Norwich to Tilbury Transmission Project

Essex County Council

PINS Reference: **EN020027**

Our Reference: [redacted]

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Glossary of acronyms and abbreviations

- AIL – Abnormal Indivisible Loads
- AIS – Air Insulated Switch Gear
- AMS / WSI - Archaeological Mitigation Strategy and Outline Written Scheme of Investigation
- AONB - Area of Outstanding Natural Beauty
- BaBC - Basildon Borough Council
- BDC – Braintree District Council
- BGS - British Geological Survey
- BNG – Biodiversity Net Gain
- BrBC - Brentwood Borough Council
- CCC - Chelmsford City Council
- CEMP - Construction Environmental Management Plan
- CITB - Construction Industry Training Board
- CoCC - Colchester City Council
- CoCP – Code of Construction Practice
- CSE - Cable Sealing End
- CTMP - Construction Traffic Management Plan
- CTWP - Construction Worker Travel Plan
- CWS - County Wildlife Sites
- DAS – Design and Access Statement
- DCO – Development Consent Order
- dDCO – Draft Development Consent Order
- DHFMP - Dunton Hills Garden Village Framework Masterplan in February 2020
- DHGV - Dunton Hills Garden Village
- DID - Difference-in-Difference
- DLUHC – Department for Levelling Up, Housing and Communities
- EA – Environment Agency
- EACN - East Anglia Connection Node
- ECAC - Essex Climate Action Commission
- ECC – Essex County Council
- ECoW - Ecological Clerk of Works
- EMF - Electromagnetic field
- ES – Environmental Statement
- ExA – Examining Authority
- FRA – Flood Risk Assessment
- GI – Green Infrastructure
- GIS - Gas Insulated Switchgear

- HDD - Horizontal Directional Drilling
- HGV – Heavy Goods Vehicle
- HPI- House Price Index
- HVAC - High Voltage Alternating Current
- HVDC -High Voltage Direct Current
- ICS - Integrate Care System
- IMB Index of multiple deprivation
- IoD -Indices of deprivation
- kV - kilovolt
- LCA – Landscape Character Areas
- LCT – Landscape Character Types
- LCWIP - Local Cycling and Walking Plan
- LEAP - Local Equipment Area for Play
- LEMP – Landscape and Ecological Management Plan
- LFRMS - Local Flood Risk Management Strategy
- LIR - Local Impact Report
- LLFA - Lead Local Flood Authority
- LNR - Local Nature Reserve
- LNRS - Local Nature Recovery Strategy
- LOD – Limits of Deviation
- LPA – Local Planning Authority
- LRN - Local Road Network
- LSE London School of Economics
- LSIP - Local Skills Improvement Plan
- LSIP – Local Skills Improvement Plan
- LSOA - Lower Layer Super Output Areas
- LTP – Local Transport Plan
- LTSH - Less than Substantial Harm
- LVIA – Landscape and Visual Impact Analysis
- LWS - Local Wildlife Site
- MLP – Minerals Local Plan
- MRA – Minerals Resource Assessment
- MRN – Major Road Network
- MSA - Mineral Safeguarding Areas
- MW – Mega Watts
- MWLP – Minerals and Waste Local Plan
- MWPA - Minerals and Waste Planning Authority
- NCA - National Character Area
- NCC – Norfolk County Council
- NDHA - non-designated heritage assets

- NGET - National Grid Electricity Transmission
- NL - National Landscape
- NMU - New non-motorised user
- NPPF – National Planning Policy Framework
- NPPG - National Planning Practice Guidance
- NPS - National Policy Statement
- NPSNN – National Policy Statement for National Networks
- NSIP - Nationally Significant Infrastructure Projects
- OHL - overhead lines
- OLEMP - Outline Landscape and Ecological Management Plan
- OS – Ordnance Survey
- OWSI – Outline Written Scheme of Investigation
- PA – Planning Act 2008
- PAR - Primary Accesses Route
- PFRA - Preliminary Flood Risk Assessment
- PINS – Planning Inspectorate
- PRoW – Public Right of Way
- RGDV - Residential Gross Development Value
- RIGS - Regionally Important Geological Site
- SCC – Suffolk County Council
- SOCG – Statement of Common Ground
- SoS - Secretary of State
- SPA - Special Protected Areas
- SPD - Supplementary Planning Document in January 2023
- SQSS - National Electricity Transmission System Security and Quality of Supply Standard
- SRN - Strategic Road Network
- SSSI - Site of Special Scientific Interest
- SuDs – Sustainable Urban Drainage Systems
- SWMP – Surface Water Management Plan
- TA – Transport Assessment
- TCPA - Town and County Planning Association
- TDC - Tendring District Council
- TEC - Transmission Entry Capacity
- TRO - Traffic Regulation Order
- TTRO - Temporary Traffic Regulation Order
- VRA - Visual Receptor Areas

- WLP - Waste Local Plan
- WMP – Waste Management Plan

1 Terms of reference

1.1 Introduction

1.1.1 Essex County Council ("**ECC**") is a statutory consultee for Nationally Significant Infrastructure Projects ("**NSIPs**") that are located within or adjoin its administrative area. For this proposal, it is a host authority with the proposed Norwich to Tilbury project traversing the County from north to south.

1.1.2 Officers have scrutinised the proposals submitted by National Grid Electricity Transmission ("**NGET**") and engaged with stakeholders, local Councillors, Basildon Borough Council ("**BaBC**"), Braintree District Council, ("**BDC**"), Brentwood Borough Council ("**BrBC**"), Chelmsford City Council ("**CCC**"), Colchester City Council ("**CoCC**"), Tendring District Council ("**TDC**") and Thurrock Council.

1.1.3 This document has been prepared by Essex County Council to provide a Local Impact Report ("**LIR**") detailing the policy context, assessment of impacts, and required mitigation and/or compensation. The assessment of impacts has been separated by service area. Examination Library references are used throughout to assist readers.

1.1.4 This Local Impact Report has been prepared in accordance with s60(3) of the Planning Act 2008 (as amended) and having regard to the guidance in the Planning Inspectorate's guidance Nationally Significant Infrastructure Projects: Advice for Local Authorities, and the Ministry of Housing, Communities and Local Government ("MHCLG") guidance Planning Act 2008: Examination stage for Nationally Significant Infrastructure Projects.

1.1.5 The report gives details of the likely impact of a project on the local authority's area and Sections 104(2)(b) and 105(2)(a) of the Planning Act 2008 explains that the Examining Authority and the Secretary of State must have regard to any LIR submitted when deciding the application.

1.1.6 It is important for the Council to clearly set out its concerns to the Examining Authority ("**ExA**") at this stage, in order to influence changes and improvements to the proposals before the ExA makes it recommendations to the Secretary of State ("**SoS**").

1.2 Scope of Project

1.2.1 The LIR relates to the impacts of the proposed scheme as they affect the administrative area of Essex County Council. Essex County Council is an upper tier local authority. Basildon Borough Council, Braintree District Council, Brentwood Borough Council, Chelmsford City Council, Colchester City Council, Tendring District Council are lower tier local authorities within the part of the County that will host the proposed works.

1.2.2 The proposed scheme also enters Thurrock Council which is a Unitary Authority.

1.2.3 In summary, the Proposed Development includes a number of elements including, inter alia:

- A new 400 kilovolt ("**kV**") electricity transmission connection of approximately 180 km overall length from Norwich Main Substation to Tilbury Substation via Bramford Substation, a new East Anglia Connection Node ("**EACN**") Substation and a new Tilbury North Substation, including:

  — Approximately 159 km of new overhead line supported on approximately 509 pylons, either standard steel lattice pylons (approximately 50 m in height) or low height steel lattice pylons (approximately 40 m in height) and some of which would be gantries (typically up to 15 m in height) within proposed Cable Sealing End ("**CSE**") compounds or existing or proposed substations

  — Approximately 21 km of 400 kV underground cabling, some of which would be located through the Dedham Vale National Landscape (an Area of Outstanding Natural Beauty ("**AONB**")

- Up to seven new CSE compounds (with permanent access) to connect the overhead lines to the underground cables
- Modification works to connect into the existing Norwich Main Substation and a substation extension at the existing Bramford Substation
- A new 400 kV substation on the Tendring Peninsula, referred to as the EACN Substation (with a new permanent access). This is proposed to be an Air Insulated Switchgear ("**AIS**") substation
- A new 400 kV substation to the south of Orsett Golf Course in Essex, referred to as the Tilbury North Substation (with a new permanent access). This is proposed to be a Gas Insulated Switchgear ("**GIS**") substation

- Modifications to the existing National Grid Electricity Transmission overhead lines to facilitate the connection of the existing network into the new Tilbury North Substation to provide connection to the Tilbury Substation
- Ancillary and/or temporary works associated with the construction of the Project.

1.2.4 In addition, third party utilities diversions and/or modifications would be required to facilitate the construction of the Project. There would also be land required for environmental mitigation and Biodiversity Net Gain ("**BNG**").

1.2.5 As well as the permanent infrastructure, land would also be required temporarily for construction activities including, for example, working areas for construction equipment and machinery, site offices, welfare, storage and temporary construction access.

1.2.6 This LIR does not describe the Works any further, relying on the Applicant's descriptions as set out in the Development Consent Order ("**DCO**") application documents.

1.2.7 The Order Limits largely encompass greenfield land, other than where they encompass mineral workings, watercourses, or the public highway.

1.3 Engagement with the Applicant

1.3.1 The Council continues to engage with the Applicant through the draft Statement of Common Ground ("**SoCG**") process, with a view to narrowing the issues in dispute. On this matter, giving consideration to the query raised during the Issue Specific Hearing 1 (EV8-004), ECC is using the LIR to provide an update on progress on the SoCG.

1.3.2 Within its Relevant Representation response (RR-1083) and it's response to the Rule 6 Letter (PDA-003), ECC set out its commitment to engaging with the Applicant through the Statement of Common Ground. As stated in the Rule 6 Letter Response (PDA-003), the County Council provided detailed comments on the SoCG on 17 December 2025 (paragraph 1.2). Subsequent engagement since these comments were provided in December 2025 has included a number of topic specific meetings. In these meetings, extracts from the SoCG were shown on screen and comments sought. Feedback in writing did not appear until sometime after these meetings, when consultees at ECC were asked to provide comments on this feedback within very tight timescales.

1.3.3 Despite a number of requests from ECC to have sight of the submission version of the SoCG ahead of Deadline 1, Officers did not receive the entire SoCG that the Applicant proposed to submit at Deadline 1 for comment until Thursday 19 February at 23:51 – with comments sought by Tuesday 24 February. This version contained a number of significant amends to the Applicant's position.

1.3.4 Despite the lateness of this issue to ECC and whilst finalising this LIR, ECC sought to provide an update on the SoCG where possible and issued commentary back to the Applicant by the deadline requested.

1.3.5 Many of the comments provided by the Applicant on 19 February related to material due to be submitted by the Applicant at Deadline 1. This meant ECC could not provide any comment in response on these matters.

1.3.6 Furthermore, given the extensiveness of the Applicant's updates as issued on 19 February, ECC did not consider it was given reasonable time to be able to formulate a comprehensive response to the ExA to the Applicant's revised positions.

1.3.7 ECC has communicated its concerns with the processes for updating the SoCG to the Applicant, and it is hoped that this feedback will be taken account of to ensure that a comprehensive update is able to be provided at Deadline 4 of the Examination covering both Applicant and local authority position on matters.

1.4 <u>Structure of LIR</u>

1.4.1 Section 60(3) of the Planning Act 2008 defines Local Impact Reports as:

> *"a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)."*

1.4.2 The Planning Inspectorate ("**PINS**") "Advice for Local Authorities" advises as regards a Local Impact Report: -

> *"The report should give details of the likely impact of a project on the local authority's area. Sections 104(2)(b) and 105(2)(a) of the Planning Act explains that the Examining Authority and the Secretary of State must have regard to any LIR submitted when deciding the application. Therefore, local authorities should not underestimate the importance of the report.*
>
> *The report should cover any topic the local authority consider is relevant to the impact of the project on their area and the local communities affected…*

The purpose of the LIR is to make the Examining Authority aware of the potential impacts of the project based on local knowledge. It is a technical evidence based assessment of all the impacts. The LIR is therefore not the document where the local authority should set out its objections or support for the application (see relevant representations)."

1.4.3 The PINS Advice also states: -

"The content of the LIR is a matter for the local authority. The Examining Authority will be assisted by the submission of a LIR that clearly sets out and evaluates the impacts in a structured manner ..."

1.4.4 This LIR provides details of the likely impact of the proposals under topic based headings reflecting the likely nature of the impacts. The key issues for the Council under each topic are identified, followed by commentary on the extent to which the Applicant has sufficiently addressed these issues by reference to relevant policy, and the application documentation as relevant.

1.4.5 Where the Council considers that key issues have not (as yet) been adequately addressed, the likely impacts, as identified in the LIR, provide the basis for the Council's objections to the proposals.

1.4.6 To overcome the Council's objections the Applicant is urged to address the key issues and the Council respectfully invites the Examining Authority to encourage the Applicant to do so.

1.4.7 Where the Applicant has sought to address these concerns, these will be referenced to the application documentation, including the DCO articles, requirements, and obligations where relevant.

2 Description of the Area

2.1 The proposed Norwich to Tilbury development traverses the administrative areas covered by the following local authority areas.

i) Norfolk County Council - South Norfolk Council

ii) Suffolk County Council - Babergh District Council and Mid Suffolk District Council

iii) Essex County Council - Basildon Borough Council, Braintree District Council, Brentwood Borough Council, Chelmsford City Council, Colchester City Council, Tendring District Council

iv) Thurrock Council - Unitary Authority

2.2 The project route has been broken up into seven sections as set out Document: 6.4 Environmental Statement Chapter 4 – Project Description [APP-130] Section 4.2:

- Section A: South Norfolk Council
- Section B: Mid Suffolk District Council
- Section C: Babergh District Council and Tendring District Council
- Section D: Colchester City Council
- Section E: Braintree District Council
- Section F: Chelmsford City Council and Brentwood Borough Council
- Section G: Basildon Borough Council, Brentwood Borough Council (and Chelmsford City Council east of Ingatestone)
- Section H: Thurrock Council

2.3 Section A is in Norfolk, Section B and part of Section C are located within Suffolk with Sections D -G located in Essex.

2.4 While it is pertinent to consider the cumulative impacts of the whole development across all sections, this Local Impact Report primarily focuses on the development in Sections C-G to which ECC as County Council is the 'host county local authority'.

2.5 <u>Overview of Essex</u>

2.5.1 ECC will first present an overview of the detail of the characteristics, landscape and environment of Essex and then will provide further detail on the individual sections of the Norwich to Tilbury project. This is to provide the ExA with additional context of the environment of Essex, and the features on the proposed route.

2.5.2 The project route is predominantly rural, avoiding major urban areas but passing close to several villages, farmsteads and sensitive landscapes in Essex, including the River Stour catchment, the fringe of Dedham Vale Area of Outstanding Natural Beauty, and areas of high-quality agricultural land. These are identified in Landscape Character Assessments. It passes through a largely open, rural landscape surrounding numerous towns, villages and hamlets.

2.5.3 ECC will now provide commentary on the proposed development area in respect of services and specialisms covered by the County Council.

Highways and Transportation

2.5.4 The County Council is the Highway Authority for the whole of Essex and is responsible for maintaining, managing, and improving public roads and pavements, together with Public Rights of Way. The core duties are defined under the Highways Act 1980 and include ensuring road safety, repairing surfaces, managing traffic flows and maintaining street lighting. The Highway Authority is also responsible for the repair and maintenance of the network in response to incidents or weather conditions to ensure the safe operation of the network. The Highway Authority is therefore consulted on development proposals including proposed NSIPs, to assess their impacts on the function and safe movement of vehicles, cyclists and pedestrians on the highway network while promoting sustainable modes of transport.

2.5.5 The County contains a diverse range of local and strategic highway networks, used by communities, local businesses as well as for tourism. The safe and functional running of this network is of vital importance.

2.5.6 The proposed Norwich to Tilbury project will generate significant additional traffic during the construction phases, from both construction workforce, as well as from HGV and AIL movements. It is expected that this construction traffic will use both strategic and local highway networks – which could have a knock on effect for local communities and businesses.

2.5.7 In particular, the ECC depot at Ardleigh, is the main highway depot for the north of the County providing general maintenance and reactive services 24/7, 365 days a year will be affected by the development. It is noted that the proposed route over sails the depot, and its construction will require access and for structures to be potentially placed in the depot yard. This could potentially have a significant impact

on the operation of the depot which would have serious implications for the maintenance and function of the County highway network.

2.5.8 The Applicant is strongly encouraged to engage with the Local Highway Authority on the matters set out within this LIR to ensure necessary mitigation and controls are in place to effectively manage the impacts arising from this development on the highway network.

Socioeconomics

2.5.9 The County Council is committed to addressing the drivers of socioeconomic inequality (including income, education, employment, health and housing).

2.5.10 As set out in ES Chapter 15 – Socio-economics, Recreation and Tourism (APP-265), cross Essex, the workforce has a diverse occupational distribution, however, there is a noticeable skills gap, with higher proportions of the population with lower or no qualifications compared to regional and national figures.

2.5.11 ECC is concerned that the Norwich to Tilbury project could result in detrimental socio-economic impacts for Essex, particularly affecting local businesses, residents, and the tourism sector. The scale and nature of the development, alongside other concurrent infrastructure projects, raises the risk of cumulative disruption to the local economy, including reduced footfall for tourism-dependent areas, strain on local services, and displacement of existing business activity.

2.5.12 While much of this negative impact will be short term ECC believes there is potential for significant impact to businesses along the planned route. This needs careful management and consideration to ensure appropriate mitigation and compensation for these businesses. ECC would wish to see the Norwich to Tilbury project make a significant and lasting contribution through a S106 agreement, to support the Essex skills and employment landscape by assisting and encouraging local people to access apprenticeships and training.

Health and wellbeing

2.5.13 The County Council provides public health services across Essex. It is recognised by ECC in respect of public health that the proposed development route intersects rural settlements and peri-urban communities with known and entrenched health inequalities. As such, the project area contains a number of characteristics that materially heighten sensitivity to health and wellbeing impacts.

Within Essex, the project passes through Tendring, Colchester, Braintree, Chelmsford, Brentwood, Basildon and Thurrock, intersecting numerous villages and urban areas. The Environmental Statement ("**ES**") Chapter 10 (APP-192) identifies ward-level receptors across Essex including Ardleigh, Lawford, Marks Tey, Boreham, Broomfield, Writtle, Herongate, Hutton, Laindon Park, Langdon Hills, and others.

2.5.14 Many of these communities are:

- Rural with limited access to health and social infrastructure
- Deprived in multiple domains, particularly Tendring, Colchester, Basildon ((APP-192) Figure 10.3 – Index of multiple deprivation ("**IMD**")
- Containing ageing populations, low physical activity levels, and higher burdens of long-term conditions
- Dependent on local road networks, Public Rights of Way ("**PRoWs**") and green/blue infrastructure for daily mobility and wellbeing.

2.5.15 In respect of health inequalities and vulnerable communities, the ES baseline (APP-192) clearly identifies multiple vulnerability indicators, including:

- High proportions of disabled residents (Figure 10.10)
- Areas with high levels of overweight/obesity (Figures 10.11 & 10.12)
- Linguistic vulnerability, notable populations speaking English not as a first language (Figure 10.6), which the ES fails to integrate into sensitivity or mitigation planning, ECC has raised this point in the RR
- Areas within 10-minute access to green/blue spaces (Figure 10.13), many of which will be directly or indirectly affected by construction disturbance and landscape change.

2.5.16 These characteristics mean the project area contains communities with reduced adaptability, limited resilience and heightened susceptibility to both physical and mental health impacts, an issue central to EN-1 paragraph 4.4.6 but insufficiently addressed in the ES.

2.5.17 In consideration of the landscape and designated sites relevant to health and wellbeing, the route interacts with landscapes and ecological assets that support health and wellbeing, including:

- Dedham Vale National Landscape, a nationally sensitive landscape providing recreational and mental wellbeing value
- Woodlands such as Writtle Park Woods, which provide biodiversity and green space

- Multiple Public Rights of Way (PRoWs), many of which the ES identifies for closure, diversion or severance during construction (PRoW Management Plan referenced in ES Chapter 10.1.3).

2.5.18 Loss of access, visual intrusion and noise disturbance will have direct implications for mental wellbeing, physical activity, social connectedness and community identity.

2.5.19 With regards to local transport patterns and constraints, across Essex, many communities intersected by the scheme rely on:

- Local rural roads with limited capacity
- PRoWs critical for daily physical activity
- Single carriageway routes experiencing increased construction HGV flows

2.5.20 ES Chapter 10 (APP-192) identifies sensitive receptor clusters along primary access routes, including residential zones and schools but stops short of evaluating cumulative exposure for these receptors. Construction will introduce:

- Higher risk of real and perceived road safety issues, especially for pedestrians and cyclists
- Reduced active travel, with health consequences
- Amenity loss from noise, dust and severance

2.5.21 ECC identifies the following as sensitive health receptors requiring explicit attention:

- Communities in Lower Layer Super Output Areas ("**LSOA**") within the lowest IMD deciles
- Non-English-speaking households (linguistic vulnerability)
- Older adults, especially in areas with high dependency ratios
- Children, including households along PRoW routes and near construction access points
- Residents with existing poor mental health or high levels of anxiety, particularly in areas with significant landscape change
- Communities already experiencing multiple NSIPs (e.g., Tendring) where cumulative stress is likely.

2.5.22 The overall public health position on overall project area sensitivity is that given the demographic, environmental and socioeconomic characteristics outlined above and as supported by ECC's Statutory Consultation response and Relevant Representation the project area should be considered highly sensitive in terms of:

- Mental wellbeing
- Visual and landscape effects

- Access to green infrastructure
- Active travel disruption
- Vulnerability to inequality-widening impacts.

2.5.23 ES Chapter 10 (APP-192) does not sufficiently reflect this sensitivity, nor does it address how vulnerable populations will be differentially affected, despite acknowledging their existence in the baseline. This represents a material gap against EN-1 requirements.

Flood Risk, Drainage and Surface Water

2.5.24 The County Council, as Lead Local Flood Authority is responsible for overseeing and managing the risk of flooding from surface water, groundwater, and ordinary watercourses in Essex.

2.5.25 At section 12.5.54, the ES Chapter 12 (APP-221) states "*The new substations, proposed works to existing substations, and the Cable Sealing End (CSE) compounds would be located within Flood Zone 1. One CSE compound at Wenham Grove is partially situated in Flood Zone 3. However, this CSE compound would be situated within the defined Limits of Deviation (LoD) to avoid Flood Zone 3, as secured by commitment W19 within the CoCP (document reference 7.2). The proposed temporary construction compounds would also be within Flood Zone 1".*

2.5.26 At 12.5.55 within the ES Chapter 12 (APP-221) is also noted that the ES advises that "*The majority of the permanent Project infrastructure would be located outside of the areas shown to be at 'high' risk of surface water flooding in the Environment Agency Surface Water Map. Of the places where the Project interacts with the high risk zone for operation, the majority of these are access roads"*

2.5.27 In this regard, it is noted the FRA (APP-331) at Paragraph 6.1.7 concludes that *"with respect to surface water flooding, during construction and operation (and maintenance), the Project is considered to be largely at low risk, with some areas at higher risk. Measures would be in place to manage surface water runoff and minimise impacts on the land drainage regime across the Project, including allowances for climate change resilience within the designs of operational SuD"*

2.5.28 As the proposed development route within Essex is on largely greenfield land, there is a focus for the LLFA on securing from the Applicant appropriate flood mitigation and management of surface runoff to mitigate any increased risk of flooding from the temporary structures, haul roads and compounds required during the construction period.

Minerals and Waste

2.5.29 The County Council, as Minerals and Waste Planning Authority ("**MWPA**") is responsible for preparing the Minerals and Waste Local Plan, ensuring there are enough minerals for construction to meet the needs of Essex, as well as providing sites for facilities to meet the waste needs of Essex. The MWPA has reviewed the proposed development area and would highlight to the ExA that the currently proposed route alignment in so far as it relates to Essex has resulted in the application site passing through land that, through geological mapping undertaken by the British Geological Survey, has been designated as containing economically viable mineral resource. In this case, it is predominantly sand and gravel although a silica sand deposit is also impacted.

2.5.30 For information purposes, it is recognised that 'Safeguarding' is the process used in the planning system to ensure the protection of mineral resources from the risk of sterilisation. 'Sterilisation' is the term used when development or land-use changes take place which permanently prevent the extraction of mineral resources from the ground. By protecting mineral resources from unnecessary sterilisation, the MWPA can ensure that mineral resources remain available to meet the needs of future generations.

2.5.31 As set out in Paragraph 9.5.8 of Volume 6: Environmental Statement: Document – 6.9.A2 Environmental Statement Appendix 9.2 - Qualitative Minerals Resource and Infrastructure Assessment (APP-183), referred henceforth as the Minerals Resource Assessment ("**MRA**"), the Order Limits of the DCO within Essex located within mineral bearing land represents approximately 1.1% of the total sand and gravel mineral resource identified in Essex. It is also noted that the route will impact areas of land designated as containing silica sand. Although the impact is much smaller in terms of scale than the impact on land safeguarded for sand and gravel, silica sand is much scarcer in Essex and has greater market value, owing to its local and national importance.

2.5.32 The MWPA acknowledges that, following engagement with National Grid, pylons have been sited outside of the brick clay safeguarded areas as far as practicable to reduce the impacts on the brick clay mineral. The MWPA had previously raised that this is a very limited resource in the County which is vital for the restoration of historic buildings and, as such, welcomes those amendments to the routing which allow for the removal of any impact on this local and national resource.

Green Infrastructure

2.5.33 In respect of green infrastructure; ECC would draw the ExA's attention of the routing passing through sensitive landscapes in Essex, including the River Stour catchment, the fringe of Dedham Vale National Landscape, and areas of high-quality agricultural land. It encompasses designated sites such as Local Wildlife Sites, ancient woodlands, and priority habitats including hedgerows and wetland corridors. These areas are identified within the Essex Local Nature Recovery Strategy ("**LNRS**") as critical for habitat connectivity and species recovery. Key constraints include flood risk zones along river valleys and low-lying areas, particularly near Colchester and Chelmsford, and major transport corridors such as the A12 and A120, which create fragmentation risks. Sensitive receptors within the project area include protected species habitats, public rights of way, and heritage landscapes.

Ecology

2.5.34 Designated nature conservation sites within the Chelmsford, Colchester, and Tendring local authority areas which are present either within or a relevant proximity to the Order Limits. These include:

- Stour & Orwell Estuaries SPA/Ramsar (Colchester, Tendring)
- Stour Estuary SSSI (Tendring)
- Cattawade Marshes Site of Special Scientific Interest ("**SSSI**") (Colchester, Tendring)
- Chelmer Valley Riverside Local Nature Reserve ("**LNR**") (Chelmsford)
- LWSs falling within the Order Limits
    - Black Brook; Harrow Wood (Colchester)
    - Bushy Wood, Chignall St James; Great/Little Edney Woods; Langley's Deer Park; Writtlepark Woods (Chelmsford)
- LWSs adjacent to the Order Limits
    - Aldham Hall Wood; Church House Wood; Fiddler's Wood; Gun Hill Place; Stonefield Strip (Colchester)
    - Border Wood; James's Spring; Lady Grove; Osborne's Wood; Parson's & Queen's Wood; Sheepcotes Wood; Sparrowhawk Wood (Chelmsford)

2.5.35 ECC also notes that there are several 'irreplaceable habitat' ancient woodlands sites (included in Local Wildlife Site ("**LWS**") fall within or adjacent to the Order Limits through the combined Chelmsford, Colchester, and Tendring area.

2.5.36 The ExA should also be aware of the Habitats of Principal Importance (i.e. habitats that are a priority for biodiversity conservation) falling within the Order Limits through the combined Chelmsford, Colchester, and Tendring area include:

- Arable field margins
- Lowland dry acid grassland
- Reedbeds
- Ponds
- Lowland mixed deciduous woodland
- Hedgerows
- Rivers and streams

Landscape

2.5.37 In relation to landscape character, ECC notes that the Norwich to Tilbury Project passes through two National Character Areas within the Essex authorities (Excluding Thurrock for the purpose of this response):

- National Character Area ("**NCA**") 86 South Suffolk and North Essex Clayland
- NCA 111 Northern Thames Basin

2.5.38 Despite the scale of the project, it does not appear as though the effects of the Project on national or regional landscape character have been assessed. The judgement of this approach is questioned considering this is a proposal that at least of a regional scale if not national and is identified as having significant negative operational landscape and visual effects along the whole length.

2.5.39 Further, the landscape of the study area is described within a series of district and county level landscape character assessments identifying Landscape Character Types ("**LCT**") and Landscape Character Areas ("**LCA**"). The landscape character assessments covering the Essex authorities are identified as:

- Tendring District Landscape Character Assessment (2001)
- Colchester Borough Landscape Character Assessment (2005). This identifies 15 No. LCAs along the Project line including 3 No. sub-areas of the Stour River Valley Slopes. The 2005 LCA has now been updated by Colchester Landscape Character Assessment (LUC November 2024). Our position is that if the 2005 Colchester Borough Landscape Character Assessment (2005) has been used, the decision-making needs to be checked against the 2024 assessment.
- Essex Landscape Character Assessment (2003) – Braintree District, Chelmsford District, Brentwood District identifies 15 No. LCAs along the Project line.
- Landscape Character Assessment of Basildon Borough (2014) identifies 6 No. LCAs along the Project line. (Ref: Document 6.13 ES Chapter 13 Landscape and Visual 7.12 Parts 1-9)

2.5.40 The negative visual impact effects on the landscape will be widespread. The loss of existing trees and hedgerows will also be significant. Suitable and proportionate levels of compensation will be important outcomes to manage this harm on the landscape character.

Historic Environment

2.5.41 Given the linear nature of the proposed route of the project, it will traverse diverse archaeological landscapes of Essex (river terraces, covers and plateaus, and valley floors), where there is potential for the presence of archaeological remains and deposits of local to national significance.

2.5.42 There are no scheduled monuments located within the Order Limits, however a small number of scheduled monuments are located within close proximity to the Order Limits. Non-designated heritage assets within the Order Limits are primarily below ground, archaeological remains. A number of these are recorded on the Essex Historic Environment Record and there is potential for further, currently unknown, archaeological remains of high significance within the Order Limits.

2.5.43 The route also bisects the Stour Valley which has extensive cropmark complexes in a relatively undisturbed valley and preserves deposits of high palaeolenvironmental potential. Geoarchaeological deposits of high significance for their potential to contain rare Palaeolithic archaeological remains and associated palaeoenvironmental evidence have been recorded within ancient river terraces within both the Tendring and Thurrock District. Further details of the assessment of archaeological remains are discussed in detail in the following sections.

Historic buildings

2.5.44 There are no designated heritage assets within the Order Limits; however, it does encompass the setting of a large number of designated heritage assets including listed buildings and conservation areas. Non-designated heritage assets within the Order Limits are primarily below ground, archaeological remains. Further details of the assessment of both designated and non-designated heritage assets are discussed in detail in the following sections.

2.6 Section Analysis

2.6.1 ECC will now provide a more detail of the proposed development area section by section, focusing on those within Essex.

Section C – Babergh / Tendring / Colchester

2.6.2 For this section the proposal uses underground cable and overhead line technology comprising 46 standard height lattice pylons. The underground section is approximately 16km in length and connects into the new EACN where the Project then returns to an overhead line.

2.6.3 This section passes through the Dedham Vale National Landscape. In addition, the Suffolk & Essex Coasts and Heaths National Landscape is located 3.7km to the south-east of the nearest pylon at Wenham Grove.

2.6.4 The character in this area is one of undeveloped, rural landscapes where intervisibility is frequently quite high due to the large scale flat or gently undulating landscapes with shallow river valleys, meaning the pylons and overhead wires have the effect of a perceived significant industrialisation of the countryside up to 2km from the Project.

2.6.5 The Dedham Vale National Landscape ("**NL**") is situated on the boundary between ECC and Suffolk County Council ("**SCC**") and is characterised by picturesque villages, gently rolling farmland, ancient woodlands, and the meandering River Stour, creating a traditional English lowland landscape. In response to the legal test 'to conserve and enhance the beauty of the area', the proposal uses underground cables through the NL.

2.6.6 Remaining underground, the route crosses the River Stour to the north of Stratford St Mary and then, crosses the Black Brook to the north-east of Langham. Heading south-east' the route passes to the north of Ardleigh before connecting into the proposed EACN Substation. This is located to the east of Ardleigh at the junction of Hungerdown Lane / Little Bromley Road.

2.6.7 Exiting the new EACN Substation, the overhead line moves westwards following the route back on itself until, again passing to the north of Ardleigh and then west passing to the north of the Ardleigh Reservoir and continuing to the A12, where this section ends.

2.6.8 NGET states in Chapter 5 of the Planning Statement (APP-085) at paragraphs 5.5.7 – 5.5.9 that there are no designated ecological features such as Special Protected Areas ("**SPA**"), Special Areas of Conservation ("**SAC**"), SSSI, Ancient Woodland, County Wildlife Sites ("**CWS**") or LNRs within the Order Limits of this section. Furthermore, there are no designated heritage assets such as World Heritage Sites,

Registered Battlefields, Registered Parks and Gardens, Scheduled Monuments, Listed Buildings or Conservation Areas within the Order Limits. There are also no Regionally Important Geological Site ("**RIGS**"), County Geodiversity Sites or geological SSSI present within the Order Limits.

2.6.9 However, the Norwich to Tilbury Project at this section passes through National Character Areas: NCA 86 South Suffolk and North Essex Clayland. In addition, there are several Landscape Character Types and Area affected by the proposals as set out in the Tendring District Landscape Character Assessment (2001) and Colchester Borough Landscape Character Assessment (2005).

2.6.10 It should also be noted that the 2005 LCA has now been updated by Colchester Landscape Character Assessment (LUC November 2024).

Section D – Colchester

2.6.11 This section utilises overhead line and underground cable technology. The overhead line route comprises 50 standard height lattice pylons within a relatively open farmland and field landscape.

2.6.12 In this section the proposed route runs to the north of Colchester in a westerly direction towards Great Horkesley where it goes underground for approx. 3.9km. It then returns to overhead line technology at which point the route heads south until it crosses the River Colne. At this point Fiddlers Wood Ancient Woodland is adjacent to the Order Limits.

2.6.13 It then continues south-west passing Ford Street Conservation Area. Aldhamn and Aldhamhall Wood Ancient Woodland and Church House Wood Ancient Woodland lie adjacent to the Order Limits as is Marks Tey Brickpit SSSI, the route also crosses the Roman River.

2.6.14 The landscape character assessment covering Colchester City Council is the Colchester Landscape Character Assessment (LUC November 2024). This is an update on the previous assessment Colchester Borough Landscape Character Assessment (2005).

2.6.15 For this section there are 12 Landscape Character Areas the effect on which are described in the Landscape Section

- LCA B7: Langham Farmland Plateau
- LCA A8: Stour River Valley Floor

- LCA A7: Stour River Valley Slopes
- LCA Sub Area A7a: Stour River Valley Slopes
- LCA Sub Area A7b Stour River Valley Slopes
- LCA Sub Area A7c: Stour River Valley Slopes
- LCA B5: Rochfords Farmland Plateau
- LCA B6: Great Horkesley Farmland Plateau
- LCA A5: Colne River Valley Slopes
- LCA A4: Colne River Valley Floor
- LCA B4: Great Tey Farmland Plateau
- LCA B2: Easthorpe Farmland Plateau

2.6.16 NGET confirm in Chapter 5 of the Planning Statement (APP-085) at paragraphs 5.6.7 – 5.6.9 there are no designation ecological features such as SPA, SAC, SSSI, Ancient Woodland, CWSs or LNRs within the Order Limits in this section. In addition, there are no designated heritage assets such as World Heritage Sites, Registered Battlefields, Registered Parks and Gardens, Scheduled Monuments, Listed Buildings or Conservation Areas. Also there are no RIGS, County Geodiversity Sites or geological SSSI present within the Order Limits.

Section E: Braintree District

2.6.17 This Section utilises overhead line and underground cable technology. The overhead line route comprises 53 standard height lattice pylons while the underground cable takes place in the vicinity of Fairstead with approximately 0.15 km of cabling.

2.6.18 Moving in a general south westerly direction over open field and arable farm land, the route crosses River Blackwater and the River Brain. It also runs close to a number of Ancient Woodlands including Rivenhall Thicks Ancient Woodland, Troys Wood Ancient Woodland and Manns/Parson Wood Ancient Woodland.

2.6.19 Chapter 5 of the Planning Statement (APP-085) at paragraphs 5.7.7 – 5.7.9 confirms there are no designation ecological features such as SPA, SAC, SSSI, Ancient Woodland, CWSs or LNRs within the Order Limits. In addition, there are no designated heritage assets such as World Heritage Sites, Registered Battlefields, Registered Parks and Gardens, Scheduled Monuments, Listed Buildings or Conservation Areas within the Order Limits although the Faulkbourne Hall Registered Park/Garden is located approximately 270 m to the south of the Order Limits.

Section F – Chelmsford and Brentwood

2.6.20 This Section utilises overhead line technology with 59 standard height lattice pylons and three low height lattice pylons. The low height pylons are proposed between Great and Little Waltham as proposed mitigation for Langleys House (Grade I listed building), Langleys Registered Park and Garden (Grade II) and Great and Little Waltham Conservation Areas.

2.6.21 The overhead line is approximately 20 km in length and runs to the north / north east of Chelmsford across land which is open farmland and fields in character. The route crosses the River Tey and a number of minor watercourses passes and is in close proximity to a number of designated ancient woodland at Lyonshall Wood and Writtle Park and passing between and adjacent to Bushey Wood and Osbornes Wood Ancient Woodland.

2.6.22 There is a minor overlap between the Order Limits and Langley's Deer Park and Great/Little Edney Woods LWS.

2.6.23 NGET states in Chapter 5 of the Planning Statement (APP-085)at paragraphs 5.8.7 – 5.8.9 that there are no designated heritage assets such as World Heritage Sites, Registered Battlefields, Registered Parks and Gardens (the overlap with Langley's Deer Park LNR does not extend to the Registered Park and Garden), Scheduled Monuments, Listed Buildings or Conservation Areas within the Order Limits for this Section. In addition, there are no RIGS, County Geodiversity Sites or geological SSSI present.

Section G Basildon & Brentwood

2.6.24 This section utilises overhead line technology with 46 standard height lattice pylons along a length of approximately 14 km. Moving in a southerly direction over predominantly open fields and farm, the route is entirely within the Metropolitan Green Belt through this Section and passes to the west of Billericay, the east of Brentwood and to the west of Basildon as it moves to the boundary with Thurrock.

2.6.25 As well as crossing the River Wid it runs adjacent to or close to a number of designated ancient woodlands at Harespring Wood, Havering Grove, Parkhill Wood James Wood and Friernen Wood. In particular, a section of St. Margarets Wood and Lane LWS would be over sailed by the overhead line and would require some tree removal.

2.6.26 NGET have confirmed in Chapter 5 of the Planning Statement (APP-085) at paragraphs 5.9.7 – 5.9.9 there are no designated heritage assets such as World Heritage Sites, Registered Battlefields, Registered Parks and Gardens, Scheduled Monuments, Listed Buildings or Conservation Areas within the Order Limits for this section. In addition, there are no RIGS, County Geodiversity Sites or geological SSSI present.

3 Policy Context

3.1 National Policy

Powering UP Britain

3.1.1 The Powering Up Britain document sets out how the Government will enhance our country's energy security, seize the economic opportunities of the transition, and deliver on our net zero commitments

A Green Future: Our 25 Year Plan to Improve the Environment

3.1.2 The "A Green Future: Our 25 Year Plan to Improve the Environment" document is the Government's high level environmental strategy which includes targets in a number of relevant areas.

The UK's Industrial Strategy (November 2025)

3.1.3 The aim of the Industrial Strategy was "to boost productivity by backing businesses to create good jobs and increase the earning power of people throughout the UK with investment in skills, industries and infrastructure."

3.1.4 The Industrial Strategy includes a commitment to reducing electricity costs, accelerating grid connections and promoting industrial decarbonisation. Allied to this, the Strategy states "as well as reforming connections processes, we will need to accelerate build times for new infrastructure". In addition, the Onshore Wind: Sector Deal which outlines support for a massive increase in onshore wind electricity of the east coast (and the consequent requirement to increase onshore infrastructure to cope with this).

Clean Power 2030 Action Plan

3.1.5 A plan to achieve at least 95% of Great Britain's electricity from clean sources by 2030. Key measures include reforming the grid connection queue, speeding up planning permission for critical energy infrastructure, and expanding renewable auctions. The plan aims to secure energy supply, lower bills, and re-industrialize the country while meeting climate goals, with significant private sector investment needed.

3.2 National Policy Statements

3.2.1 When deciding DCO submissions s104(2)(d) of the Planning Act (PA) 2008 requires the Secretary of State (SoS), following recommendation by the Planning Inspectorate (PINS) to have regard to any other matters considered both important and relevant. The National Policy Statements for National Networks ("**NPSNN**") requires consideration to be given to policies and information in the development plan to matters including other developments which may give rise to cumulative impacts, non-designated heritage assets, impacts on land use and the preclusion of other development.

3.2.2 National Policy Statement ("**NPS**") (EN-1) is the overarching national policy statement for energy and was published in November 2023 and updated in January 2024. This sets out the UK Government's commitment to increasing renewable generation capacity and recognises that in the short to medium term, much of the new capacity is likely to come from onshore and onshore wind.

3.2.3 NPS (EN-3) is the UK Government's strategy for renewable energy infrastructure. This policy supports the creation of new clear energy electricity generating capacity and covers onshore and offshore wind together with solar photovoltaic development

3.2.4 NPS (EN-5) is the UK Government's strategy for electricity networks infrastructure. This policy statement applies to not only transmission systems but also associated infrastructure such as substations and converter stations. This policy statement sets out the general principles that should be applied in the assessment of development consent application across the range of energy technologies. National Policy Statement for Electricity Networks Infrastructure (EN-5), also requires mitigation of landscape and ecological impacts, and the Environment Act 2021, which mandates a minimum of 10% BNG.

3.2.5 Notwithstanding the publication of revised National Policy Statements 1, 3 and 5 which came into force on 6 January 2026, the transitional arrangements mean this DCO application is to be assessed against the 2024 iterations i.e. - those in force at the time of submission.

3.2.6 In considering the planning policy context, it is recognised that the Applicant has submitted a policy compliance document (APP-086). It is also noted that the timetable seeks the update of this where necessary at deadline 1 and deadline 7 to take account of any relevant developing / emerging policy.

3.3 National Planning Policy Framework

3.3.1 The National Planning Policy Framework ("**NPPF**") was last updated in 7 February 2025 and provides national policy in respect of proposals under the Town & Country Planning Act 1990. It is however also a material consideration when considering NSIP proposals.

3.4 Holford Rules

3.4.1 A set of guidelines for routing high voltage electricity lines to minimise visual and environmental impact

3.5 Horlock Rules

3.5.1 National Grid's guidelines for the siting and design of substations.

3.5.2 The Secretary of State should be satisfied that the development, as far as is reasonably possible, complies with the Holford and Horlock Rules.

3.6 Government Consultation - Community Benefits

3.6.1 The Government consulted on a recommended approach to community benefits for electricity transmission network in 2023. The government response, published in November 2023, stated that voluntary guidance on community wide benefits and information on developing a mandatory policy approach would be published in 2024.

3.6.2 A working paper seeking further views on community benefits and shared ownership of low carbon energy infrastructure was then published in May 2025.

3.6.3 The Government guidance - Electricity transmission network infrastructure: Community funds was published on 10 March 2025 (last update 27 November 2025). This guidance sets out Government expectations for how communities living near electricity transmission network infrastructure developments should benefit as a result of hosting these developments.

3.6.4 ECC continues to seek updates from National Grid regarding the response to this Government Guidance and is disappointed with the lack of engagement on this matter. The reference to a £30 million fund was noted in the Community Newsletter dated January 2026 prepared by National Grid but there has been no meaningful engagement on this to date. The County Council would welcome this

engagement as there are opportunities that the Council is aware of which community funding could be beneficial for – for example, supporting and encouraging the use of the PRoW network for both recreational and active travel uses.

3.7 County Level Local Plan, Policy and Guidance

a) Strategic and Corporate

3.7.1 Everyone's Essex: our plan for levelling up the county (2021 to 2026). 'Everyone's Essex' sets out 20 commitments to improve the lives of people of Essex between 2021 to 2026. The 20 commitments are divided into four key areas of economy, environment, health and family.

3.7.2 Levelling Up Essex: ECC strategy for Levelling Up Essex sets out how the Council will support people living in priority areas of the county to benefit from the same opportunities and life chances as the wider Essex population.

3.7.3 The Future of Essex: The Future of Essex sets out the vision agreed by the Essex Partners. This vision informs our plans and actions for the council. Essex Partners is a collection of organisations from across Essex dedicated to improving our county, of which Essex County Council is a member of.

3.7.4 Net Zero: Making Essex Carbon Neutral – Essex Climate Action Commission: The Essex Climate Action Commission has set out recommendations for ECC on tackling the climate change crisis across six core themes, with a trajectory of targets and milestones that need to be met for Essex to become a net zero county by 2050. The six core themes are: Land Use and GI, Energy, the Built Environment, Transport, Waste and Community Engagement. Progress against these recommendations are captured in the Essex Climate Action Plan (2023-2025).

b) Nationally Significant Infrastructure Projects

3.7.5 ECC NSIP's Policy (2022). ECC will only support NSIPs that create resilience in Essex and not those that exacerbate existing, or make new, vulnerabilities, particularly in relation to ECC's commitment to deliver sustainable communities that level up the economy, environment and health and wellbeing across the County.

c) Minerals and Waste (Minerals and Waste Planning Authority)

3.7.6 Adopted Mineral and Waste Local Plan: At the County level, the ECC Minerals Local Plan (2014) ("**MLP**") and ECC Waste Local Plan (2017) ("**WLP**") are also a material consideration in terms of Development Plan considerations. The emerging MLP underwent a Regulation 18 Consultation in June 2024.

d) Highways and Transportation (Local Highway Authority)

3.7.7 Local ECC Development Plan Policies: Local Highway Development Management policies have been the subject of a full public consultation exercise, together with a Sustainability Appraisal and Strategic Environmental Assessment. They have been approved by ECC cabinet members for Highways and Transportation and for Communities and Planning and as such were formally adopted as ECC Supplementary Guidance in February 2011.

3.7.8 ECC Local Transport Plan (2011): Assesses transport needs and challenges and sets out its transport aspirations over the 2011 – 2026 period. To improve maintenance of existing transport networks, support sustainable economic growth and regeneration; reduce carbon emissions

3.7.9 A Better Connected Essex (ECC Emerging Local Transport Plan (2025)): ECC are developing a new transport strategy and undertook a second public consultation during the summer of 2025. Whilst this strategy is not yet adopted, it shows the direction that ECC are taking in setting a vision for Essex. It has been written against the backdrop of future election for a Mayor of Greater Essex and the reorganisation of current local authorities. The plan is to cover this transition period and be used as a starting point for the development of a new Greater Essex Local Transport Plan by the new Mayoral Combined County Authority.

3.7.10 Local Cycling and Walking Infrastructure Plan (LCWIP) – Finalised in August 2025 but not formally adopted, this sets out Essex wide strategies designed to create a network of sustainable interconnected active routes. Of particular relevance are the 'Clacton – Jaywick' and 'Dovercourt – Harwich' specific LCWIPs, which have recently finished public consultation. TDC will be including reference to these in the updated Local Plan.

3.7.11 Essex Planning Officers Association (EPOA) Parking Guidance (September 2024): Paragraph 8.2.1 of the guidance sets out how where developments do not fall into a specific land use classification (as is the case for the Norwich to Tilbury Scheme) then parking provision will be considered on the development's own merit.

However, the onus will fall on the developer to demonstrate that the level of parking provided is appropriate and will not lead to problems of on-street parking on the adjacent highway network.

e) Socioeconomics

3.7.12 The Local Skills Improvement Plan: identifies key skills gaps across Essex, as well as steps that employers, training providers and other organisations can take to fill these. It explains our vision for future growth in Essex, alongside short and long-term actions to enable us and our partners to achieve this.

3.7.13 Essex Sector Development Strategy: The strategy has identified five economic sectors with significant growth potential that could be realised in Essex. They cover construction and retrofit, clean energy, advanced manufacturing and engineering, Digi-tech and life sciences.

3.7.14 Green Skills Infrastructure Review for ECC, (March 2022): A review of green skills and related infrastructure has been undertaken to identify skills gaps and business needs, the capacity of existing providers and growth plans and to identify how existing or improved skills infrastructure can support the Essex Climate Change Commission's ambition to mitigate the effects of climate change.

3.7.15 The Essex Green Skills review: carried out by Mace, on ECC's behalf, shows where there are opportunities for green skills growth across the county. The outcomes identified supported the development of ECC's local skills plan, sector development plan and green growth ambitions.

3.7.16 Essex Destination Management Plan 2024 to 2030: explores the future of visitor economy growth in Essex. The plan's aim is to: help residents and visitors experience everything that Essex has to offer; support our Everyone's Essex objectives; protect the environment and current attractions in Essex; add value to jobs and income in Essex and broaden people's perspectives of our county.

f) Water (Lead Local Flood Authority)

3.7.17 ECC Local Flood Risk Management Plan (2018): The document aims to manage the risk of flooding in the region and inform all groups and individuals who may have an interest in, or an ability to influence or manage flood risk.

3.7.18 Our Water Strategy for Essex (2024): The document highlights some of the great work already being done across Essex to improve: water resources water quality.

It aims to provide an important starting point for more conversations around the risks and opportunities in Essex.

g) Infrastructure

3.7.19 The Developer's Guide to Infrastructure Contributions (2025): ECC has produced a developer's guide to infrastructure contributions which details the scope and range of contributions towards infrastructure which ECC may seek from developers and landowners in order to mitigate the impact and make development acceptable in planning terms.

h) Ecology and Biodiversity (Responsible Authority for the Local Nature Recovery Strategy)

3.7.20 The Local Nature Recovery Strategy (2025): The LNRS is a tool designed to drive nature recovery action and bring about benefits for nature and the wider environment. The improvement enhancement and creation of habitats can deliver multiple benefits. These benefits include, but are not limited to carbon capture, absorption of water to reduce flooding, protection of soil quality and agricultural production and provision of spaces for nature and wildlife. It identifies priority areas for habitat creation and species corridors.

3.7.21 ECC Rural Strategy (2016): The Essex Rural Partnership brings together organisations in the public, private and voluntary sectors to co-ordinate action on the major economic, social and environmental issues facing rural Essex.

3.7.22 Tree Management Plan (2023) and statements: Essex County Council is committed to managing, improving and extending its tree stock.

3.7.23 Essex Green Infrastructure Strategy (2020): Our strategy enables us to: protect, create, and improve green infrastructure for biodiversity and people improve connectivity and inclusivity, by supporting healthier, more active lifestyles contribute to economic growth. Locally, the Essex Green Infrastructure Strategy (2020) and Essex Green Infrastructure Standards (2022) promote multifunctional green spaces and nature-based solutions,

3.7.24 Essex County Council has commissioned two reports to evaluate the feasibility of requiring developers to achieve a 20% BNG, an increase from a proposed minimum 10% figure. These reports, funded by government grants, are to serve as an evidence base for advocating enhanced BNG.

3.8 District Level Local Plan, Neighbourhood Plan and Guidance

3.8.1 For reference, the County Council has provided below details of the adopted local plans for the districts impacted by the development.

3.8.2 The County Council would refer to each district's own LIR for further details of the policies within these plans and their relevance to this project, as well as any relevant neighbourhood plans or guidance documents. The table below demonstrates only the adopted Local Plans, although ECC would refer to each Council's LIR for further details of any emerging plans.

Area	Local Plan	Adoption date
Basildon Borough Council	Basildon District Local Plan Saved Policies 2007	Approved by the Secretary of State via a Direction issued on 20 September 2007.
Braintree District Council	Braintree District Local Plan 2033	Adopted on 22nd February 2021.
Brentwood Borough Council	Brentwood Local Plan 2016-2033	Adopted on 23 March 2022
Chelmsford City Council	Chelmsford Local Plan 2013-2036	Adopted 27 May 2020.
Colchester City Council	Colchester Local Plan (Section 1) 2013-2033 Colchester Local Plan (Section 2) 2017-2033	Adopted 1 February 2021
Tendring District Council	Tendring District Local Plan 2013-2033	Adopted on 25th January 2022
Thurrock Council	Core Strategy and Policies for Management of Development (Core Strategy)	Adopted 21 December 2011

4 Assessment of Impacts

4.1 The County Council sets out an assessment of the impacts arising from proposed development within this chapter of the LIR, split out into separate subject areas with mitigation recommended where necessary.

4.2 In Principle Strategic Objection

4.2.1 ECC from the outset of its engagement on this project, has raised an in-principle objection throughout all stages of consultation as set out in ECC's relevant representation (RR-1083). ECC maintains a strong position that its preferred strategic option for meeting the need for additional transmission capacity is that of securing an integrated offshore technology that minimises onshore transmission infrastructure and does not include overhead lines ("**OHLs**") and pylons along its entire length. ECC remains strongly of the view that a more sensitively designed scheme which minimises the predominant use of traditional overhead line technology, could deliver the best outcome for Essex in the interests of safeguarding the amenities of local communities and the environment.

4.2.2 ECC acknowledge that enhanced transmission infrastructure will play a central role in tackling climate change and in meeting Government targets in the lead up to net-zero by 2050. As part of the Great Grid Upgrade therefore, Norwich to Tilbury is recognised as a proposal that would contribute to the decarbonisation of the UK's energy supply, in accordance with the Clean Power 2030 Action Plan, helping to deliver the Government targets of net zero.

4.2.3 ECC also accepts that network reinforcement is necessary to accommodate the expected growth in demand for electricity taking account of the additional contracted / planned electricity generation in the East Anglia region, and that timing for the project is driven by the need for capacity in the transmission system taking account of the requirements of the National Electricity Transmission System Security and Quality of Supply Standard ("**SQSS**").

4.2.4 The Council is supportive of the national transition towards a low or zero carbon economy but considers the shift towards the delivery of low carbon energy will only be successfully achieved if developments such as Norwich to Tilbury can be appropriately located taking into account and suitably mitigating the very real impacts they have on the natural environment, landscapes and local communities within which they are situated. However, such national benefit should not be secured at the expense of local host communities, landscapes and environments that would be affected by such development.

4.2.5 ECC's in principle objection informing its preferred option and reflected in the comments of many residents, is founded on the significant impact a scheme based on the transmission of energy lines via overhead power cables will have on affected communities, the environment and the economy of Essex. The proposed technical solution involving overhead powerlines supported on pylons, would result in the introduction of a significant number of incongruous and intrusive features of industrial character into a predominantly open rural landscape; the effects of which would be permanent and due to the height and scale of the structures involved, cannot be successfully mitigated.

4.2.6 ECC notes that an offshore High Voltage Direct Current ("HVDC") cable solution would be more expensive than the preferred onshore solution with OHLs, although it would be less expensive than an onshore solution with underground High Voltage Alternating Current ("HVAC") cables, as set out by 6.3 Environmental Statement Chapter 3 – Alternatives (APP-127). Where proposed, the areas of undergrounding are supported due to the reduction of visual impact on sensitive landscapes, but the Council is conscious of the concerns regarding the visual impact of the remaining sections of OHLs. A more extensive combination of onshore and offshore technologies to mitigate the clear harm could therefore have been considered, beyond the areas of underground cabling currently proposed, to address the real and significant impacts the OHLs have on the natural environment, landscapes and local communities within which they are situated.

4.2.7 Supporting this concern, and as advanced in the Council's Relevant Representation (RR-1083), it is contended that there has been too great a reliance by NGET on the contracted energy generation position to identify the maximum requirement for additional transmission capacity in East Anglia. The Hiorns Report (as submitted to the ExA with the Norfolk County Council Relevant Representation (RR-2753)) identified that it is extremely unlikely that all of the contracted energy generation projects would come forward and/or connect at the volumes stated or dates contracted. It identified a need for sensitivity analysis to assess the likelihood of all contracted projects proceeding (either at all, or by the dates assumed). The report concluded that there was more time available to consider further analysis of potential options, including a potential offshore HVDC link, without prejudicing the development of offshore projects in the East Anglian region. It could not be concluded that the NGET proposal was the best option.

4.2.8 In response, NGET suggested it could not delay its reinforcement of the transmission network beyond 2030 without being in breach of its contractual and licence obligations. ECC has accepted the relevance of those contractual and

licence obligations. In so doing, the ECC response concluded that a further review of the contracted electricity generation was needed as part of the DCO submission.

4.2.9 ECC does not believe that NGET has provided any new evidence or sensitivity testing to refute the conclusion of the Hiorns report that the Norwich to Tilbury project is not needed by 2030. While ECC has had regard to the Transmission Entry Capacity ("**TEC**") Register in the submitted DCO, ECC considers it essential that in determining what future expansion is needed, more transparency is provided about the status of the contracted connections and the likelihood of those projects being ready to connect to the transmission network by 2030. The Applicant must not restrict the justification for future network expansion solely to the ESO contracted position.

4.2.10 This clarification of the contractual position to inform the need and timescale for the planned Norwich to Tilbury Project is still required. Until this is evidenced, ECC maintains its position that credible alternatives such as an offshore-centred approach or HVDC undergrounding, delivered at pace, to minimise onshore infrastructure in Essex should continue to be fully explored so as to minimise the visual instruction and environmental impact.

4.2.11 In summary, the current application proposes OHLs supported on 50m high lattice pylons, with targeted HVAC undergrounding primarily in the Dedham Vale National Landscape within Essex. As such, the scheme as put forward would have very significant impacts as set out in separate sections this local impact report. If indeed the timing for the network reinforcement is less acute, as suggested in the Hiorns Report, alternative schemes to the current lattice pylons scheme should be explored in more detail (such as offshore connections and HVDC undergrounding) to ascertain whether they would achieve better environmental outcomes overall than the current submitted scheme, at acceptable costs, and if so put them forward at pace to achieve the required network reinforcement instead of the submitted scheme.

4.2.12 Despite these in principle concerns, ECC considers the shift towards the delivery of low carbon energy will only be successfully achieved if developments such as Norwich to Tilbury take into account and mitigate the very real impacts they have on the natural environment, landscapes and local communities within which they are situated as well as on planned development such as Dunton Hills Garden Village. If the proposal is to receive favourable consideration it is important that appropriate levels of mitigation and legacy benefits are secured. In particular, alongside community benefits for local residents and communities, ECC strongly believes the Norwich to Tilbury project should deliver significant beneficial socio-

economic benefits to the host communities. ECC is concerned that this issue - and especially the associated social value opportunities around skills, training, and future employment - have not been fully addressed. NGET needs to address this significant shortcoming as a matter of priority. These concerns are set out in detail in section 4.8 of this LIR.

4.3 Dunton Hills Garden Village

4.3.1 In short, Dunton Hills Garden Village ("DHGV") is one of the most important strategic housing sites for Brentwood, Basildon and Thurrock. It will meet Town and County Planning Association ("TCPA") Garden City principles and be self-sustaining, while providing up to 4,000 homes, as well as key on- and off-site infrastructure such as new schools, health and community facilities and new public spaces. It will also provide job opportunities.

4.3.2 Brentwood Borough Council's Planning Committee resolved to grant permission for DHGV in November 2023 and outline planning permission will be granted once the complex section 106 negotiations have completed (addressed further below). The proposed route of the overhead power line runs along the eastern boundary (in Basildon Borough) and through the south eastern corner of the DHGV site. It is crucial that this impact be mitigated so that it avoids harmful impacts on the viability and deliverability of DHGV.

4.3.3 ECC understands that the Applicant agrees that mitigation of the impact on DHGV is necessary. ECC will keep close engagement with the Applicant to try to reach agreement on the nature and extent of the mitigation.

National Policy

4.3.4 The National Planning Policy Framework (2024) ("**NPPF**") requires Local Planning Authorities to plan positively for growth and identify appropriate land for homes (such as in paragraph 36). It promotes the delivery of healthy and safe communities, in particular through mixed-use developments (paragraph 96) and positively-planned community facilities (paragraph 98). It promotes well-designed places supported by necessary infrastructure and facilities (including the provision of a genuine choice of transport modes), where people will want to live (paragraphs 77 and 115).

4.3.5 In this regard, paragraph 11 of the NPPF sets out the presumption in favour of approving sustainable development proposals that accord with an up-to-date

development plan. This is consistent with the Government's objective of significantly boosting the supply of homes. Particularly relevant to the application of paragraph 11 (but also to other national policies, and further below), Brentwood Borough Council adopted a new Local Plan (2022) which contains policies for the development of DHGV, including Policy R01 (I) Dunton Hills Garden Village Strategic Allocation. As set out further below, this allocation was identified to meet the majority of Brentwood's housing need. DHGV is thus strongly supported by multiple NPPF policies.

4.3.6 Applications for NSIPs are primarily to be determined in accordance with relevant National Policy Statements ("**NPS**s") which will take precedence where there is conflict with any local policy. The strong need to mitigate the impacts of the project on the development of DHGV is consistent with the relevant NPSs.

4.3.7 It is of course recognised that as a matter of principle, overhead power lines are referenced in Government policy (NPS-EN5) as the starting presumption for electricity network developments. Nevertheless, paragraph 2.9.7 of EN5 acknowledges the effects of new overhead lines and that they can give rise to adverse landscape and visual impacts, with national policy supporting the use of alternative technological solutions in certain situations. While this is primarily aimed at protecting nationally designated landscapes, it does not preclude alternative solutions being promoted in other scenarios where adverse landscape and/or visual impacts may exist (paragraph 2.9.23) - such as would occur here, impacting on an important strategic housing development designed to secure high environmental, sustainability, health and well-being outcomes.

4.3.8 Moreover, the Government's position on energy infrastructure development as set out in the overarching NPS for Energy (EN-1), also recognises the importance of understanding and addressing landscape and visual impacts. Para 4.6.2 of EN1 states that:

"Applying 'good design' to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area."

4.3.9 Furthermore, Holford Rule 7 states that a new high-voltage route alignment should only be chosen after consideration has been given to the effects on the amenity of

"…existing development and proposals for new development." Rule 7 further states that when a new line needs to pass through a development area it should be routed to minimise as far as possible effects on development.

4.3.10 ECC contends that there has been no consideration of this Rule in relation to the proposed development at DHGV particularly given the fact the plans for DHGV were brought to the attention of the Applicant during the formative stages of the non-statutory consultation. Rule 7 of the Holford Rules also supports ECC's concerns regarding the effect of the proposed development on DHGV and the principle of mitigation.

Local Policy / Guidance

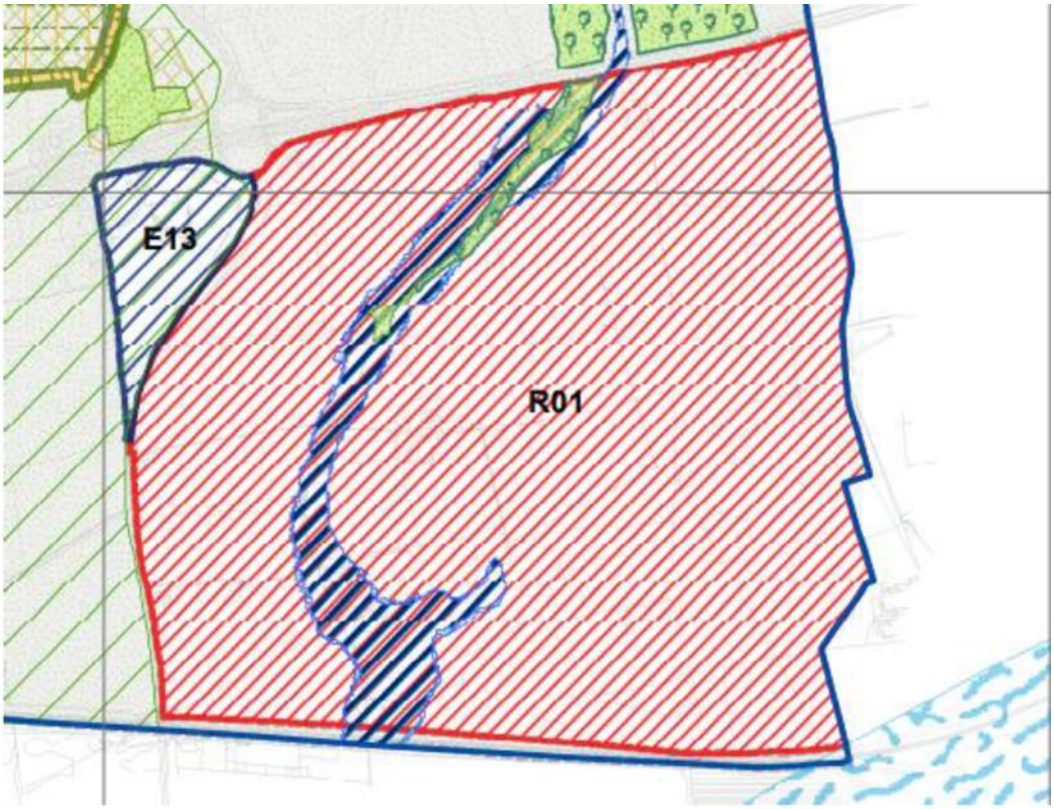
4.3.11 As set out above, the Bentwood Local Plan makes an allocation at DHGV which is designated to deliver circa 4000 new homes together with affordable housing and associated infrastructure to support a sustainable community. Due to the green belt constraints on new housing and development faced by Brentwood Borough Council, this strategic allocation (R01) is identified to meet the majority of Brentwood's housing need, within the Plan period and beyond.

4.3.12 In support of this policy objective, Brentwood Borough Council approved the Dunton Hills Garden Village Framework Masterplan in February 2020 (Appendix B) ("**DHFMP**") and the Dunton Hills Supplementary Planning Document in January 2023 (**"SPD**"). Brentwood is currently in the process of reviewing its adopted Local Plan.

4.3.13 The DHFMP and the SPD build upon the policies for the Strategic Housing Allocation at Dunton Hills (R01) set out in the adopted Local Plan. They also set out detailed design principles which are bespoke to the proposed garden village, providing a framework for how the policy requirements in the Local Plan should be translated into a well-designed and successful place.

4.3.14 In addition, the Local Plan requires that Dunton Hills Garden Village adheres to the principles of Garden Communities and that these principles should be "*an indivisible and interlocking framework for delivery with a focus of ensuring the development is design led and respects its landscape setting*" (paragraph 9.15).

Figure A – Illustration of Local Plan Designation
Source: Brentwood Borough Council Local Plan Policy Map (2022)



Source: Brentwood Borough Council Local Plan Policy Map (2022)

4.3.15 The adjacent Basildon and Thurrock Councils are also in the process of preparing new Local Plans to guide future development of their respective areas. This could include further growth between Basildon, DHGV and West Horndon, which would lead to a continuation of the area allocated for residential development at DHGV as part of what in effect is, a larger Garden Community as demonstrated by the joint Expression of Interest to the New Towns Task Force last year (Appendix A).

4.3.16 In this regard, land to the south of West Horndon was approved by Thurrock Council's Planning Committee on 10 Feb 2026 for 2,100 homes.

Figure B: Proposed Masterplan for development approved at Land South of Brough Boundary And East Of Dunnings Lane West Horndon Essex (24/01051/OUT)



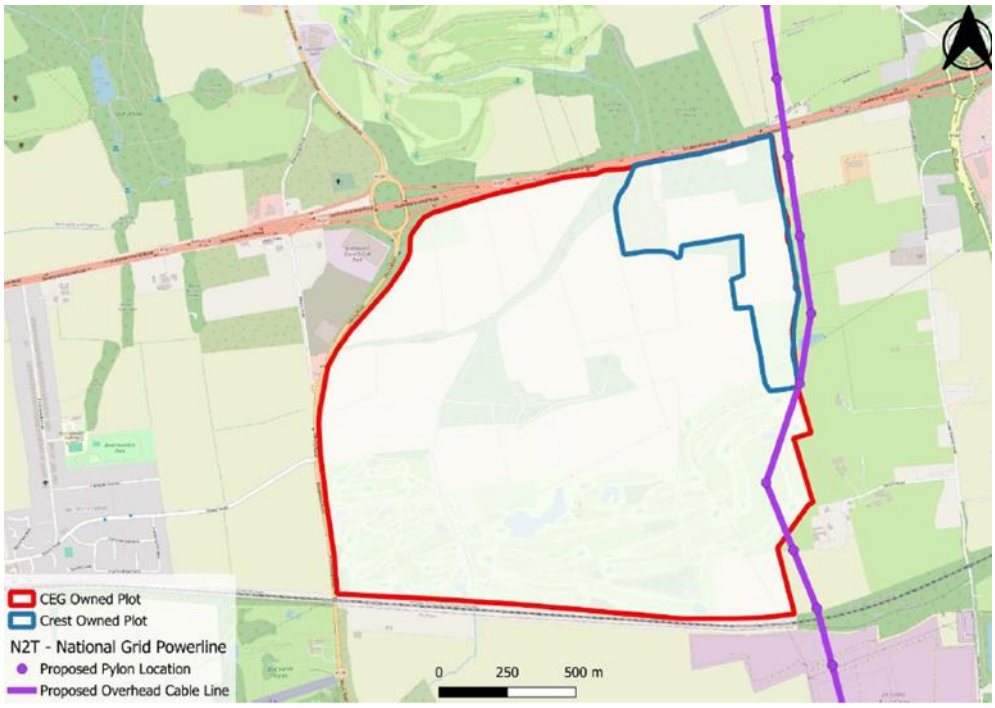
4.3.17 In addition, there are currently two live planning applications on land between DHGV and Basildon for c.500 homes.

i) 25/00541/OUT - Land West Of Mandeville Way Laindon Basildon Essex. Outline application for 375 dwellings
ii) 25/00171/OUT - Land At Wash Road Junction With Bridge Street Wash Road Laindon Essex. Outline application for up to 300 dwellings

Proximity of the Project to DHGV

4.3.18 The proposed route of the overhead power line runs along the whole of the eastern boundary (in Basildon Borough) and through the south eastern corner of the DHGV site (in Brentwood Borough), as illustrated below.

Figure C – Illustration of Route Alignment relative to DHGV. Source: Savills (2025), QGIS (2025). Note: landownership of red line area has been altered since this plan was produced – Land Improvement Holdings now control the majority of the site subject to a planning application.



4.3.19 The site extends to approximately 224 hectares, encompassing Dunton Hills Golf Course and surrounding agricultural land. The boundaries are defined by a combination of field hedgerows, watercourses, and local road networks, creating a semi-enclosed character while maintaining visual links to the wider landscape.

4.3.20 The wider landscape context is influenced by the Essex Fanns character area, typified by open arable farmland, hedgerow field patterns, and scattered woodland blocks.

4.3.21 Views from the site include long-distance panoramas towards London and the Thames Estuary, as well as local features such as church spires and historic farmsteads, which contribute to its rural setting. The proposed masterplan seeks to retain and enhance these qualities through green infrastructure corridors and integrated blue networks.

4.3.22 Topographically, the site is structured around a prominent east–west ridgeline, offering elevated vantage points and shaping the visual experience of the development. This is a key physical feature of the site and the impact arising from

the proximity of the route alignment is exacerbated by the elevated nature of the site relative to the route.

Planning History

4.3.23 An outline planning application (reference 21/01525/Out) for the development of up to 3700 homes on the majority of the site was presented to Brentwood Borough Council's Planning Committee on 29 November 2023. At that meeting, the Planning Committee resolved to grant outline planning permission for the development subject to planning conditions and a s106 legal agreement

4.3.24 Following the resolution, the completion of the legal agreement has been subject to detailed negotiations over a period of two years to ensure the viable delivery of new homes and infrastructure in accordance with garden village principles. This process culminated with Brentwood Borough Council's Planning Committee approving the detailed heads of terms on 29 July 2025.

4.3.25 Following the Committee's decision, the land changed ownership from CEG to Land Improvement Holdings ("**LIH**"), which has necessitated further negotiations to try and finalise the S106 agreement. Outline planning permission is therefore yet to be issued.

4.3.26 The ongoing viability of the scheme remains sensitive to factors that will impact on costs and funding streams, including property sales.

4.3.27 ECC is supportive of the Applicant's engagement with LIH. If an agreed position is reached, and once the detail of any agreement is shared, ECC will likely make further submissions of viability matters.

Locally Significant Effects

4.3.28 Formulation of the adopted Brentwood Local Plan, including the allocation of DHGV, pre dates the pre application process for the Norwich to Tilbury proposals. ECC and local authority partners made the Applicant aware of DHGV at initial project meetings. Within its consultation response, ECC highlighted the locally significant effects arising from the proximity of the proposed pylons and overhead power lines to the proposed residential development and the fact that the proposed route was encroaching into the site.

4.3.29 This important strategic site allocation therefore should have been fully taken into account to inform the evolution and design development of the Norwich to Tilbury

project and its routing. National Grid should have given significant weight to the effect of the pylon route on the overall deliverability of the new homes, infrastructure and environmental benefits at DHGV, which is in accordance with adopted local and national planning policy TCPA principles.

4.3.30 The Applicant should therefore have taken DHGV into account when designing the project, per the NPSs and Holford Rule 7, referred to in paragraphs 4.3.7 to 4.3.8 of this LIR.

4.3.31 ECC has reviewed the DCO submission, which makes limited reference to DHGV as a material consideration. The concern about the approach and weight given to the effect of the proposed development on DHGV remains. It is notable that the proposed OHLs extend into a heritage viewing corridor (part of the master planning of DHGV and referred to below).

4.3.32 The impact of the Norwich to Tilbury project and DHGV is set out in the following sections.

Garden Village Principles

4.3.33 The site was first identified by the Government in 2017 as one of several new Garden Villages across England and is one of a small number (14) that are included in Homes England's National Garden Communities Programme, to be both allocated and consented.

4.3.34 The objective of the Garden Communities Programme is to create distinctive, high-quality, sustainable communities, which go beyond the qualities of 'standard' housing developments, and which also meet housing needs while improving the quality of life experienced by residents. Having Garden Village status recognises the potential of the new settlement to embed garden city principles in a locally led vision for the site and the opportunity to develop a distinctive new place that is of high aesthetic and environmental quality, is attractive to live and work in and is a well-designed sustainable development which draws on strong references to the local area and surrounding environment. This translates locally into the DHGV Framework Masterplan and the DHGV SPD which set out mandatory and advisory principles to deliver the exemplar development required.

4.3.35 Based on the evidence set out below, the proposed alignment and consequential visual presence of the overhead powerlines along the eastern boundary of DHGV and encroachment into the southeastern corner of the development will significantly hamper the ability for DHGV to meet the garden village principles as

we as the mandatory design principles derived from the Framework masterplan. This would be to the detriment of achieving the policy objectives of a well-designed garden village development which respects and connects with its surrounding landscape.

4.3.36 It is evident that the purpose of a garden village designation is to create a special place informed by both the Dunton Hills Garden Village Framework Masterplan (2020) itself informed by TCPA's 'Understanding Garden Villages', and the Dunton Hills Garden Village SPD (2023). Furthermore, for those projects that are included in Homes England's National Garden Communities Programme, the prospectus published by the Government in 2018 stated that for designated developments, it should be all about setting: *"clear expectations for the quality of the development and how this can be maintained with the aim of achieving vibrant, mixed-use, communities where people can live, work, and play for generations to come – communities which view themselves as the conservation areas of the future."*

4.3.37 The Framework Masterplan Document sets out the vision for DHGV which has been established by a range of stakeholders through a comprehensive design review process. In order to ensure the vision for the new Garden Village is realised, a series of Mandatory Principles have been established. These Mandatory Principles relate to Land Use and Spatial Organisation; Vistas, Access and Movement, Landscape, Heritage, Density and Heights (as detailed below in paragraph 4.3.36). They reflect critical outcomes from the Design Review process undertaken with Design South East and seek to establish a robust framework whilst allowing sufficient flexibility for future detailed designs for the development to emerge.

4.3.38 ECC has therefore assessed the impact of the Norwich to Tilbury proposals on DHGV in respect of how the project will likely affect the deliverability of Mandatory Principles on which DHGV had been developed and adopted. To support this assessment, a report has been prepared from Place Services (Appendix C).

4.3.39 The report by Place Services identifies 14 criteria which were derived from the Key Mandatory Principles of the DHGV Framework Masterplan

4.3.40 The following mandatory principles are considered relevant:

a) Vistas, Access & Movement - Plan and narrative setting out key access points, routes and movement around the Garden Village. Key vistas are also established to safeguard the setting of the Farmstead, as well as promoting placemaking.

b) Landscape - Plan and narrative setting out key elements of landscape to be protected, retained and enhanced within the Garden Village as well as areas of landscape interface and play.

c) Heritage - Plan and narrative setting out how the masterplan must protect and enhance the existing heritage within the site, in relation to the historic farmstead and its setting as well as views to heritage assets in the site's immediate surroundings.

4.3.41 Of the 14 criteria assessed, 11 are considered to be affected by the presence of the Norwich to Tilbury Project. The report concludes that 8 would be partially impacted, with 2 of the principles not deliverable - the provision of a heritage viewing corridor and the provision of a play space. This assessment is summarised at Page 125 of Appendix C.

Provision of a heritage viewing corridor

4.3.42 A key design feature incorporated into the DHFMP is the retention of key views across the site, including those towards and between the Dunton Hills farmhouse, Church of All Saints and Church of St Mary. In particular, development in the foreground and middle ground must not occlude the views of the Church of St Mary from the viewpoint to the east of the farmstead and preserve the viewers' ability to recognise and appreciate the landmarks.

4.3.43 This has resulted in a heritage viewing corridor east to west across the southern end of the site - which influenced the masterplan and the detailed policy, guidance and restrictions around what development could take place within the corridor (for example, one of the primary school sites).

4.3.44 The retention of key views within the corridor, including those towards and between the Church of St Mary, just beyond the eastern boundary of the site so as to not occlude the view of the Church of St Mary from the development in the foreground and middle ground south-west of the site, is a key heritage design features incorporated into the Masterplan. However, the proposed alignment of the overhead powerline in the south east corner of DHGV would interrupt the safeguarded sightlines and adversely impact the view of the Church contrary to the stated design principle.

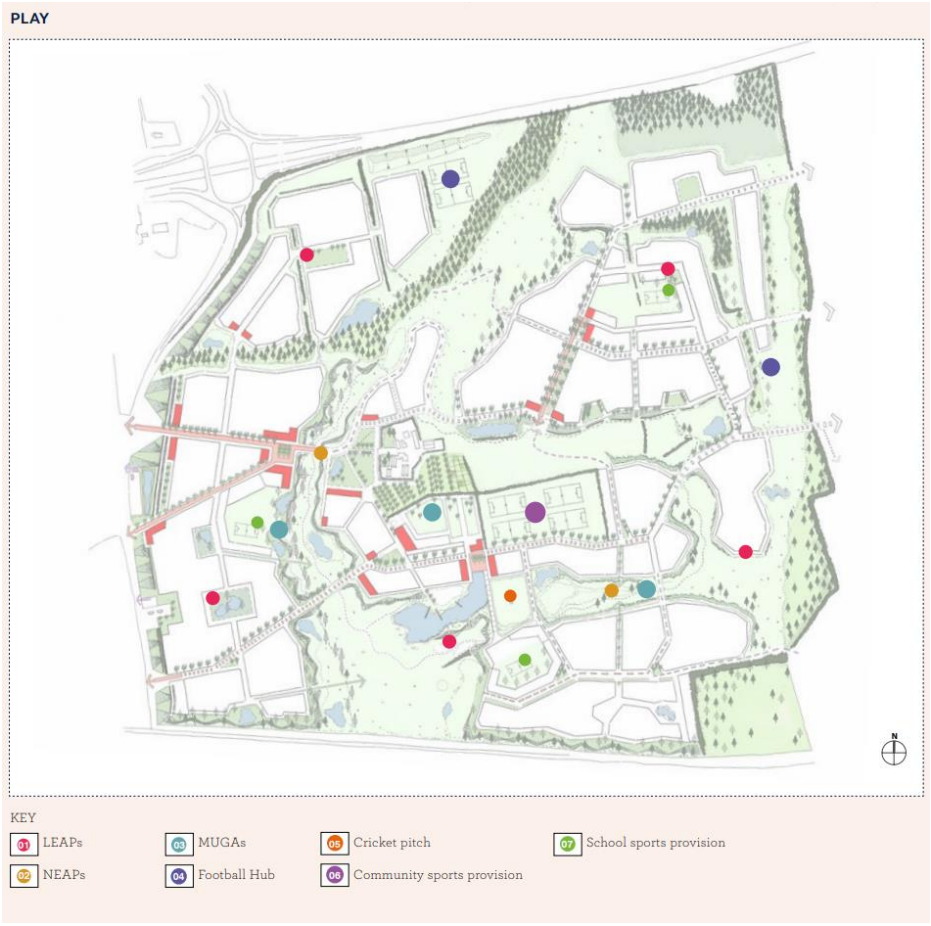
4.3.45 The key view relationship affected can be seen in Figure D below:



Provision of a play space

4.3.46 A Local Equipment Area for Play ("**LEAP**") is proposed in the location where pylon TB229 is proposed. Therefore, the proposed development would need to be amended to re-provide this play space and as a result, the Play Strategy would not be deliverable in full.

4.3.47 The location of the play space is illustrated in Figure E below (red dot bottom right)



4.3.48 ECC is also mindful that the DHFMP identified the requirement for an eastern boundary interface to be established formed through robust vegetation of native hedges, hedgerow trees and woodland, reinforcing and defining the Green Belt edge. This has a direct relationship with the route of the overhead powerlines which runs down the eastern side of the Dunton Hills development. Furthermore, in respect of the south area (labelled 'G' on Figure F) it is likely to have to respond to the proximity of the overhead powerlines, potentially affecting the robust nature of any planting and to the boundary with the adjacent green belt

Figure F Landscape Areas and Interface – Taken from Dunton Hills Framework Masterplan



Viability

4.3.49 As referred to in Para 6.2.16 of ECC's relevant representation (RR-1083), ECC commissioned Savills to investigate the impact of the pylons and overhead power lines on the planned viability and deliverability of DHGV: specifically, the impacts of the Norwich to Tilbury proposals on property prices and the Residential Gross Development Value ("**RGDV**") of the proposed DHGV scheme.

4.3.50 The report by Savills (attached as Appendix D) reviewed a range of published work relating to the impact of power lines on house prices, of which the 2023 paper 'Are Friends Electric' by Tang and Gibbons published by Centre for Economic Performance (part of the London School of Economics ("**LSE"**)) is considered to be the most relevant for the analysis of any effect on DHGV.

4.3.51 The LSE paper conducted two main pieces of analysis:

i) A Cross-Sectional study that looked at the values of homes in increasing distance bands from power lines, while also considering the voltage of the power lines, and whether they were visible or not. This study controlled for the type and prices of properties.

ii) A Difference-in-Difference ("**DID**") model that compared the values of homes at varying distances from new power lines before and after they were installed.

4.3.52 The DID model is the preferred and more robust approach because in comparing before and after effects, it looked at the differences in values with the installation of power lines as a variable. It also incorporates more sophisticated statistics to compensate for endogenous variables – i.e. variables that may affect both home values and powerline locations together, such as locations of rivers or landscape shapes.

4.3.53 Using the DID model, lower values were indicated closer to a newly installed powerline with values within 300m of a new powerline found to be on average 10.1% lower than those more than 1.5km away. Homes between 300m and 600m were found to 3.9% lower, those between 600m and 900m were 6.6% lower, those between 900m and 1,200m were 4.9% lower, and those between 1,200-1500 were found to be 0.2% lower.

4.3.54 It is acknowledged the cross-sectional study showed no effect of power lines on values at any distance irrespective of any variation in effect from difference voltages, or whether the pylons were visible or not. However, while each study had different results, ECC's consultants, Savills, consider the DID model to be the more applicable technique given its comparison of before and aftereffects, the fact that it analyses house prices near high voltage power lines in the UK and that it relies on a more detailed statistical approach. It is therefore considered to provide the most relevant results for Dunton Hills.

4.3.55 To further inform this analysis, Savills also conducted primary research into the effect of powerlines on new build values, looking at six recent new build developments that have power lines either running through, or directly adjacent to them. For each site, they examined how new build values (on a per square foot basis) have varied by proximity to the power line. The developments considered are Berryfields, Linmere, Marston East, Marston West, New Lubbesthorpe and South Bourne.

4.3.56 Due to the sample size being relatively small (in terms of total transactions analysis), the case studies did not find any conclusive evidence of whether there is a significant effect of power lines on new build house prices. Consequently, Savills consider the most relevant evidence for the impact on house prices comes from the 2023 LSE paper entitled 'Are Friends Electric'. However, to reflect the primary research, the analysis conducted by Savills for ECC considers two scenarios:

i) one based on the pricing impacts directly from the LSE study listed above (Option A), and;

ii) a second blended approach which uses a smaller pricing impact, influenced by the findings of the primary research undertaken (Option B). The percentages used in this blended analysis are reduced from those found in the LSE study as follows: homes within 300m of the power line have 5% less value and those between 300m and 1.2km have 2% less value. There is no impact on those properties beyond 1.2km.

4.3.57 Further information on the primary research conducted by Savills can be found in Section 4 of Savills' report attached as Appendix D.

4.3.58 Savills then applied the conclusions drawn from the aforementioned research regarding the impact of power lines on house prices to estimate the RGDV of the proposed DHGV scheme in light of the proposed line of Norwich to Tilbury line and its effect on the DHGV site.

4.3.59 The assessment undertaken by Savills is based on three scenarios:

- Scenario 1 - The Norwich to Tilbury line is not delivered
- Scenario 2 – The Norwich to Tilbury line runs through the subject site, with the cables undergrounded, and
- Scenario 3 – The Norwich to Tilbury line runs through the subject site, with the cables running overhead.

4.3.60 Option A and Option B were considered for Scenario 3. In more detail, the options are:

- Option A (Higher Impact) – Considers that properties within 0m to 300m of the Norwich to Tilbury line will see a 10% reduction in value; properties within 300m to 1200m of the Norwich to Tilbury line will see a 3.6% reduction in value, and properties over 1200m from the Norwich to Tilbury line will see no reduction in value.
- Option B (Lower Impact) – Considers that properties within 0m to 300m of the Norwich to Tilbury line will see an 5% reduction in value; properties within 300m to 1200m of the Norwich to Tilbury line will see a 2% reduction in value, and properties over 1200m from the Norwich to Tilbury line will see no reduction in value.

4.3.61 The conclusions reached by Savills on the effect on the estimated RGDV is summarised below:

Table 5.9 Residential Gross Development of the Three Scenarios

	Scenario 1 Value	Scenario 2 Value	Scenario 3A Value	Scenario 3B Value
CEG Site	£1.304 billion	£1.304 billion	£1.267 billion	£1.284 billion
Crest Site	£106 million	£106 million	£99 million	£102 million
Total	**£1.410 billion**	**£1.410 billion**	**£1.366 billion**	**£1.386 billion**

4.3.62 Scenario 3A (LSE study) results in a lower RDGV of £1.366 billion while Scenario 3B (Primary Research) results in a higher RDGV of £1.386 billion as a result of the smaller magnitude of impact.

4.3.63 It is recognised this could be viewed as a relatively modest impact on overall scheme value. However, it is important to factor in a ratcheting effect on changes in GDV and impact on land values and viability. Savills therefore anticipate a bigger impact on these variables. Together with other viability challenges reflecting the protracted and ongoing viability discussions, this would result in the scheme facing increased viability and deliverability challenges.

4.3.64 Significant planning contributions are expected to be delivered by DHGV in addition to an optimised policy level of on-site affordable housing delivery at 35% of total homes. Alongside a policy level of affordable housing, financial contributions sought as at 2021/22 are understood to be in the order of £20.9m (£5,650 per plot) plus £242m (£65,450 per plot) of infrastructure/S106 obligated sums.

4.3.65 Based upon the assumptions set out above, Savills' provisional review of the independent viability assessments carried out during 2021/22 on behalf of the developer and Council suggests that the introduction of overhead pylons has a material impact on residual land value with a reduction in the order of £17.5m to a policy compliant scheme.

4.3.66 The impact of associated site abnormal and infrastructure costs in comparing undergrounding to overheading the pylons does not however appear to have been afforded due consideration within the modelling carried out to date. More detailed consideration of both the overgrounding and undergrounding of pylons should therefore be considered in greater detail to inform formal decision making and referred back to Savills for review.

4.3.67 Despite a reduction in residual land value, the extent to which the scheme is deemed viable whilst supporting a policy level of planning obligations remains dependent upon BLV as shown within Table 6.1 and Table 6.2.

Table 6.1 Benchmark to £69.3m

Scenario	Description	Affordable	SLP RLV	MD RLV	SVB	Surplus / (Deficit)
1A	Pylons run overhead	Policy	£11m	£93.8m	£69.3m	£24.5m
1B		Nil Affordable	£13.1m	£139.2m		£69.9m
2A	Pylons undergrounded	Policy	£11.8m	£111.3m		£42.0m
2B		Nil Affordable	£14m	£158.5m		£89.2m

Source: Savills (2025)

Table 6.2 Benchmark to £101m

Scenario	Description	Affordable	SLP RLV	MD RLV	SVB	Surplus / (Deficit)
1A	Pylons run overhead	Policy	£11m	£93.8m	£101m	(£7.2m)
1B		Nil Affordable	£13.1m	£139.2m		£38.2m
2A	Pylons undergrounded	Policy	£11.8m	£111.3m		£10.3m
2B		Nil Affordable	£14m	£158.5m		£57.5m

Source: Savills (2025)

4.3.68 Development of this nature is highly sensitive to movements in both development revenue and/or costs with the impact of recent cost inflation considered material. Savills' assessment is reliant upon the third party viability assessments carried out during 2021/22 which are based on a set of point-in-time assumptions. Since this date there has been a material level of cost inflation equivalent to c.9.3%. This has greatly exceeded the standard House Price Index ("HPI") at c.1.9% over the same period to Q2 2025. The delta created between HPI and cost inflation will have impacted adversely on the viability carried out most recently in 2022 and any negative changes in viability could impact the provision of affordable housing and necessary infrastructure of this multi-phase DHGV development. Other material changes to the regulatory, environment and residential market in the form of building safety, Future Homes Standards, BNG and finance etc have also taken placed over the same period. The impact of such changes will have materially impacted on viability and should be taken account of at the relevant decision making stage.

4.3.69 At this stage therefore, the Savills report recommends that viability is held under continuous review to reflect any changes in the underlying assumptions pending the outcome of further viability negotiations which continue between the new developer Land Investment Holdings and the relevant Councils.

4.3.70 Savills' recommendation, which ECC accepts, is that ECC should continue to seek measures which mitigate the impact of the overhead powerlines and to secure an underground solution to minimise the viability and deliverability of both DHGV and emerging development proposals in Basildon Borough directly to the east.

4.3.71 Savills also advised that Authorities should be aware of the potential effect of the Norwich to Tilbury scheme on the development of land beyond DHGV. In particular, reference is made to draft policies E5 and H11 in the emerging local plan for Basildon Borough Council (a Regulation 19 consultation is expected to commence shortly concurrent with the examination process) which relates to potential new site allocations for development to the west of West Mayne in Basildon for the delivery of employment uses and up to 1,800 homes and associated infrastructure, respectively.

Housing Need

4.3.72 As highlighted in ECC's relevant representation (RR-1083) at Section 6.2, the strategic importance of DHGV for housing in Brentwood, Basildon, and the South Essex Housing Market Area, including the delivery of affordable housing and supporting infrastructure, must be acknowledged.

4.3.73 The need for Councils to plan for housing growth to meet housing targets responds to the Government's mission to kick start the economy by building 1.5 million new homes. While the Government's missions also seek to make Britain a clean energy superpower by delivering clean power by 2030, the latter does not override the former and the 'missions' should be mutually inclusive. ECC would therefore have expected all preferred draft alignments to have been informed by the relevant local development plans and specifically in relation to Basildon, the absence of an up-to-date local plan and five-year housing land supply.

4.3.74 The evidence submitted by the Applicant does not adequately demonstrate how the effect on housing delivery arising from the project has been taken into account to inform the project design across all stages. Further, the Applicant is not exempt from the need to balance route selection with good design and impact mitigation.

4.3.75 ECC is therefore disappointed to see that the opportunity to address this effect was not taken when undertaking targeted consultation in March 2025. Therefore, ECC remains of the opinion that the current proposals do not respond at all to the concerns raised in its response to the 2024 statutory consultation regarding the impact on DHGV by including revisions which would mitigate the impact.

4.3.76 Placing the route underground for the length that it runs through / alongside the Garden Village would accord with the principles of good design and minimise the impact, safeguarding the viability and deliverability of DHGV. If this is not feasible,

alternate pylon design should also have been considered alongside any identified mitigation to minimise the impact of the Norwich to Tilbury project.

*Conclusion*s

4.3.77 ECC is concerned over the absence of any baseline assessment undertaken by the Applicant in relation to the impacts of overhead line and pylon technology at DHGV. This includes the lack of application of the mitigation hierarchy, compensation, the likely locally significant effects arising from those impacts to the principles of the Garden Village and viability of this strategic housing allocation, including its supporting infrastructure.

4.3.78 The proposed Norwich to Tilbury route which runs along the eastern edge of the allocated site and cuts through this new settlement, clearly does not adhere to Holford rule 7. Furthermore, and exacerbated by the elevated nature of the site relative to the route, the proposed overhead powerlines and pylons offer no potential to enhance the quality of the landscape or the amenity of DHGV. ECC therefore maintains the proposed installation of overhead powerline along this section of the route will degrade the design principles of a Garden Village and considers it is highly likely to lead to a reduction in current and future land value and property prices, which will be to the detriment of the viability and deliverability of housing and infrastructure delivery.

4.3.79 As a result, ECC considers that the proposed alignment is contrary to the principles of good design and impact mitigation for energy infrastructure as required by NPS EN-1 and NPS EN-5. Furthermore, it also considers the proposals are contrary to garden community principles of Policy R01: Dunton Hills Strategic Allocation of the adopted Brentwood Local Plan 2016 – 2033 and that the 2024 preferred draft alignment materially undermines the local plan-making process in Basildon, Brentwood, and Thurrock to the detriment of housing and infrastructure delivery.

4.4 <u>In Combination Effects / Cumulative Effects</u>

4.4.1 Paragraph 17.1.2 of the Environmental Statement Chapter 17 (APP-281); Cumulative Effects defines “intra-project cumulative effects” (several different effects from the same project on a specific receptor or group of receptors) and “inter-project cumulative effects” (a specific receptor or group of receptors are affected by more than one project at the same time). The Norwich to Tilbury project has the potential to give rise to significant intra and inter cumulative impacts, affecting the communities and environment of Essex. Both types of effect are assessed in the Environmental Statement Intra-project cumulative effects

identified by National Grid are those caused by the project and therefore formally assessed within the Environmental Statement. Inter-project cumulative effects are those which are resultant of the combination of the Norwich to Tilbury project (this application) and other existing projects.

4.4.2 There are significant levels of growth and development proposed within Essex. For example, within the Tendring Peninsula, there are three NSIPs which are progressing – North Falls Offshore Wind Farm (EN010119), Five Estuaries Offshore Wind Farm (EN010115), and Tarchon Interconnector Project (EN0210009). There are also further NSIPs in other areas of the County as recognised in Annex F of the Rule 6 Letter (PD-009). Furthermore, there are a number of local and strategic level developments bringing forward residential and economic growth.

4.4.3 The cumulative impacts arising from this project relate to highways, landscape, public health, noise, and environmental matters.

4.4.4 Taken together, especially in the Tendring area, but all along the route, the proposals have the potential to lead to significant adverse effects on communities and the environment. It will be important for there to be coordination between ECC and all developers / key stakeholders for the effect on local communities to be managed and minimised. ECC emphasises upon the need for a Developers Forum, as set out in paragraph 4.4.29 to address cumulative matters and mitigation measures.

4.4.5 Mindful of the potential for in combination effects, it is crucial that respite, mitigation, and compensation is secured for communities and the environment affected by the development. ECC is therefore seeking substantially better controls within the DCO, other agreements, and the Management Plans to ensure appropriate levels of respite, mitigation, and compensation are delivered as part of the project.

4.4.6 Minimal information is available concerning the development programme for this project and how this relates to the timing for various other projects. Without this detail, it is more challenging to understand fully some of the possible cumulative impacts, as well as how these may be mitigated.

4.4.7 Whilst it may not be practicable to mitigate all impacts due to the scale of works and the project, ECC would expect to see all aspects of project design including implementation considered holistically by the Applicant to minimise the impacts, through proactive management and coordination and / or financial compensation packages.

4.4.8 Within this section, ECC sets out some of the key cumulative impacts which it considers will arise from the project and the need for ongoing collaboration to secure mitigation for the communities and environment of Essex.

Cumulative effects- Highways and Transportation

4.4.9 As previously highlighted, ECC has significant concerns around the cumulative impact of development on the local highway network arising from the overlap of construction periods for the identified NSIPs and Strategic Sites in Essex. In particular, ECC has limited control over the timing of the various projects resulting in both localised impacts (where multiple sites are implemented in close proximity) and further afield across Essex (where multiple sites use similar construction routes).

4.4.10 In Appendix 17.2 of the ES (APP-281), the list of committed development's in Essex is extensive with 59 planning applications identified of which 5 are NSIPs, and 3 are new Garden Communities. All of these have the potential to contribute to the in-combination effect on the operation of the County's highway network.

4.4.11 ECC have also identified a handful of sites that are in the planning system that have not be included in the assessment of cumulative impact affecting Billericay, Witham, and Great Notley. A summary of the sites is given in the table below:

Figure G – Summary of Development Sites – Billericay, Witham & Great Notley

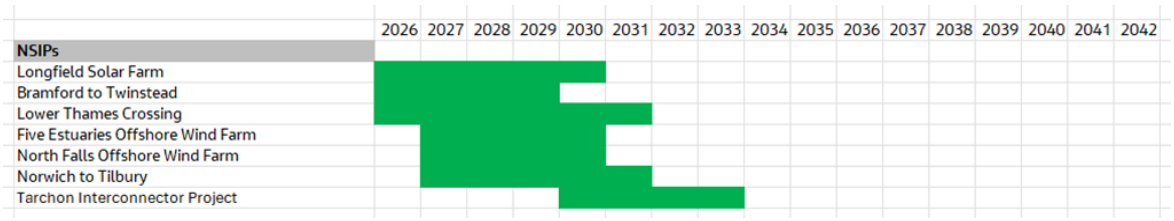
Site Location	Planning Ref	Description/Comments
Witham	19/01896/OUT	400 dwellings with new access affecting A12/Hatfield Road on NtT construction route.
Billericay	24/00980	130 dwellings. Awaiting decision.
Great Notley	23/02807/OUT	Phase 2, Hybrid Application for up to 55,000sqm employment. This is in addition to the LDO identified.

4.4.12 ECC has reviewed the latest information in the public domain on the delivery of NSIPs, Garden Communities, Strategic Sites and Major Sites, to ascertain the overlaps in construction programmes. Where information is unavailable for the Strategic Sites, ECC has made some assumptions over likely timescales and construction routes.

4.4.13 The following illustrates the cumulative impact based on what is known at this time.

Nationally Strategic Important Projects (NSIPs)

Figure H – Summary of NSIP Construction Programme



4.4.14 As can be seen, five other NSIPs are expected to active and coincide with the Norwich to Tilbury Scheme and for a period of three years between 2027 and 2030, this would include North Falls Offshore, Five Estuaries Offshore, Bramford to Twinstead and Longfield Solar Farm. Of these, North Falls and Five Estuaries alongside Norwich to Tilbury have focussed impacts on the Parishes of Ardleigh, Great Bromley, Little Bromley and Little Bentley. Furthermore, the proposed Tarchon Interconnector is another future NSIP planning to land in the Tendring Peninsula which although likely to start at the latter end of Norwich to Tilbury project, will have significant interventions in the Ardleigh area around the proposed EACN (although specific site locations are not yet defined).

4.4.15 Information extracted from the two offshore windfarms show the following Heavy Goods Vehicles ("**HGV**") around the Ardleigh area where there is an overlap in works on the LRN:

Table A – Number of HGV Movements by Project / Route

Project	**Route**	***No. of HGVs (two way daily)**
Five Estuaries	Bentley Road	214 (peak) – *taken from Drawing No. 8.14 in ES Chapter*
North Falls	Bentley Road	235 (peak), 135 (average) – *taken from Table 27.16 in ES Chapter 27*
Norwich to Tilbury	Bentley Road (PAR 30)	720 – *taken from Table A16.3.6 in ES Appendix 16.3 (Document 6.16.A3)*

**Information taken from Drawing No. 8.14 in ES Transport Chapter for Five Estuaries; Table 27.16 in ES Chapter 27 for North Falls; and Table A16.3.6 in ES Appendix 16.3 (Doc. 6.16.A3) for Norwich to Tilbury.*

4.4.16 Whilst there is a direct overlap of construction works in Ardleigh on the Local Road Network ("**LRN**") there will also be overlaps on the Strategic Road Network ("**SRN**") will mean additional impacts on overall journey times for road users around Essex. Information extracted from the two windfarms, show the following HGVs on the SRN network in the table below. Furthermore, if projects such as Tarchon Interconnector progress, this could lead to further construction traffic accessing the highway network.

Table B – Number of HGV Movements on SRN Network by Project

SRN	****Five Estuaries**	****North Falls**	**TOTAL**
A120 (between Harwich and A120/A133)	482	494 (peak), 381 (average)	863 - 976
A133	194	265 (peak), 177 (average)	371 - 459
A120 (between A120/A133 and A120/A12)	676	494 (peak), 381 (average)	1,057 - 1,170
A12	241	**494 (peak), 381 (average)*	*622 - 735*

**Assumed on the basis of traffic on A120 between junction with A133 and the A12*

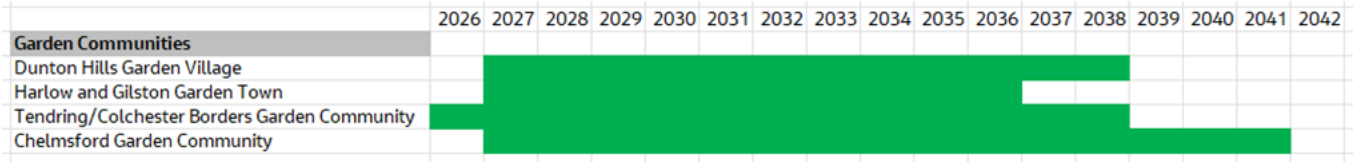
***Information taken from Drawing No. 8.14 in ES Transport Chapter for Five Estuaries; and Table 27.16 in ES Chapter 27 for North Falls as whilst the NtT application includes the cumulative impact it doesn't disaggregate flows to show specific sites.*

Garden Communities

4.4.17 Essex currently has four Garden Communities planned to develop over a period of 10+ years. All indicate they will be taking place during the Norwich to Tilbury construction period of 2027-2031 and ECC considers the ES does not take the cumulative impacts into account. There is no detail on the construction routes to be used for the Garden Communities, however a review of the locations show it is highly likely construction access routes for HGV's will overlapping the Major Road Network ("MRN") and SRN. Again, this will mean additional impacts on overall journey times for road users around Essex.

4.4.18 The following is a summary of the potential overlap of impacts associated with the Norwich to Tilbury construction routes and the Garden Communities:

Table C– Garden Communities Construction Programme



Tendring/Colchester Borders Garden Community (Horsley Cross)

4.4.19 ECC considers there is significant potential for construction workers staying/living in Colchester and travelling to the Norwich to Tilbury compound in Ardleigh to use minor roads which area also serving as the construction route for the Colchester Garden Community. This demonstrates the importance of ensuring that workers are travelling to the Norwich to Tilbury compounds outside of the peak hours and that any local deliveries use the A120 and the designated Primary Accesses Route ("PAR") of Bentley Road rather than shorter routes on local roads. ECC also considers it is of critical importance that sustainable travel is promoted through suitable measures in the Construction Workers Travel Plan.

4.4.20 ECC is also concerned that there will be cumulative impacts on the highway network from creation of the A1331 junction onto A120.

Dunton Hills Garden Village

4.4.21 This development would result in an overlap of off-site works at the junctions of A127/A128 and West Mayne/A127, together with pedestrian/cycle improvements along A127 corridor between the two aforementioned junctions associated with DHGV. The agreed trigger points in the planning consent are:

- 1,150 residential occupations for West Mayne/A127 (highway improvements and new crossing at West Mayne) and pedestrian/cycle improvements along A127 corridor;
- 1,900 residential unit occupations for pedestrian/cycle infrastructure improvements at A127/A128; and
- 2,650 residential unit occupations for highway improvements at A127/A128 if required following monitoring.

4.4.22 On the basis of the above trigger points, ECC understands these are likely to occur during the periods 2032-2033, 2035-2036 and 2037-2038, respectively. Therefore, although construction works for Norwich to Tilbury on the current programme would be completed before the off-site works at West Mayne/A127 and along the A127 corridor commence, any delay with the current programme could have an adverse in combination impact. It will be important therefore, to keep this under review.

Chelmsford Garden Community

4.4.23 This development would result in an overlap of construction traffic using the A131 between Braintree and A130 as well as strategic traffic using the A12 and A120, and A120/A131.

Harlow and Gilston Garden Community

4.4.24 The Harlow and Gilston Garden Community is on the western edge of Essex and does not overlap with the Norwich to Tilbury scheme and so will have no impact on the local highway network.

Garden Community Summary

4.4.25 The ES (APP-281) acknowledges that three of the four Garden Communities have the potential to contribute to in-combination cumulative effects due to the scale and nature of the development. ECC therefore considers it is important that these

are reviewed as part of the updates to the Construction Traffic Management Plan ("CTMP") (APP-309) produced by the Contractor post any consent and that there is evidence of pro-active engagement through a Developers Forum (to be discussed later in this report) to minimise impacts through focussed interventions and flexibility with programming to take account of wider works.

Strategic Sites and Clusters of Major Sites

4.4.26 The following table sets out the strategic sites and clusters of major sites that are currently in the planning system:

Table D – Summary of Strategic / Major Site Development Project Status

Project	Location / District	Development size and type	Stage	Construction timeline
Chelmsford Garden Community	2 major development sites	250 new homes	Approved/pending decision	Anticipated 2026 - 2028
Hayeswood	Braintree	1,750 new homes	Planning permission granted	Anticipated 2026 - 2029
Great Leighs	Chelmsford	750 new homes plus school, childcare centre, business, and retail uses and an 80-bed residential care home	Planning permission granted in July 2025	Anticipated 2026 - 2029
Horizon 120 Business Park, Great Notley	Braintree	55,000sqm of employment land, hotel, and childcare facility	Planning permission granted	Anticipated 2026 - 2030
Colchester	5 major development sites	800 new homes and one food storage and distribution facility and one business units' development	Approved/pending decision	Anticipated 2026 - 2030

Braintree	4 major development sites	1,050 new homes and up to 2000m2 of employment floorspace	Approved/pending decision	Anticipated 2026 - 2030
Billericay	8 major development sites	1,060 new homes, one new food store South of London Road and work to Laindon Road / A176 / Noak Hill roundabout	Approved/pending decision	Anticipated 2026 - 2030
Thurrock	4 major development sites	1,810 new homes and 44,000 sqm of employment land development	Approved/pending decision	Anticipated 2026 - 2030
Thames Enterprise Park	Thurrock	3.7 million square feet of commercial space	Awaiting Decision of additional phases	Anticipated 2026 - 2038
Brentwood Enterprise Park	Brentwood	4 major industrial units providing 112,000 sqm of floorspace and offices	Planning permission granted in June 2025	Anticipated 2027 - 2030
Hedgehog Grove Solar Farm	Braintree (Bannister Green)	EN01 - Generating Stations	Application to be submitted in 2026	Anticipated 2027 - 2030
Hartley Gardens	Clacton Tendring	1,750 new homes	Application to be submitted in 2026	Anticipated 2027 - 2030
Warren Farm	Chelmsford	880 new homes	Planning Permission	Unknown– could happen

			granted for site access and Phase 1	during construction of NtT
Witham 19/01896/OUT	Braintree	400 dwellings in Witham with new access affecting existing A12/Hatfield Road	Outline planning permission granted	Unknown – could happen during construction of NtT
East Chelmsford Garden Village (Hammonds Farm)	Chelmsford	4,500 new homes	Allocated in the Local Plan. Master planning	Unknown– could happen during construction of NtT
South Maldon Garden Suburb	Maldon	2,600 new homes and 4.5ha of employment land	Allocated in the Local Plan. Master planning	Unknown– could happen during construction of NtT

4.4.27 There are 16 strategic sites or clusters of major sites across Essex of which 12 are anticipated to develop over the construction period of Norwich to Tilbury. The remaining four have unknown timescales but there is potential for them to overlap with the Norwich to Tilbury construction period too.

4.4.28 It is also worth noting that additional detail is emerging on Local Plans in Tendring and Basildon which are within proximity of the PARs. The site allocated for a Garden Community in Tendring at Horsley Cross (located on the Colchester / Tendring Border) is the next junction along on the A120 from the Bentley Road junction which relates to PAR30 is close to the proposed EACN Substation at Ardleigh where there is a concentration of NSIPs. The timescales for the Garden Community are unknown and may not overlap with the construction works for Norwich to Tilbury on the current programme. However, any delay with the current programme for Norwich to Tilbury in combination with a developer bringing the Garden Community forward in advance could have an adverse localised cumulative impact. It will be important therefore, to keep this under review.

Developers Forum

4.4.29 Given the amount of concurrent development, it is essential that there is some level of management and control for ECC to facilitate coordination and reduce the cumulative impact of construction vehicle movements. ECC identified in the Relevant Representations how this could be achieved through a combination measure including:

i) the Applicant following ECC's Permit Scheme so that as the Highway Authority (ECC) can manage road space bookings; information on the detailed programme being shared through the updated Construction Traffic Management Plans and;

ii) requesting a commitment from the Applicant to join and positively engage with a Developer's Forum. ECC has sought to highlight examples of where there are clear overlaps with other development but as programmes change, and more detail on the construction routes for the various garden communities and strategic sites are identified, it is considered important that the Developers / Applicants and its Contractors are flexible to adapt to changing conditions.

4.4.30 ECC would recommend the following approach for the Developers Forum:

- The Developer's Forum would be a regular monthly online meeting chaired by ECC with key members of the other NSIP Teams invited as well as other Strategic Site Teams, alongside relevant members of the Local Highway Authority and Planning Authority
- The Forum would be attended by National Grid as scheme promoter alongside their Main Contractor(s) constructing the scheme
- Assuming Norwich to Tilbury were to get planning consent, we anticipate the regular monthly online Highway Update meetings would take place as soon as consent was granted
- ECC anticipate at critical times where programmes overlap that there may be a need for more regular weekly or bi-weekly meetings for urgent discussions on collaboration

4.4.31 ECC would request that the Applicant commits to funding the time spent by ECC in organising and chairing the meetings of the Developers Forum over the life of the construction period for Norwich to Tilbury. Assuming monthly online meetings over a period of 4 years of construction for up to three members of ECC staff and an allowance for 6 months' worth of weekly meetings to take account of critical periods in the construction programme, ECC would suggest a cap of £45,360

against which a meeting rate of £105 per person is drawn down (+allowance for indexation). Any additional meetings beyond the cap would be charged at £105 per person required due to delays in the programme. ECC will look to claim for hours and time spent on all for post consent work, including the discharge of any requirements which may be attached to any consent, as it is our published policy intent to operate at cost neutral on all aspects in the NSIP process. It is anticipated that attendees from the Local Planning Authority or other public bodies (for example, the police) for the particular area discussed would also need to agree an attendance meeting rate and financial repatriation.

4.4.32 An important aspect of the Forum would be the attendance of the Applicant as undertaker of the scheme (National Grid) so that an overview of the project works can be provided. It is key to have the promoter of the scheme alongside the Main Contractor(s) constructing the scheme. ECC has found from experience that having multiple Contractors dealing with different parts of a DCO has resulted multiple meetings duplicating the same issues with different people involved rather than a co-ordinated approach with people that have an overview of the whole project as well as the detail necessary for certain aspects. ECC would highlight that co-ordination and co-operation would be beneficial to all engaged in the NSIP process.

*Cumulative impacts - Abnormal Indivisible Loads ("**AIL**")*

4.4.33 Another major concern around the cumulative impacts not adequately dealt with in the ES is how the number of AILs will be managed such that multiple loads are not taking place on any one day, or indeed that there is a high number of daily AILs generated by the project during an intense period. The Norwich to Tilbury scheme is proposed to generate a total of 960 AIL movements (see table below) to the compounds There are also an additional 4 No. AILs proposed for the large mobile crane deliveries on each PAR throughout Essex, that are not included in the table below:

Table E – Number / Duration of AIL Movements by Location of Compound / Total

	Total Movements (PARs)	**Weekly Movements (PARs)**	**No. of Weeks (Programme)**
Langham Hall Compound	420	20	29
Birchwood Road Compound	296	24	19
EACN	160	27	38
Great Horkesley	72	12	6

Fairstead Compound	12	4	6
TOTAL	960	87	98

4.4.34 There are a total of 960 movements associated with AILs over a period of 98 weeks of which 358 (half of 716) involve a 'u' turn at A120/A12 interchange for entry into Langham Hall and Birchwood Road compounds (taken from the AIL Access Strategy at Appendix A of the Outline CTMP (APP-310). In addition, 284 (half of 568) AIL movements to the Holton St Mary compound in Suffolk involves 'u' turns at A120/12 interchange if the Ipswich Port is used.

4.4.35 The two offshore windfarm NSIPs with onshore works on the Tendring peninsula do not include the number of AILs in their documentation with both stating they will be using routes to the EACN Substation in Ardleigh. Therefore, the number of AILs travelling through Essex County on the strategic network and then on the local road network leading towards Ardleigh (using the A120/Bentley Road) to access the EACN will be significant more than show in the aforementioned table and will have a substantial impact on road users and residents for a sustained period.

4.4.36 A further unknown at this stage is the impact from the Tarchon interconnector NSIP that is at pre application stage. The works for this including necessary AIL's could also possibly overlap with the other NSIPs if there are delays to some of the forthcoming projects.

4.4.37 ECC has therefore requested confirmation from the Applicant in its Relevant Representation (RR–1083) that they are in consultation with the police and local highway authority, to limit the number of AIL's and prevent the cumulative impact of multiple AILs taking place on any one day. ECC does meet with the police and blue light services on a regular basis to discuss NSIP projects and understand they will also be providing evidence into this Examination. It is recognised that the concentration of AILs on the local road network will provide significant and lasting impacts on Essex Police which will need proper planning and receive significant financial support.

4.4.38 There are a number of points of clarity that will impact on this – including when the AILs will be travelling (overnight or during the hours of daylight) and issues identified on the strategic highway network (A12). These specific points are dealt with later on in the text in more detail.

4.4.39 It is noted that the current process for agreeing AIL routes does allow the Local Highway Authority to place conditions on AIL applications and as such, ECC will use this to manage the impacts on the local highway network – particularly in terms of the number, timing and frequency of movements. ECC are aware that the Essex Police have limited resources to escort AILs which will likely reduce the ability for multiple AILs to be on the network on any one day and indeed Essex Police have confirmed that in any event, they generally restrict movements to one per day. ECC is also aware that there is a current embargo on AIL movements covering Ipswich Port which restricts movements during the hours of darkness. ECC would prefer AIL movements to be undertaken on the network at quietest times which is likely to be at night and so the choice of port and associated route will have an impact on the operation of the network.

4.4.40 Having reviewed the submitted information, it is considered further commitments are needed from the Applicant for inclusion in the outline CTMP (APP-309); AIL Access Strategy (APP-310); OCoCP (APP-301); Community Engagement and Public Information (APP-305) to provide information to residents, businesses and road users so they can plan their journeys and avoid delays as follows:

- Variable Messaging Sign boards to be implemented at locations agreed with the Local Highway Authority
- Communication strategy to include clear information for the general public on what AILs are, why they are needed and how they impact the local / strategic road network, with the purpose of providing a co-ordinated way for people to find out how their journey will be impacted in Essex without needing to consult multiple sources of information
- Distinction in the communication strategy across the various documents between what the Contractor will implement and what National Grid will implement; and including a summary of the high-level principles for both the localised impacts and wider impacts combined with the AIL communication strategy within each document

4.4.41 The AIL Strategy shows routes using the A12 strategic highway network and confirms National Grid are in discussions with National Highways. ECC have not been party to these discussions or with other stakeholders on the routes provided, save for the views given based on discussions with Essex Police above. However, it is understood that National Highways have restrictions on the A12 in the Colchester area at three locations – i) over the rail line north of A12, J27; ii) the bridge connecting the two roundabouts at the interchange of A12, J28; and iii) A120 slip road bridge over the A12. ECC is concerned that if the A12 cannot be used for the AILs then the Applicant may put forward a route through Colchester Town Centre.

ECC would strongly oppose this route being used due to the level of disruption through the town and surrounding highway network.

4.4.42 With reference to the potential impact of a route for AIL's through Colchester Town Centre, there are multiple technical issues to note:

- It is not clear that there is a viable route through Colchester in terms of road widths, and height restrictions.
- There are multiple structures through Colchester that require assessment. ECC have identified a number that require intrusive investigation works which are due to be undertaken shortly to avoid forthcoming major works.
- Major road works are planned in Colchester at St. Boltoph's Street which would impact on any AIL route proposed through the city;
- The maintenance regime of this route would be impacted by the AILs – not only the road construction but also the structures along it. Therefore, it would be an additional financial burden to ECC if it were used.

4.4.43 ECC have contacted National Highways and understand the restrictions on the A12 are as a result of structural assessments that have taken place. Therefore, these are not assumptions that have been made on the viability of using the structures but actual analysis. ECC continues to highlight its concerns to the Applicant and that further work is needed to discuss the restrictions with National Highways to find a suitable way forward using the strategic highway network rather than the local highway network though Colchester Town Centre.

4.4.44 National Highways have advised that a possible solution they are considering is for AIL's to have smaller partial loads together with lane closures on the A12 to minimise loading on the bridge. Partial loads would however mean more AIL vehicles on the network and would be an even greater impact for those using the A12 route and road users in Essex. More discussion is therefore needed around what is acceptable to both National Highways and ECC, as well as the Applicant.

4.4.45 At present, the Applicant has been discussing the AIL routes with individual parties to gather intel but there needs to be a co-ordinated approach to ensure there are acceptable AIL routes for the scheme. The concern is that other locations have similar issues that impact on route choice through Essex. The co-ordinated approach should include discussions with all the local highway authorities (Thurrock, Essex, Suffolk, and Norfolk), National Highways and Network Rail along with input from the police.

4.4.46 While there has been engagement with the Applicant's team on the status of structures along the AIL routes proposed, ECC would expect this review to have been completed prior to the end of the Examination so that workable AIL routes are defined. The following table sets out the specific locations of structures where ECC currently have concerns on the local highway network and which ongoing liaison is taking place with the Applicant's team:

Table F – Location of Concerns for Proposed AIL Movements

Route Reference	X	Y	Location	Vehicle	Bridge
H33-A1	568381	191080	Noak Hill Road, Basildon	Crane	Noak Hill 384
H32-A1	562418	196984	Roman Road, Brentwood	Crane	Chain No 0155:
H29-A2, H30-A1	568881	205156	Greenbury Way, Chelmsford	Crane	First No 790
Added by ECC	568124	205360	Greenbury Way, Chelmsford	assumed crane	Hylands Subway 793
Added by ECC	568256	205313	Greenbury Way, Chelmsford	assumed crane	Sandy Brook culvert No 792
Added by ECC	569380	205102	Greenbury Way, Chelmsford	assumed crane	Queensway Ref: No 794:
H28-A2, H29-A1	569823	206789	Waterhouse Lane, Chelmsford	Crane	Waterhouse Lane No 661
Added by ECC	569831	206806	Waterhouse Lane, Chelmsford	assumed crane	Rainsford Lane Subway No 1668
H28-A2, H29-A1, H28-A2, H29-A1	567539	207571	Roxwell Road, Writtle, Chelmsford	Crane	Two No 125

H29-A1	565955	208202	Vicarage Road, Chelmsford	Crane	Blackwell No 652
H28-A1	570590	212979	Blasford Hill, Little Waltham, Chelmsford	Crane	Langelys No 660
H25-A2, H26-A1, H27-A1, H28-A1, H25-A2	572452	216849	A131, Chelmsford	Crane	Rochester Farm Accom Bridge No 1614: check height
H25-A2, H26-A1, H27-A1, H28-A1, H25-A2	572613	217415	A131, Chelmsford	Crane	School Lane No 1610: check height
H25-A2, H26-A1, H27-A1, H28-A1	572796	217690	A131, Chelmsford	Crane	Chaseside FB No 1611: check height
H20-A2, H21-A1, H22-A1	594650	225301	Halstead Road, Colchester	Crane	Brickstables No558
H20-A2	592903	227111	Fiddlers Hill, Colchester	Crane	Lower Mill No 458
Added by ECC	599606	229022	Via Urbis Romanae	assumed crane	Axial Way underpass No 4191
H14-A1	603629	232658	Ipswich Road, Dedham, Colchester	Crane	Blackbrook:181
H28-A2, H29-A1, H29-A2, H30-A1	569170	204551	London Road, Chelmsford	Crane	Widford Culverts No 739
Added by ECC	569162	2045687	London Road, Chelmsford	assumed crane	Widford No. 379

Added by ECC	568366	203158	Three Mile Hill Chelmsford	assumed crane	Killigrew No 161
H31-A1, H32-A1	566641	201498	B1002, Ingatestone	Crane	Margaretting no 159
H25-AIL3, H25-AIL4, H25-AIL3, H25-AIL4, H25-AIL3, H25-AIL4	572613	217415	A131, Great Leighs	Cable Drum	School Lane No 1610: check height
H14-AIL1, H14-AIL2	603629	232650	Ipswich Road, Colchester	Cable Drum	Blackbrook no 181
H13-AIL2, H14-AIL2, H16-AIL2, H17-AIL1, H19-AIL1, H25-AIL3	624105	232125	Parkeston Bypass, Harwich	Cable Drum + Transformer	Dovercourt Dock River No:4077
H13-AIL2, H14-AIL2, H16-AIL2, H17-AIL1, H19-AIL1, H25-AIL3	624536	231878	A120, Harwich	Cable Drum + Transformer	Phoenix Bridge No 716.
H13-AIL2, H14-AIL2, H16-AIL2, H17-AIL1, H19-AIL1, H25-AIL3	623980	231783	A120, Harwich	Cable Drum + Transformer	Bathside 0715
H32-A1	569211	190127	A127	assumed crane	Basildon Flyover 519: check height for return
H32-A1	567632	193917	Southend Road, Billericay	assumed crane	School Road 269
H32-A1	566270	195640	Southend Road, Billericay	assumed crane	Hanakin no 2058
H32-A1	564757	196289	Mountnessing Road, Billericay	Crane (+HGV)	Lawness No 0234

4.4.47 The AIL Strategy Document should be updated to reflect the frequency of inspections undertaken by ECC as this is currently incorrectly noted. ECC undertake General Inspections every two years (not annually as stated by the Applicant) and Principal Inspections (PIs) are carried out based on a risk based assessment where intervals vary between 4 – 12 years (not every 6 years as stated by the Applicant). The Applicant should satisfy itself of this risk in relation to the AIL routes using these structures.

Existing Roadside Facilities

4.4.48 The availability of existing roadside facilities to support HGV movements and drivers is another point of concern around the cumulative impact. The pressures on these facilities around the UK are well documented with the Road Haulage Association, and the independent watchdog Transport Focus both highlighting lack of quality and capacity for facilities across the country. Due to the number of NSIPs and Strategic Sites in Essex and the wider eastern region under construction at the same time, there will be an increased pressure on these limited facilities.

4.4.49 The Lorry Driver Facilities Survey undertaken by Transport Focus (November 2024) (Appendix E) shows that less than four in ten were satisfied with the number of stopping places available in the UK. The report mentions that satisfaction among those that run logistics businesses is even lower and states that when no services are available drivers can be forced to park in laybys or industrial estates which frequently lack basic amenities like toilets and have little to no security

4.4.50 Transport Focus have identified the issues through research and are bringing together government and industry to develop a long-term solution. However, it is unclear how quickly this issue will be resolved and, in the meantime, local highway networks will often be used for drivers to find places to park and rest.

4.4.51 ECC identified in its Relevant Representations (RR-1083) that the issue of additional impacts created by the unprecedented number of HGVs associated with the NSIP on the lack of existing facilities should be examined in more detail by National Grid. ECC's concern is that more HGVs will seek to find laybys or other locations close to the construction routes either parking inappropriately or adding pressure to existing locations used by HGV drivers. In relation to inappropriate parking, the concern is that this potentially compromises not only highway safety for all highway users but also will cause damage to verges due to the rural nature of parts of the PARs and accesses to the compounds. ECC believe that laybys, industrial

estates, or local roads close to the strategic network may become impacted and possibly inappropriate locations used along the construction routes affecting the free flow and safety of the highway network.

4.4.52 At present, the Applicant has been discussing the AIL routes with individual parties to gather intel but there needs to be a co-ordinated approach to ensure there are acceptable AIL routes for the scheme. The concern is that other locations have similar issues that impact on route choice through Essex. The co-ordinated approach should include discussions with all the local highway authorities (Thurrock, Essex, Suffolk, and Norfolk), National Highways and Network Rail along with input from the Applicant.

4.4.53 ECC would request that the dDCO secures that the Applicant must prior to the start of the works review proposed arrangements so that they can be based on the situation as it is at the time and any potential mitigation needed can then be identified. ECC's preferred approach would be for this work to be considered through parking usage surveys for laybys and industrial estates where clusters of HGV parking is identified, along with observations of other local roads where HGV drivers park and rest. This would be in areas on the local highway network along or within close proximity to the construction routes to determine any potential HGV parking issues. ECC suggest that the surveys would need to be undertaken prior to the start of works with possible mitigation considered in advance of construction works where necessary. Depending on the results, the mitigation could either be implemented or a monitor and manage approach adopted with regular reviews at the key locations undertaken during the construction period. An example of one known location is where HGVs Park on Mountnessing Roundabout (Roman Road/Chelmsford Road/A12).

Cumulative impacts - Minerals and Waste

4.4.54 The MWPA is satisfied based on its understanding of the evidence before it that reasonable steps are being taken to minimise the impact, both direct and cumulative, on safeguarded mineral resources and infrastructure. However, where a potential interaction exists between existing Candidate Sites and the DCO, it is expected that all practical measures will be taken to avoid any impact on the potential future operation of these sites. This will provide certainty to both the MWPA and site promoters that the Candidate Sites can deliver their assessed contribution to the County's mineral needs throughout plan preparation and the plan period.

Cumulative impacts - Health and wellbeing

4.4.55 ECC in its role regarding Public Health considers cumulative health and wellbeing impacts are highly significant for Essex communities and should be fully assessed and addressed by the Applicant.

4.4.56 Communities in Essex, particularly, Braintree, Chelmsford, Colchester, and Tending will be subject to overlapping exposure from other developments projects

4.4.57 ECC notes that the ES does not incorporate any cumulative sources into its health evaluation. The ES also does not provide quantitative cumulative health modelling, qualitative cumulative mental wellbeing analysis, and cumulative mapping of overlapping construction programmes. This has been raised in the ECC responses including the Relevant Representation (RR-1083) and the ECC SoCG regarding Health and Wellbeing.

4.4.58 In respect of cumulative mental health and wellbeing impacts, communities in Colchester, Basildon and Tendring experience high prevalence of anxiety and depression and low resilience, as highlighted by the Joint Strategic Needs Assessment, also high social isolation, and economic vulnerability. Cumulative change to landscapes (particularly in Dedham Vale, Chelmsford Rural West, Brentwood) can lead to loss of attachment to place and loss of identity. Cumulative impacts need to consider the impact of recurrent PRoW and access disruption from multiple overlapping projects which impacts cyclists and pedestrian, consider compounded community severance when multiple schemes restrict movement increasing social isolation, dependence of cars and older and disabled residents being disproportionately impacted.

4.4.59 Regarding cumulative inequalities impacts, communities such as Clacton, Harwich, and Jaywick area in Tendring, Basildon, Laindon and Colchester rural fringe areas are already in the lowest IMD deciles (Figure 10.3) and face poor health outcomes, low active travel rates, higher unemployment, and higher disability prevalence (Figure 10.10). Cumulative impacts disproportionately fall on these populations and would widen existing health inequalities contrary to EN-1, Essex Joint Health and Wellbeing Strategy and local ICS Joint Forward Plans.

4.4.60 It is crucial that mitigation addresses cumulative impacts. ECC Public Health considers there should be a Cumulative Health and Wellbeing Statement setting out all interacting projects, timelines, and health pathways. This could include a

Health and Wellbeing Monitoring Framework including mental health metrics, active travel use, air quality, noise exposure, and community engagement levels together with clear commitments to community benefits to offset cumulative burden in most affected parishes with dedicated cumulative impact mitigation fund for PRoW enhancements, local mental health support and Green Infrastructure ("**GI**") improvements.

Cumulative impacts - Ecology

4.4.61 ECC notes paragraph 17.5.39 of the Norwich to Tilbury ES Chapter 17 – Cumulative Effects (APP-281) *"Based on the data available on other developments it was determined that inter-project cumulative effects on ecology and biodiversity receptors within the areas surrounding the Project would be not significant during both construction and operation (and maintenance). This is either due to the distance of the Project to other development, or due to a lack of notable ecological receptors/lack of connectivity for any protected species to reach the Project, or because of different habitats being affected within the ZOI of other developments."*

4.4.62 ECC agrees with the above statement owing to the characteristics of the Norwich to Tilbury project with respect to its potential for ecological impact, namely:

- The embedded mitigation of the project route has very largely avoided a potential for significant impacts on any designated sites.
- The construction phase is expected to have primarily temporary impacts. After the construction of the pylons, overhead lines, and underground cable sections, those areas are anticipated to be restored back to similar, if not equivalent, natural habitats (although noting there are currently limited commitments to habitat establishment and on-going vegetation height management requirements).
- The operational stage of the project has very few and limited potential ecological impact pathways.
- The Norwich to Tilbury project as a whole has significant ecological impact potential owing to its scale – a 180km electricity transmission route plus compounds and construction infrastructure. However, where a lesser component section of the project may share a zone of influence with another development proposal, that section alone would be expected to have a much lower impact potential.

Cumulative impacts - Landscape

4.4.63 At paragraph 17.4.17 (APP-281), the common receptors that have potential to give rise to intra-project cumulative effects and therefore included in the assessment are identified only as Land and Community Assets, Development Land and Businesses, and Pedestrians, Cyclists and Horse Riders and these only at Construction Stage. Place Services. ECC is concerned that no intra-project cumulative effects are identified at the Construction and Operational Stage for Agricultural and Soil, Landscape, Ecology and Historic receptors.

4.4.64 Significant cumulative effects at the Construction stage are identified on Pedestrians, Cyclists and Horse Riders in many Visual Receptor Areas ("**VRA**") and yet Paragraph 17.4.21 (APP-281) identifies '… no additional mitigation measures were identified in addition to those already identified within the environmental topic assessments' (ECC underlining). The decision-making assumptions that gave rise to these conclusions need clarifying. In these circumstances, it is argued that a compensatory sum should be provided as part of a Side Agreement for significant cumulative effects that cannot be further mitigated.

4.4.65 Paragraph 17.4.18 (APP-281) identifies that 'No effects on common receptors during the operation (and maintenance) phase of the Project have been identified which could give rise to intra-project cumulative effects and are therefore not considered further.' This is queried in relation to Agricultural and soil receptors, Landscape, Ecology and Historic receptors.

4.4.66 In relation to inter-project impacts, a large number of significant landscape and visual effects associated with the project have been identified, as reported in Chapter 13: Landscape and Visual (APP-226). Based on the data available on the other developments, the assessment identified 47 shortlisted other development with the potential to contribute to significant inter-project effects on landscape and visual receptors during construction, and 34 during operation (and maintenance).

4.4.67 These other developments have the potential to contribute to major and significant inter-project effects on Landscape Character Typesor Visual Receptors Areas. Despite this, paragraph 17.5.58 (APP-281) states 'No additional mitigation measures beyond those proposed in Chapter 13: Landscape and Visual (Ref 6.13) have been identified'. Whilst it is agreed that it is not practicable to mitigate these due to scale of the works and the height of the pylons, this being the case, then ECC consider significant compensation in the form of a funding package should be

secured under a side agreement in partnership with the relevant authorities and environmental partners in order to create landscape enhancement elsewhere within the character area, district or County, on third party land.

Cumulative impacts - Historic buildings

4.4.68 Cumulative effects of the development are split by the application into two categories - intra-project and inter-project which are covered separately in this LIR in respect of historic buildings.

4.4.69 Intra-project cumulative effects include contamination of below ground deposits due to construction, setting effects and changes to groundwater. No further comment on this is necessary, as the intra-project effects are part of the overarching assessment.

4.4.70 In respect of inter-project cumulative effects, one significant cumulative effect has been identified regarding Dunton Hills Farmhouse, a Grade II listed building within the Brentwood district (list entry number: 1208245). This building, which, as National Grid summarises, will experience a greater level of change to its setting, were additional planned projects to also go ahead. ECC agrees with this conclusion, as well as the conclusions set out within the document 6.17.A3 Environmental Statement Appendix 17.3 - Inter-Project Cumulative Effects (APP-281) regarding built heritage.

4.4.71 However, the limits of deviation included within the Draft Development Consent Order (APP-056) are a concern, due to the extent of the changes this will allow for movement and adaptation to the route as work commences. This matter is further covered in section 5.3 of this LIR.

Cumulative impacts - Historic Environment

4.4.72 There are a number of developments which are proposed, or under construction across Essex (in particular, within the Tendring Peninsula, Thurrock and other NSIPs schemes dependant on Norwich to Tilbury) which have potential to have cumulative effects on archaeology due to the scale and nature of the development.

4.4.73 Cumulative effects of the development are split by the application into two categories: intra-project and inter-project. Archaeological remains are not considered potential receptors to give rise to intra-project cumulative effects.

4.4.74 Inter-project cumulative effects to non-designated heritage assets/archaeological remains have been identified for the project and separately for other developments. These are listed in Table A17.3.1 in Document 6.17.A3 Environmental Statement Appendix 17.3 - Inter-Project Cumulative Effects (APP-28).

4.4.75 No significant inter-project cumulative effects have been identified for archaeological remains as part of the ES assessment. The reasoning for this is expanded in Section 17.5.52 (APP-281) which states:

> *"While there would be overlap of the Order Limits for other developments and the Project, effects to archaeology would only occur once by whichever construction would take place first. These effects would be mitigated as appropriate and agreed with the LPA (such as through excavation, recording, and publication). Any affected archaeology would be removed as a result of the mitigation/construction and therefore the inter-project effects for construction and operation (and maintenance) would be negligible and not significant."*

4.4.76 ECC is of the opinion that this statement is not correct as the cumulative effects would be derived from the increase in land take across the combined Order Limits of both or more projects and not from overlap. For example, in Tendring District a separate substation is planned to be erected adjacent to the substations required for both Five Estuaries and North Falls Offshore Windfarms and not within the same parcels of land.

4.4.77 Similarly, the Lower Thames Crossing within Thurrock District will result in a significant impact on archaeological remains that would be increased by the groundworks required for the construction of a substation for Norwich to Tilbury as well as pylon bases and associated infrastructure.

4.4.78 ECC is therefore of the opinion that the cumulative impact of the project would be because of the increase in the total area of land take and not overlap as proposed by the Applicant, and as a result, the scale of potential archaeological remains which could be lost as a result of the mitigation / construction is increased. Archaeological remains are a finite and non-renewable resource. This cumulative impact may not be determined as significant through the process of the assessment but should be considered an adverse effect of the project wherever they are removed. As the nature of the archaeological remains that may be affected is currently unknown, the impact and significance cannot be determined effectively through this form of assessment. While mitigation by record may reduce the

cumulative impact in EIA terms, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted (NPPF, 2004 Paragraph 218)- this matter must be considered by the Applicant accordingly, and where necessary, controlled accordingly through the DCO.

Cumulative Impacts – Summary

4.4.79 As set out within this section, ECC raises considerable concern around cumulative impacts and how these will affect the communities and environment of Essex. It is vital that the Applicant properly engages with relevant stakeholders, as well as other applicants in County to consider all impacts arising from the Development. Furthermore, it is vital that the Applicant does not simply disregard practical measures and suggestions, such as a Developers Forum, as a means of controlling and minimising impacts arising from their development.

4.4.80 As this section of the LIR sets out, there will be a significant degree of cumulative impacts which must be mitigated as far as reasonably possible. ECC considers that there must be relevant controls and effective and meaningful engagement in place and wishes the ExA and the SoS to consider this matter fully in its consideration of the project.

4.5 Highways & Transportation including Public Rights of Way (PROW)

4.5.1 The following section sets out the relevant policy context against which the development is to be considered in relation to highways and transportation matters.

4.5.2 More details have then been provided in relation to concerns around the current mitigation proposals in terms of highway capacity, environmental impacts and road safety.

4.5.3 The section also sets out a potential way of capturing the maintenance impacts from the scheme on the local highway which are over and above everyday “wear and tear”. Finally, it highlights how the Highway Authority needs to capture officer time in providing oversight on the monitoring and mitigation to ensure the development is within the parameters assessed.

National Policy

Overarching National Policy Statement for Energy (EN-1) (November 2024)

4.5.4 At the time of the submission, the relevant National Policy (NPS-EN1) included the following:

4.5.5 Paragraph 5.14.1 highlights that "The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion."

4.5.6 Paragraph 5.14.5 states that "if a project is likely to have significant transport implications, then the ES should include a transport appraisal".

4.5.7 Paragraph 5.14.7 includes a requirement to prepare a travel plan including demand management and monitoring measures to mitigate transport impacts by providing details of proposed measures to improve access by active, public and shared transport.

4.5.8 Paragraph 5.14.9 states that where transport infrastructure is needed or proposed then good quality walking, wheeling and cycle routes, and associated facilities should be included.

4.5.9 Paragraph 5.14.11 sets out the types of mitigation that should be considered relating to demand management – these include consolidating trips, locating development in accessible locations, providing opportunities for shared mobility, shifting travel to sustainable modes, retiming travel outside of known peak times and rerouting to use parts of the network that are less busy.

4.5.10 At paragraph 5.14.12 the policy sets out that this type of mitigation should be required before considering provision of new inland transport infrastructure.

4.5.11 Paragraph 5.14.13 also covers the importance of supporting and prioritising modal shift of freight from road to sustainable alternatives, as well as making provision for supporting alternative fuels including charging electric vehicles.

4.5.12 Paragraph 5.14.13 also shows that regard should be given to the needs of freight at all stages of construction including the need to provide appropriate facilities for HGV drivers as appropriate.

4.5.13 Paragraph 5.14.14 suggests that the Secretary of State may attach requirements to a consent to control numbers of HGV movements to/from the site and possibly routing; make sufficient provision for HGV parking and associated high quality drive facilities either on site or at dedicated facilities elsewhere to avoid the negative consequences associated with not having sufficient facilities; and ensuring satisfactory arrangement for foreseeable abnormal disruption.

4.5.14 It is also clear at paragraph 5.14.17 that if the Applicant suggests costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the SoS of any obligations or requirements needed to secure the mitigation.

4.5.15 Paragraph 5.14.18 states "A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure, and the Secretary of State should therefore ensure that the Applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility."

4.5.16 Importantly at paragraph 5.14.22 it states that refusal on highways grounds is only considered "if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show consideration has been given to the provision of adequate active public or shared transport access and provision."

Overarching National Policy Statement for Energy (EN-1) (6 January 2026)

4.5.17 After the acceptance of the application, meaning that It does not have full effect in relation to this application, but, as it was an emerging NPS, it is capable of being an important and relevant consideration (as confirmed in the transitional provisions). It includes the same policy requirements as in the previous version, except there is additional text on including a vision led approach in relation to the assessment and in the Travel Plan requirements. This vision led approach is essentially a shift from "predict and provide" whereby a clear vision is set for how a place should function and then designing transport to achieve that – prioritising active and sustainable travel over accommodating more vehicles. Whereas the "predict and provide" premise was to define the uplift in traffic and accommodate it within highway capacity. The specific changes in the policy wording are set out below:

4.5.18 Paragraph 5.14.5 states that if a project is likely to have significant transport implications, then the ES should include a vision for transport and an assessment of potential transport impacts.

4.5.19 Paragraph 5.14.8 includes a requirement to "prepare a travel plan adopting a vision-led approach to identify demand management and monitoring and fall-back measures that proactively mitigate transport impacts by providing details of proposed measures to improve access by active, public and shared transport."

National Planning Policy Framework (Dec 2024, Amended on 7 Feb 2025)

4.5.20 Paragraph 109 states "Transport issues should be addressed from the earliest stages of plan-making and development, using a vision-led approach to identify transport solutions that support well-designed, sustainable and popular places. This should involve:

- *Making transport considerations an important part of early engagement with local communities;*
- *Ensuing patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making highway quality places;*
- *Understanding and addressing the potential impacts of development on transport networks;*
- *Realising opportunities from existing or proposed transport infrastructure and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated;*
- Identifying and pursuing opportunities to promote walking, cycling and public *transport use; and*
- *Identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains."*

4.5.21 Paragraph 110 includes that the planning system should actively manage patterns of growth to support sustainable transport objectives. Significant development should be located where the need to travel can be minimised and genuine choice of transport modes is available. However, it is recognised that the scope for sustainable transport differs between urban and rural areas, and this should be reflected in decision-making.

4.5.22 Paragraph 114 highlights the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause nuisance.

4.5.23 Paragraph 115 sets out what should be ensured when considering development proposals:

- Sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;
- Safe and suitable access to the site can be achieved for all users;
- The design of streets, parking areas, other transport elements and the content of associated standard reflects current national guidance, including the Nation Design Guide and National Mode Design Code; and
- Any significant impacts from the development on the transport network (in terms of capacity and congestion) or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach

4.5.24 Paragraph 116 highlights that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.

4.5.25 Paragraph 117 sets out how applications should include the following within the context of paragraph 116:

- Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
- allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations

Local Planning Policy

ECC Development Plan Policies (February 2011)

4.5.26 ECC Highway Development Management policies have been the subject of a full public consultation, together with a Sustainability Appraisal and Strategic Environmental Assessment. They have been approved by the relevant ECC Cabinet Members for Highways and Transportation and for Communities and Planning, and as such have been formally adopted as ECC Supplementary Guidance.

4.5.27 Policy DM1 is a general policy which highlights that the highway authority will ensure that:

"all proposals are assessed and determined in relation to the Development Management Route Hierarchy Policies (Policies DM2 – DM5);
where vehicular access is accepted in principle; the number of access points will be kept to a minimum on roads designated within the Development Management Route Hierarchy;
where access is accepted in principle; new access points will be designed and constructed in accordance with the current standards;
where existing access is to be used, substandard accesses will be improved and/or upgraded in accordance with the current standards for the category of road;
all proposals are assessed and determined against current standards for the category of road having regard to the capacity, safety and geometry of the highway network;
all proposals have safe and convenient access for sustainable transport modes commensurate to its location;
proposals will not create a significant potential risk or be detrimental to the safety of the highway network."

4.5.28 Policy DM2 and DM3 sets out how the Highway Authority will protect the function of various road types (as defined in Appendix A of the document for the Local Highway Network) through key design principles. It mentions that there may be exceptions to these principles where access is required for developments of overriding public, environmental, national and/or regional need. The policies also include the requirement for new access points to be designed and constructed in accordance with current standards (also included in more detail at Policy DM7: Application of Design Standards).

4.5.29 Policy DM9 highlights that the Highway Authority will ensure that the development minimises the number of trips by private vehicle through provision of alternative

transport modes and/or associated infrastructure. It states that alternatives to private car use are to be considered as a first principle in assessing travel impacts and that mitigation will be required through the application of comprehensive travel planning. It then lists all the relevant strategies that the development should be reviewed against– including passenger transport, cycling, walking, rail, sustainable modes for schools and colleges and workplace sustainable business.

4.5.30 Policy DM11 relates to the public rights of way network and sets out how the Highway Authority will safeguard the existing network, and will require the creation of new and/or enhanced routes as well as take appropriate consideration of rights of way that are reasonably alleged to subsist where affected by development.

4.5.31 Policy DM15 sets out how the Highway Authority will protect the safety and efficiency of the public highway by requiring the developer to demonstrate the impacts on existing or proposed highway and appropriate mitigation measures where necessary. Policy DM17 sets out how mitigation can be delivered – through implementation by the developer or agreed financial contributions.

4.5.32 Policies DM19 and DM20 relate to HGV related policies which include a requirement for a routing management plan and Construction Traffic Management Plan. Specific points to be agreed with the Highway Authority are mentioned ensuring parking, turning facilities, temporary access and wheel cleaning facilities are agreed with the Highway Authority.

Essex Planning Officers Association (EPOA) Parking Guidance (September 2024)

4.5.33 The parking standards contained in this Guidance are intended to guide new development in relation to parking requirements in order that the appropriate balance can be achieved between securing a reduced reliance on the private car whilst allowing provision for all modes.

4.5.34 Paragraph 8.2.1 of the guidance sets out that where developments do not fall into a specific land use classification (as is the case for the Norwich to Tilbury Scheme), then parking provision will be considered on the development's own merit. However, the onus will fall on the developer to demonstrate that the level of parking provided is appropriate and will not lead to problems of on-street parking on the adjacent highway network.

ECC Local Transport Plan (2011)

4.5.35 The Local Transport Plan ("LTP") assesses transport needs and challenges, and sets out its transport aspirations for the County over the 2011 – 2026 period. There are five broad outcomes that the plan sets out to achieve as follows:

- Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration
- Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology
- Improve safety on the transport network and enhance and promote a safe travelling environment
- Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use
- Provide sustainable access and travel choice for Essex residents to help create sustainable communities

A Better Connected Essex: Essex Transport Strategy (emerging)

4.5.36 ECC are developing a new transport strategy and undertook a second public consultation during the summer of 2025. Whilst this strategy is not yet adopted, it shows the direction that ECC are taking in setting a vision for Essex. It has been written against the backdrop of future election for a Mayor of Greater Essex and the reorganisation of current local authorities. The plan is to cover this transition period and be used as a starting point for the development of a new Greater Essex Local Transport Plan by the new Mayoral Combined County Authority.

4.5.37 There are three key themes identified as 'Supporting people, health, wellbeing and independence', 'Creating sustainable places and communities' and 'Connecting people, places and businesses'.

4.5.38 Out of the three key themes there are a series of activities associated with them which are summarised within the following headings:

- People have inclusive and affordable access to key services
- People enjoy improved physical and mental health and wellbeing
- The transport network is safe, and feels safe for all users
- All places support the transport needs of all residents
- New developments are designed to be sustainable from the start
- Transport has a reduced impact on the environment and adverse impacts on natural habitats are avoided

- The business potential of Essex is maximised
- People have inclusive and affordable access to employment, education and training
- The transport network has a secure and long-term future

Tendring District Local Plan (2013-2033)

4.5.39 The adopted local plan covers the period up to 2033. The strategic policies (SP1 and SP6) have been developed and adopted in collaboration with Tendring District Council, Colchester Borough Council and Braintree District Council. Further local policies that are relevant for Tendring only are set out in policies CP1 – 2 and DI1 below.

4.5.40 Policy SP1 (Presumption in Favour of Sustainable Development) (App 1) of the Adopted Local Plan Section 1 states that the Local Planning Authorities 'will take a positive approach that reflects the presumption in favour of sustainable development contained within the National Planning Policy Framework.'

4.5.41 Policy SP6 (Infrastructure and Connectivity) (App 2) of the Adopted Local Plan Section 1 identifies the need for all development to be supported by the provision of infrastructure, services and facilities.

4.5.42 Policy CP1 (Sustainable Transport and Accessibility) (App 17) of the Adopted Local Plan Section 2 seeks to ensure new development is sustainable in terms of transport and accessibility and therefore should include and encourage opportunities for access to sustainable modes of transport, including walking, cycling and public transport.

4.5.43 Policy CP 2 (Improving the Transport Network) (App 18) of the Adopted Local Plan Section 2 states that proposals for new development which contribute to the provision of a safe and efficient transport network that offers a range of sustainable transport choices will be supported. Major development proposals should include measures to prioritise cycle and pedestrian movements, including access to public transport.

4.5.44 Policy DI1 (Infrastructure Delivery and Impact Mitigation) (App 19) of the Adopted Local Plan Section 2 ensure that all new development is supported by, and have good access to, all necessary infrastructure. Permission will only be granted if it can be demonstrated that there is sufficient appropriate infrastructure capacity to support the development or that such capacity will be delivered by the proposal. It must further be demonstrated that such capacity, as is required, will prove

sustainable over time both in physical and financial terms. Where a development proposal requires additional infrastructure capacity to be deemed acceptable, mitigation measures must be agreed with the Local Planning Authority and the appropriate infrastructure provider.

Colchester Local Plan (February 2021)

4.5.45 The adopted local plan covers the period up to 2033. The strategic policies have been developed and adopted in collaboration with Tendring District Council, Colchester Borough Council and Braintree District Council. Therefore, these are as set out above in the Tendring District Council summary above (Policies SP1 and 6). Further local policies that are relevant for Colchester only are set out below:

4.5.46 DM20 (Promoting Sustainable Transport and Changing Travel Behaviour) sets out how the LPA will work with developers and other partners to increase modal shift towards sustainable modes. This would be through improving accessibility of development through the promotion of walking and cycling as an integral part of development, and by further improving public transport.

4.5.47 The policy also includes how the LPA will work with others to accommodate necessary car travel making the best use of the existing network and managing the demand for road traffic. The LPA will support improvements to the strategic road, rail and cycle network where appropriate evidence is provided and local consultation undertaken. In addition, improvements will be made to the road network to support sustainable development and to reduce the impact of congestion. The demand for car travel will be managed to prevent adverse impacts on sustainable transportation, air quality, safety, local amenity and built character by:

- Encouraging a reduction in through traffic in the town centre to encourage trips to be undertaken by more sustainable modes
- Encouraging use of new technology to better manage traffic, provide alternatives, facilitate the use of ultra-low emission vehicles and reduce the need to travel, particularly at peak times.

4.5.48 The policy also highlights that the use of sustainable travel in rural areas will be encouraged to minimise the impact of transport on sensitive rural areas. The LPA will seek to make best use of rural rail services through promotion and improving access at stations.

4.5.49 Policy DM21 seeks to enhance accessibility for sustainable modes of transport for all new developments and that access to all development should be created in a

manner which maintains the right and safe passage of all highway users. Development will only be allowed where there is physical and environmental capacity to accommodate the type and amount of traffic generated in a safe manner. Where lower than standard trip rates are proposed development will be expected to demonstrate through a package of sustainable transport measures that the proposed trip rates can be achieved.

4.5.50 Policy DM22 sets out that parking standards for non-residential development should be agreed through joint discussions with the local Highway Authority and the Local Planning Authority in accordance with the most recent local Parking Standards (EPOA Parking Guidance as summarised above).

Braintree Local Plan

4.5.51 The adopted local plan covers the period up to 2033. The strategic policies have been developed and adopted in collaboration with Tendring District Council, Colchester Borough Council and Braintree District Council. Therefore, these are as set out above in the Tendring District Council summary above (Policies SP1 and 6). Further local policies that are relevant for Braintree only are set out below.

4.5.52 Policy LPP42 (Sustainable Transport) requires development to make appropriate provision for all transport modes including pedestrians, cyclists, public transport and servicing, refuse and emergency vehicles. It also requires development to be consistent with the 'Essex Transport Strategy' Local Transport Plan for Essex (or its successors), and for Developers to produce Travel Plans and Transport Assessments. It confirms that the Essex County Council Transportation Development Management Policies provide further detail on requirements relating to accessibility and access.

4.5.53 Policy LPP43 (Parking Provision) relates to vehicle parking and requires that provision is made in accordance with the Essex Parking Standards (EPOA Parking Standards as summarised above).

4.5.54 Policy LPP52 (Layout and Design of Development) states that a proposed development should not have a detrimental impact on highway safety or any other public right of way and its users.

4.5.55 Policy LPP69 relates to Protected Lanes and states that the Council 'will conserve the traditional landscape and nature conservation character of roads designated on the Proposals Map as Protected Lanes, including their verges, banks, ditches and

natural features such as hedgerows, hedgerow trees and other structural elements contributing to the historic features of the lanes'.

4.5.56 Policy LPP69 further states that proposals which fail to do this, or which would 'generate traffic of a type or amount inappropriate for the traditional landscape and nature conservation character of a protected lane, will not be permitted.'

Chelmsford Local Plan

4.5.57 The adopted Local Plan runs until 2036. Braintree, Colchester and Tendring Councils have a shared strategic plan. This forms a joint Part 1 of their relevant Local Plans for the period to 2033. Due to a mismatch in timetables Chelmsford is not covered by this shared strategic plan. However, all authorities are collaborating on strategic cross-boundary issues and the alignment of strategic investment priorities in support of sustainable growth. Therefore, wherever appropriate, aspects of the Part 1 shared strategic plan have been included within objectives, policies and allocations of Chelmsford's Local Plan.

4.5.58 Policy S1 is a spatial strategy which includes the requirement for all new developments to locate at well-connected and sustainable locations, ensure development is served by necessary infrastructure and utilise existing and planned infrastructure effectively.

4.5.59 Policy S10 summarises how it must be demonstrated that there is sufficient appropriate infrastructure capacity to support the development or that such capacity will be delivered by the proposal. It also highlights how the developer must work positively with partners throughout the planning process to ensure the cumulative impact of development is considered and then mitigated at the appropriate time.

4.5.60 DM27 sets out that Chelmsford have regard to the EPOA Parking Standards.

Basildon Local Plan

4.5.61 The saved policies from the adopted Local Plan (dated 2007) were reviewed in 2018 and again in 2025. There are no relevant highways and transport related policies to summarise except to note that there is reference to the use of EPOA Parking Standards dated 2009. These have now been superseded as set out above.

Junction Mitigation

4.5.62 Table 7.1.21 of the Transport Assessment ("**TA**") highlights that mitigation for sensitive junctions is yet to be agreed with ECC and the results as summarised below, are taken from Tables 7.17 and 7.18 of the same document.

Table G – summary of sensitive junctions yet to have mitigation agreed.

Ref	**Junction**	**AM queue increases (max flows)**	**PM queue increases (max flows)**	**AM queue increases (85th %ile flows or average flows)**	**PM queue increases (85th %ile flows or average flows)**
Site 38	A120 Ardleigh Crown Interchange	13 vehicles on A1232 and DoS from 112.5% to 121.4%; 7 vehs on A120 EB and DoS from 135.7% to 139.7%	4-6 vehs on A1232 and max DoS from 90% to 98.1%; 25 vehs on A120 EB and DoS from 137.9% to 153.3%	13 vehs on A1232 and DoS from 112.5% to 116.7%; 7 vehs on A120 EB and DoS from 135.7% to 137.6%	4-6 vehs on A1232 and max DoS from 90% to 97.8%; 25 vehs on A120 EB and DoS from 137.9% to 153.3%
Site 47	A120 Coggeshall Road/Great Tey Road	12 vehs on Great Tey Road for left/ahead and RFC from 0.69 to 1.55; 6 vehs on Great Tey Road for right/ahead and RFC from 0.93 to 1.49	Minimal increase in vehs on Great Tey Road and RFC remains well below 1.0	5 vehs on Great Tey Road for left/ahead and RFC from 0.69 to 1.18 2 vehs on Great Tey Road for right/ahead and RFC from 0.93 to 1.15	Minimal increase in vehs on Great Tey Road and RFC remains well below 1.0

4.5.63 It is noted that the operation of both of the junctions are well above theoretical capacity signifying congestion with associated delays and queuing. The A120

Ardleigh Crown Interchange is over capacity with and without the development included, whilst the A120 Coggleshall Road/Great Tey Road junction is pushed over theoretical capacity with the development flows included.

4.5.64 The Applicant has verbally confirmed that the models have used the worst-case hour from the current traffic surveys, which is welcomed. It is understood that the Applicant has commissioned further surveys to compare with the traffic flows and queue data used in the modelling. ECC awaits details of this analysis to determine whether the models are a reasonable representation of existing conditions and in advance of this, continues to review the modelled junctions on the basis of the information presented on the assumption that the base models do not alter significantly. However, should the traffic flows and queues alter the models significantly, ECC reserves the right to update our comments.

4.5.65 The highest queue is on the A120 (eastbound) at Ardleigh Crown Interchange with an increase of 25 vehicles both during the peak of construction and the 85th percentile peak. The existing junction is already congested based on the output included in Appendix H.4 of the Transport Assessment. Additional queues on Tey Road are shown to be made up of 18 vehicles (12 left and 6 right) in the AM peak and minimal in the PM peak during peak construction, and 7 vehicles (5 left and 2 right) based on 85th percentile flows. However, considering this is a rural lane with existing queues (and future base flows) of around 1-2 vehicles, the effect is likely to be noticeable by regular users – particularly in the AM peak during the peak of construction.

4.5.66 In addition, Table 7.1.21 of the TA (APP-333)) includes junctions where monitoring of the operation of the junction is proposed (with Table 5.9 in the Outline CTMP (APP-309) showing that mitigation is yet to be agreed). ECC would welcome further discussion and confirmation around the principles of monitoring and what will be implemented if the monitoring identifies issues at the following locations:

- A120 Braintree Bypass/A131 Great Notley Bypass – monitor operation of junction and temporary signage to warn general traffic of peak hour congestion (Site 48)
- A127 Southend Arterial Road/A176 Noak Hill Road – priority junction – monitor operation of junction (Site 73)
- A1060 Roxwell Road/Lordship Road – roundabout – monitor operation of the junction (Site 69)
- A414 Greenbury Way/Highwood Road – roundabout – monitor operation of the junction (Site 71)

- A176 Noak Hill Road/Wash Road – priority– monitor operation of the junction (Site 74)
- A129 London Road/Mountnessing Road – priority junction – monitor operation of the junction (Site 82)

4.5.67 There are two junctions that have been modelled which include mitigation in the form of temporary signage where the model predicts theoretical congestion (RFC value is above 1.0) in the AM peak. These are summarised below (taken from Transport Assessment (APP-333)):

Table H – summary of mitigation for site reference 58 and 63

Site Ref	Junction Description	Model Results	Mitigation
58	A131 Great Notley Bypass/Main Road Roundabout	Operates above theoretical capacity in the future base without development included in the AM Peak • Increase of 36 PCUs on A131 in AM Peak and 11 PCUs on Main Road in short term worst case construction peak • Increase of 14 PCUS on A131 in AM Peak and 3 PCUs on Main Road in longer term *Results taken from Table 7.91 and 7.92 of the TA*	Temporary signage to warn general traffic of peak hour congestion and availability of alternative routes
63	A414 Three Mile Hill/A1114 London Road Roundabout	Operates above theoretical capacity in the future base without development included in the AM Peak • Increase of 26 PCUs on A414 London Road (S)	Temporary signage to warn general traffic of peak hour congestion and availability of alternative routes

		and 22 PCUs on A414 Greenbury Way (W) in short term worst case construction peak • Increase of 17 PCUs on A414 London Road (S) and 9 PCUs on A414 Greenbury Way (W) in longer term *Results taken from Table 7.96 and 7.97 of the TA*	

4.5.68 The results above show that there are short term and longer-term impacts at the junction in the AM peak only. ECC considers a better approach would be to restrict development traffic during the AM peak particularly in the short-term worst-case construction peak where impacts are higher. A reduction in development traffic could be introduced alongside temporary signage warning of peak hour congestion and highlighting alternative appropriate routes (to be agreed with ECC) for the longer-term impact.

4.5.69 Appendix 16.4 of the Environmental Statement (Document 6.16) (APP-275) at Table A16.4.2 includes links that have a significant effect on driver and public transport passenger delay due to high/medium sensitive receptors and short term adverse moderate or large magnitudes of impact.

4.5.70 Commentary in the ES shows additional mitigation has been defined for the junctions along the road links 35-37, 49-51 and 59 and highlights that the impact would be temporary lasting only for a week (with the exception of PAR 59) during the peak of construction activity. Further, it is stated in paragraph 16.7.10 of the ES (Document 6.16) (APP-275) that outside of this peak construction period the construction flows would be lower but over a longer duration. It therefore concludes that the level of significance for these road links may be reduced. However, there is no further analysis to show that the significance will be less and consequently, ECC must question this conclusion. The following points are noted and suggest that the links will remain at a level of significant impact outside of the one-week duration:

- Links that have a similar level of traffic over a longer period as to the one-week period – examples include PARs 50, 51 and 59.
- The operation of junctions on the links show congestion for both the one-week peak construction period and the longer term period even where flows are less – for example the junction modelling summarised in the Transport Assessment (Document 7.11) at Tables 7.23 and 7.24 for Site 40 in relation to PAR 35 where the RFC value remains at 1.12 for both flow scenarios.

4.5.71 The following road links are defined as having a significant impact on driver delay and public transport passenger delay albeit some of the junctions along them having mitigation proposed. The peak hour flows for the peak construction period are taken from Table E.1 and E.2 from Appendix E of the TA (APP-338) and the traffic flow ranges (shown in italics below) for the longer term have been extracted from the graphs shown at the end of the document. The table below also includes where Local Cycling and Walking Plan ("LCWIP") routes are proposed which coincide with the road links that are congested offering potential to review as possible mitigation solutions:

Table I – proposed LCWIP routes coinciding with congested road links

Link Ref	Link Description	Mitigation of Junctions	Peak Hours	LCWIP – Proposed Routes
Link PAR 35	A1341 Via Urbis Romanae	Update to intergreens and phase delays, and optimise signal timings	118 vehicles (of which 44 HGVs) for 1 week *20-90 vehicles over 3 years*	Primary Cycle Route 1 in the ECC LCWIP is located on Via Urbis Romanae
Link PAR 36	A134 Northern Approach Road-A134 Wildeve Ave/A134 Nayland Road/A134 The Causeway	A1341 Via Urbis Romanae/A134 Northern Approach Road – update to intergreens and phase delays and optimise signal timings	118 vehicles (of which 44 HGVs) for 1 week *20-90 vehicles over 3 years*	Primary Cycle Route 1A and Secondary Walking Route is on Northern Approach Road/Wildeve Avenue/Nayland Road

Link PAR 37	A1124 Halsted Road	No mitigation proposed – existing capacity issues noted	42 vehicles (of which 42 HGVs) for 1 week *20 vehicles for 1 year*	Primary Cycle Route 3 and Primary Walking Route 10 is to the south of A1124 Halsted Road
Link PAR 49	A414 Three Mile Hill-A1114 London Road	Temporary signage at A414 Three Mile Hill/A1114 London Road and A1114 London Road/A1016 Westway	53 vehicles (of which 53 HGVs) for 1 week *30 vehicles for 1 year*	Secondary walking route and Primary Cycle Route 4A on Westway. East/West Cycle Route 4 crossing over Westway along Writtle Road.
Link PAR 50	A1016 Waterhouse Lane – A1016 Rainsford Lane	Signal optimisation	27 vehicles (of which 27 HGVs) for 1 week *Approx. 25 vehicles for 4 months and 10-15 vehicles for 1 year*	Primary Cycle Route 6 crossing over Waterhouse Lane – forming part of route between university and city. Primary walking route 6 on Waterhouse Lane and Rainsford Lane
Link PAR 51	A1060 Rainsford Road – A1060 Roxwell Road	Signal optimisation of A1016 Waterhouse Lane/A1060 Rainsford Road and A1060 Rainsford Road/Park Avenue; monitor operation of A1060 Roxwell Road/Lordship Road	27 vehicles (of which 27 HGVs) for 1 week *Approx. 25 vehicles for 4 months and 10-15 vehicles for 1 year*	Walking route 1 and Cycle route 8 on Rainsford Road/Roxwell Road
Link PAR 59	A129 Sun street – A129 London Road – A129	Signal optimisation of A129 London Road/Western Road; and monitor operation of A129	*7 vehicles (of which 7 HGVs) for 14 weeks – source Table E1 and E2	Cycle route 8 on A129 Sun Street and walking route 3 on London Road

	Rayleigh Road	London Road/Mountnessing Road	12-14 vehicles for 4 months – source: Graph E.59 appears to show maximum peak *6-8 vehicles for 1 year*	

*Potential error in figures quoted in Table E1 and E2 for maximum peak construction period when compared to Graph E.59. The graph shows 12-14 vehicles for 4 months for maximum peak construction period.

4.5.72 Link PAR 37 is shown as having a significant impact on driver delay/bus passenger delay but there is no mitigation proposed. The comments in the table suggest there are existing capacity issues noted which ECC assumes relate to the Site 46 junction (A12 Eight Ash Green Interchange). Further clarification is requested on this point.

4.5.73 Link PAR 49 includes mitigation in the form of temporary signage to warn motorists of forthcoming delays (as discussed above in relation to the junction impact at Site 63). As the driver delay for the overall link is determined as severe then ECC considers a higher level of mitigation at the junction of Site 63 is required to reduce the impact.

4.5.74 Link PAR 51 and 59 both include junctions that are to be monitored. These are mentioned in the previous list of junctions to be monitored but is highlighted here as the links are considered as having a significant impact where mitigation is necessary.

4.5.75 Based on the above, ECC is of the opinion that there will be impacts on the local highway network with the level of construction traffic included. Mitigation in the form of restricting construction traffic during the peak hours needs to be explored further along with the use of sustainable transport infrastructure to reduce background traffic and offset impacts. The impacts at these junctions also highlight the importance of controls being in place to ensure that workers do not arrive/depart site during the network peak hours which is a fundamental assumption in the transport assessment undertaken , and that suitable Construction Worker Travel Plan measures for office staff who are assumed to travel in the peak hours, are also secured.

Maintenance

4.5.76 As a consequence of the NSIP proposals there are a numerous roads and associated structures on the local highway network that will impact the level of maintenance regime required due to the increased usage and higher 'wear and tear' associated with large vehicles: notably on the rural lanes that serve many of the construction compounds and which have minimal levels of existing heavy goods vehicle movements.

4.5.77 ECC is keen to work proactively with the Applicant to resolve these issues and so ECC requests further dialogue with the Applicant around how this could be managed together with the inclusion of a commitment in the CTMP on the issue of maintenance. At a high level the following needs to be in place as a bare minimum and agreed for any maintenance regime:

- ECC to produce a short Technical Note setting out maintenance trends prior to the start of construction using ECC data for previous years
- The undertaker to create a record of existing PARs to identify defects on rural network prior to start of construction. Footage and written observations/information in the form of a Baseline Technical Note to be shared with ECC.
- The undertaker to monitor road conditions through quarterly observations and recording of PARs during construction period and compile a short Technical Note reviewing current information against the baseline information. Setting out defects and how they are to be corrected
- At the end of the construction period for the undertaker, a final review to be undertaken to compare maintenance trends over the period of construction against those included for a "standard year" in the original Technical Note produced by ECC. This should include how many defects have been noted each year compared to previous years prior to construction.
- Agreement between ECC and the undertaker on what sections of the network require additional maintenance to offset the additional "wear and tear" associated with the works.
- The undertaker to implement the necessary additional maintenance works.

4.5.78 In addition to the above ECC requests a commitment to a mechanism for reclaiming costs in respect of emergency callouts relating to either damage that has occurred in the highway as a result of the construction (within the vicinity of the site accesses) or Traffic Management issues associated with the scheme. This is on the basis that the level of activity and type of vehicle associated with the works on the rural network will be beyond usual adverse conditions.

4.5.79 N2T relies heavily on the rural highway network to implement the development above and beyond the impacted main network. This is, for the most part, narrow in width, unlit, and with no or limited pedestrian refuge, and as a result of the proposal as here applied for is highly susceptible to significant impact, deterioration and change.

Road Safety

4.5.80 ECC is provisionally looking to fund and implement a new road safety scheme on A1060 Roxwell Road which will include average speed cameras. In the Relevant Representations we previously highlighted that there were concerns around the impact of the Norwich to Tilbury construction route on this link. Should, the scheme be outstanding prior to the Norwich to Tilbury works commencing then we would seek a commitment from the Applicant to implement the aforementioned road safety scheme prior to construction.

4.5.81 ECC has reviewed all the PARs and identified a number of locations where it is considered the Applicant should make road safety improvements to mitigate the scheme. The following tables includes commentary on potential works the Highway Authority feels could be appropriate:

Table J – potential road safety improvements for PARs

Ref	*Location*	*Scheme/Issue*	*Further details (where required)*
1	Botney Hill Road/Farm Access	Potential to improve surfacing	
2	B1002 (between Ingatestone and Margaretting)	Fast moving road. Potential to drop to 50mph	
3	Ongar Road (near Hanging Gardens Nurseries)	Contribution to chevrons	
4	Roxwell Road/Vicarage Road	Vegetation maintenance within visibility splay	

		envelope for the duration of the works	
5	B1018 nr Temple Barns – average cameras around loss of control on bend	Vegetation clearance and improved signage scheme	
6	A134 Nayland Road, Horkesley	Speed limit reduction	Locally there is a desire to improve access to the school on the other side of A12 bridge
7	Wick Lane/Dead Lane	Vegetation clearance within visibility splay envelope for the duration of the works	
8	A129	Potential for speed reduction	
9	A414 Three Mile Hill (off A12)	Average speed cameras	
10	Margaretting	Speed reduction to 30mph	Variable sign in place but permanent 30mph which could be backed up with average speed camera. Cost: £50 – 70k
11	Cuckoo Wood (A131)	VAS Signage	
12	Galleys Corner	Potential contribution towards a bigger scheme Decent footway provision south of new RB providing links to school	

4.5.82 This is to ensure that ECC have the ability to review the latest situation on the local highway network prior to construction starting and request specific highway safety improvements that may be needed to facilitate the construction routes. This would involve a drive through assessment of the construction route identifying keys areas

from a road safety perspective that may be exacerbated during the construction phase of the project. This would be key to highlighting safety issues such as poor forward visibility along the route, reduced carriageway widths, swept path analysis (as necessary) at locations with limited carriageway geometry and ensuring the structures are in good condition to take the repetitive load of the HGVs associated with the construction.

Environmental Assessment Mitigation

4.5.83 The ES Guidance defines amenity with an element of subjectivity where thresholds are treated as starting points with each location treated on a case-by-case basis. The guidance states at paragraph 3.29 that pedestrian amenity is "broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic."

4.5.84 In Table A16.4.5 of the ES Appendix 16.4 (APP-275), ECC considers there are a number of locations where the assessment does not take account of existing conditions and as a result, ECC does not necessarily accept the conclusions on the significance of effect. Examples of PARs impacted in relation to amenity where the effective footway width is reduced due to vegetation and dirt/mud/debris overspilling are PARs 37, and 41-43. However, there may be others and so ECC suggest that the Applicant reviews all the PARs in the table to establish an agreed position.

4.5.85 Fear & Intimidation as defined in the in the Environmental Assessment and Movement Guidelines (Institute of Environmental Management and Assessment (IEMA), July 2023) also mentions undertaking a qualitative review alongside the suggested thresholds. Currently Table A16.4.6 of the ES includes consideration against thresholds only. ECC therefore believes that site conditions have not adequately been considered, in particular, the effective footway width. The impact of a narrower footway means pedestrians are closer to the carriageway where HGVs are travelling on the construction route. Examples of the PARs impacted by Fear & Intimidation guidance are the same as those related to amenity (i.e. PARs 37, and 41-43). However, as for pedestrian amenity ECC suggest that the Applicant reviews all the PARs in the table to ensure all locations have been appropriately assessed.

4.5.86 To deal with the points above, ECC suggests that the commentary is updated (or inserted for the Fear & Intimidation Guidance) in Tables A16.4.5 and A16.4.6 to highlight the lack of effective footway width and the mitigation proposed. ECC also

suggests that the mitigation includes vegetation clearance as well as 'siding out' to remove the dirt/mud/debris overspill on the footway.

4.5.87 The following PRoWs enter rural lanes where there is potential for pedestrians in the road or waiting on verges as there is a lack of footway. In the interests of safety, these require vegetation clearance and warning signage in line with the others identified in Table A16.4.5 (for example, PAR 43):

- PAR 39 Great Tey Road
- PAR 41 Witham Road (B1018)
- PAR 51, Roxwell Road

4.5.88 ECC therefore suggests that the Applicant checks the PRoW network when reviewing the effective footway width in relation to Table A16.5.6 to make sure that all locations are covered.

4.5.89 There are existing traffic calming features on Spa Road, Witham (PAR 43) which will need to be reviewed in order to be satisfied HGV's can be accommodated. The location is around 100m north of Spa Road/Humber Road. The road width has been narrowed with kerb build outs and a splitter island. ECC have concerns that the traffic calming feature will be impacted by the uplift in HGVs using the route. In the interests of both pedestrian and vehicle safety, ECC require that the Applicant reviews this through auto track analysis and provide mitigation proposals if appropriate.

<u>Impact on ECC Depot, Ardleigh</u>

4.5.90 The ECC Depot in Ardleigh located on Harwich Road (A1337) close to its junction with Little Bromley Road is the main highway dept for the north of the County providing general maintenance and reactive services 24/7, 365 days a year. It is noted that the proposed route oversails the depot and its construction will require access and for structures to be potentially placed in the depot yard. This could potentially have a significant impact on the operation of the depot which would have serious implications for the maintenance and function of the County highway network.

4.5.91 In this regard, it is important to note that access for all vehicle types are required at all times up to and including a gritter vehicle (worst case vehicle type). ECC has engaged with the Applicant on this issue and requires confirmation in the CTMP

that in principle the access will be available to the depot 24/7, 365 days of the year for large vehicles, and in particular gritter vehicles in the winter months.

4.5.92 Further clarity is also required concerning road closures in the area which might also impact on access and response times. ECC therefore needs reassurance on what arrangements will be in place to ensure continuous access.

Impact on the Property

4.5.93 In addition to the access requirements there are two areas of concern in relation to the impacts on the property which require further clarification from National Grid, and discussion around legal agreements, mitigation and potentially compensation.

4.5.94 The first, is the need to erect scaffolding to protect the railway line for the duration of the construction period which appears to impact on the northeastern area of the car park and informal storage which occurs on the boundary of the depot. The impact would be during the construction works and it is assumed would be required for any future maintenance of this section of the overhead lines. ECC has requested the following additional information from the Applicant to better understand the impacts:

- The programme for this work and how long the area would be required for
- Confirmation that the shaded area represents the maximum extent of the land required for scaffolding taking into account limits of deviation
- Whether ECC would retain unfettered access to the depot during the construction works
- If the Contractor(s) undertaking the works to install the powerlines require access to the depot and area of scaffolding during the construction period
- Whether future maintenance requirements for the overhead lines sterilise that area of the depot, limiting its ability to be used for certain functions once the initial construction period is over

4.5.95 Secondly, the removal of the 33kv line which crosses the site, also has the potential for significant impact on the operation of the depot. There is a lack of clarity around how these works will be carried out and to fully understand what impact there will be on the operation of the depot for the duration of the work. Although it is assumed that these works would not proceed at the same time as Norwich to Tilbury works, it is noted that there is a small overlap of the designated work zones. ECC have requested the following additional information from the Applicant to better understand the impacts:

- What works and/or structures are involved in the removal of the OHL
- What is the programme for this work and how long would this area be required for
- What impact will there be on the operation of the depot during the duration of the works - impact on yard and office/support building and the ability to continue to function
- Whether ECC would still have access to the dept 24/7 during the works
- What access would UKPN contractor require to the depot during the removal of the line

Design of Vehicle Accesses and Crossover Points on the Highway Network

4.5.96 ECC considers further discussion is required on site access, crossover points and local highway mitigation designs at various locations across the network.

4.5.97 Road Safety Audits have been undertaken for the various designs and the Applicant has provided a Designer's Response to the points raised. ECC have provided comments against each design which are the subject of on-going discussions and have yet to be finally agreed.

4.5.98 ECC's concern is whether there is sufficient depth of construction in the existing carriageway for the widening works to tie into, and that it can accommodate the volume of construction traffic.

4.5.99 In general, ECC is seeking a realistic approach of self-enforceable speed limit changes where possible that will set up the network for success. Simply making an order for a Traffic Regulation Order ("**TRO**") to reduce a speed limit does not automatically mean compliance by the Highway user. ECC has concerns in terms of safety that some of the designs do not include a realistic speed limit. In addition, the access design should be informed by the observed speeds of the road in terms of visibility splays. The TRO order should not be used as a tool for situations where appropriate visibility splays cannot be achieved; instead, alternative locations with appropriate visibility splays should be considered.

4.5.100 There are two specific issues in relation to the mitigation works in Ardleigh that have been discussed with the Applicant, but we have not received any response back as yet. The issues are as follows:

4.5.101 Wick Lane (PAR 32) includes a proposal for temporary traffic lights to enable construction vehicles to travel between two site access points as part of a haul road route. Wick Lane is a narrow, rural lane with existing 12-hour daily traffic flows of

1,193 vehicles. The proposals show around 80-100 daily HGVs over a period of a year, and short-term peaks of 140-160 HGVs over 5-6 months and 20-40 HGVs over approximately 20 months using the route (based on Image A16.4.32 in the ES Appendix 16.4 (Doc 6.16)). The concern is that the traffic lights will cause vehicles using Wick Lane to queue at either end, and when released will meet as platoons of traffic from either side at the narrow sections of Wick Lane causing blockages. Or, if released separately will not be able to pass the queues either end. ECC understands the reason this option has been pursued is due to the Ardleigh Reservoir severing both parts of the site. However, there do appear to be other options available that ECC would request the Applicant considers. It has not been demonstrated to us that the design and use of traffic signals is feasible and as such we do not support the approach taken.

4.5.102 Concerns have been consistently raised with the Applicant around anti-social behaviour due to speeding as a result of the permanent widening on Ardleigh Road/Bentley Road. Ardleigh Road is a relatively narrow, rural lane with verges and open fields either side, operating under a national speed limit. It is clear from observations that there are informal areas that appear to be used by drivers to enable vehicles to pass each other. The proposal includes permanently widening the section of the road to 6 metres between the private haul road, introduced between Bentley Road and Ardleigh Road, and the site access to the EACN Substation (junction ref B070 from Figure 1 (page 17 of 30) of TA (Doc 7.11) to enable occasional HGVs to access the site during the operational phase but also, temporarily, for the duration of the construction phase with higher HGV flows and access for AILs. In addition, the proposal includes reducing the speed limit to 30mph (as set out in TRO Schedule 13 of Draft DCO). ECC believe the permanent widening will encourage higher speeds over this 1km of relatively straight section of road leading to anti-social behaviour, and on a day-to-day basis that the speed limit will not be self-enforcing. This would leave ECC with a legacy issue to deal with as a result of the changes. ECC requires further consideration from the Applicant on incorporating design features to the proposed design to facilitate lower speeds and to discourage anti-social behaviour, and/or a review of the access strategy to determine other options.

4.5.103 In ECC's Relevant Representation (RR-1083), ECC identified that the new permanent private haul road between Bentley Road and Ardleigh Road crosses two existing PRoW and that as a result, ECC required more surety on the design and protection of rights. The Applicant has suggested that this level of detail will be provided at a later stage and that as they have control of the land either side of the haul road there would be adequate space to provide for public rights of way users.

Traffic Regulation Orders

4.5.104 ECC formally objects to the draft Traffic Regulation Orders listed in Schedule 13 as we have not received sufficient information. The Traffic Regulation Orders are not agreed as we are awaiting further information on traffic flows and speeds (requested by ECC in June 2025) on the diversion routes proposed, as well as the routes or junctions where there are to be a reduction in speeds as part of the traffic management controls. Parking surveys have also since been requested to justify the commentary on the potential for impacts on parking and loading bays in Table A16.4.7 of the ES (Doc. 6.16). The parking assessment is currently based on assumptions on use which should be verified to understand the potential for impacts on the local community - particularly in locations where residents rely on parking on street.

4.5.105 ECC provided initial comments during the consultation process in June 2025 based on the information available at the time and these still remain relevant in the absence of further detail being provided.

4.5.106 The Local Highway Authority's main concerns are:

- The TRO should include the duration of the orders so as to fully understand the impacts
- There should be a statement of reasons for the orders so that we can understand what is trying to be achieved so ECC can review against the necessary specific and relevant orders that are to be implemented and to understand the purpose (for example, restricted access)
- The key on the plans only shows temporary orders – there does not appear to be a differentiation between temporary and permanent orders on the plans therefore the proposals are unclear.
- More detail is required on how the TROs will be enforced and maintained – for example, advanced warning signage and traffic management.
- Confirmation that the diversion routes have been checked for weak structures, width, height and environmental restrictions.
- The mechanism for reviewing road closure diversion routes at the time – taking account of the latest information on the capacity of structures in advance of them being used and checks on other restrictions.
- A mechanism for scope to change diversion routes if needed – taking account of other works in the area for example at the time, or where structural capacity issues have been highlighted or new restrictions implemented.
- Whether some of the speed reductions are necessary as the speed data may show that there are low speeds already occurring.

4.5.107 ECC has raised concerns over the longevity of some of the traffic management associated with the works and whether a more semi-permanent design may be more appropriate to consider alongside daily checks to ensure it remains in place. It is important that the traffic management arrangements remain in position and up to standard to ensure the required level of safety. ECC would request the inclusion of a commitment in the CTMP to allow for flexibility for a semi-permanent design as needed on a case-by-case basis.

4.5.108 ECC also considers this information should be provided prior to the completion of the examination as it is important that the TROs are agreed in advance – particularly as it is understood there will be no further ability for ECC to influence the TROs post DCO.

Financial Agreement

4.5.109 It is clear that some form of agreement is required to ensure appropriate funding is available to cover the time that ECC officers will need to spend in providing oversight of the various mitigation and commitments that have been included in the DCO documentation, as well as the points raised in this Local Impact Report. ECC would welcome a discussion with the Applicant on how this can be achieved so that any costs involved in supporting the implementation of the Project are cost neutral to ECC as our policy states.

4.5.110 Listed below is a summary of matters that ECC consider will need to receive funding in some form which we do not believe is currently allowed for in the dDCO or standard ECC processes:

- Review of monitoring – route adherence, HGV numbers, Outline Construction Worker Travel Plan ("**CTWP**") (APP-311) targets, pre and post construction condition surveys, junction operation (mitigation);
- Discussions on CTWP measures following review of monitoring;
- Administering requests for repairs to highway where condition survey shows issues;
- Maintenance review and discussions around potential improvement works and costs;
- Highway Checks – observations of routes and impacts including liaison with Members, Parish Council, Contractor, and Members of the Public;
- PRoW network discussions;
- Road Safety Review;
- Discussions on structures in relation to AILs and HGV routes;

Summary

4.5.111 Overall, as set out within this LIR, ECC as Local Highway Authority has considerable concerns relating to this project and its effect on local communities, the environment as well as on local businesses and the economy resulting from negative impacts on the highway network. There needs to be further consideration by the Applicant of matters such as monitoring and mitigation of junctions, impacts arising on driver delay, AILs, maintenance, road safety, pedestrian amenity, the ECC depot at Ardleigh, site accesses, cross over points, proposed TROs as well as highway mitigation measures.

4.5.112 The Applicant is strongly encouraged to engage with the Local Highway Authority on the matters set out within this LIR to ensure necessary mitigation and controls are in place to effectively manage the impacts arising from this development on the highway network.

4.6 Minerals & Waste

4.6.1 The following section is primarily informed by the MRA (APP-183) as submitted as part of the Norwich to Tilbury Examination Library. The MRA satisfies the Essex MLP (2014) Policy S8 requirement of ensuring that the proposals do not unnecessarily sterilise mineral resources or unnecessarily conflict with the effective workings of permitted minerals development as well as adopted Preferred or Reserve Mineral Site allocations.

4.6.2 In summary, the MWPA considers the MRA to be sufficiently competent to address the requirements of MLP Policy S8. The MWPA accepts the MRA conclusion that whilst the scheme will sterilise quantities of mineral, and potentially conflict with the working of existing and potential future mineral extraction sites, appropriate steps are being taken to mitigate these impacts. Whilst discussions with regards to mitigation are ongoing between the DCO Applicant and Candidate Site promoters, and therefore the MWPA is unable to consider a final position on route variation, there is no evidence to suggest to the MWPA that its own plan making responsibilities will be inappropriately inhibited by the approach taken by the DCO promoter.

National Policy

National Policy - National Policy Statements - Overarching Policy Statement for Energy EN-1.

4.6.3 The following EN-1 paragraph highlighted in this in relation to this section of the LIR are:

5.11.19. Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place." 9.2 Para. 5.11.28 "Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources."

National Planning Policy - National Planning Policy Framework, December 2024

4.6.4 The following NPPF paragraphs highlighted in this in relation to this section of the LIR are:

222. It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation.

223. Planning policies should:

c) safeguard mineral resources by defining Mineral Safeguarding Areas and Mineral Consultation Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);

d) set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place;

e) safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;

225. Local planning authorities should not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working.

Local policy

Adopted Mineral and Waste Local Plan

4.6.5 At the County level, the ECC Minerals Local Plan (2014) and ECC Waste Local Plan (2017) ("WLP") are also a material consideration in terms of Development Plan considerations.

4.6.6 The County Council as MWPA refers to Policy S8 of the MWLP as provided below:

Policy S8- Safeguarding mineral resources and mineral reserves

By applying Mineral Safeguarding Areas (MSAs) and/ or Mineral Consultation Areas (MCAs), the Mineral Planning Authority will safeguard mineral resources of national and local importance from surface development that would sterilise a significant economic resource or prejudice the effective working of a permitted mineral reserve, Preferred or Reserve Site allocation within the Minerals Local Plan. The Minerals Planning Authority shall be consulted, and its views taken into account, on proposed developments within MSAs and MCAs except for the excluded development identified in Appendix 5.

Mineral Safeguarding Areas

Mineral Safeguarding Areas are designated for mineral deposits of sand and gravel, silica sand, chalk, brickearth and brick clay considered to be of national and local importance, as defined on the Policies Map.

The Mineral Planning Authority shall be consulted on:

a) all planning applications for development on a site located within an MSA that is 5ha or more for sand and gravel, 3ha or more for chalk and greater than 1 dwelling for brickearth or brick clay; and
b) any land-use policy, proposal or allocation relating to land within an MSA being considered by the Local Planning Authority for possible development as 69 part of preparing a Local Plan (with regard to the above thresholds).

Non-mineral proposals that exceed these thresholds shall be supported by a minerals resource assessment to establish the existence or otherwise of a mineral resource of economic importance. If, in the opinion of the Local Planning Authority, surface development should be permitted, consideration shall be given to the prior extraction of existing minerals.

Mineral Consultation Areas

MCAs are designated within and up to an area of 250 metres from each safeguarded permitted minerals development and Preferred and Reserve Site allocation as shown on the Policies Map. The Mineral Planning Authority shall be consulted on:

a) Any planning application for development on a site located within an MCA except for the excluded development identified in Appendix 5,
b) Any land-use policy, proposal or allocation relating to land within an MCA that is being considered as part of preparing a Local Plan

Proposals which would unnecessarily sterilise mineral resources or conflict with the effective workings of permitted minerals development, Preferred or Reserve Mineral Site allocation shall be opposed.

4.6.7 Whilst Paragraph 9.2.27 of the MRA acts to erroneously insert a reference to SCC's MLP within the description of the minerals policy context within Essex, the policy context is otherwise considered to be accurately articulated.

4.6.8 The MWPA has been engaged in a Review on its Minerals Local Plan (MLP) through much of the DCO process. The current MLP provides planning policies for minerals development in Essex until 2029 and identifies future sites for mineral extraction. The MLP forms part of the Development Plan for each Local Planning Authority in Essex.

4.6.9 The MLP Review acts to extend the current Plan period from 2029 to 2042. As part of this update, new sites will be required to be allocated to meet the newly forecasted demand for minerals across this revised Plan period. A 'Call for Sites' exercise, where respondents put forward land in their ownership for consideration for allocation for future extraction, took place in February/ March 2022 with a second 'Call for Sites' exercise in September 2022. The most recent engagement was a Regulation 18 public consultation which took place in February and March 2024 and this was re-run May to July 2024 to take into account an additional site.

4.6.10 The MWPA is at the Regulation 18 stage of its plan making and site selection process and recognises that whilst Candidate Sites may have been put forward, these sites have not been selected as Preferred or otherwise. The MWPA acknowledges that little to no weight may therefore be given to these allocations as part of any planning judgement made with regards to the DCO (notwithstanding the fact that they contain potential workable reserves and are therefore covered by general mineral safeguarding policy).

4.6.11 It is not envisaged that this Local Plan review will lead to the adoption of a new minerals plan before the end of the ExA into this DCO and will not lead to any material difference to the conclusions as to the impact on minerals and waste policy which is provided elsewhere in this LIR.

Engagement with National Grid

4.6.12 From the Non-Statutory Consultation Feedback Report April 2024 (APP-067)(CFR) it can be seen that promoters of sites put forward as part of the MLP Review have provided responses to the DCO project. Examples of this can be found at CRF References 4.13.237 and 4.14.11. It is welcomed that throughout the CFR, National Grid make numerous acknowledgements that the proposed route has the potential to impact on a number of active quarries as well as these other parcels of mineral bearing land that have been submitted to the MWPA for potential allocation for mineral extraction. The MWPA welcomes both the proactive engagement undertaken by National Grid before and subsequent to the publication of this document, and the principles set out in National Grid's responses, where it is said that National Grid are working to ensure their route impacts on as little mineral safeguarded land as possible. This includes a commitment to working directly with site promoters. The MWPA's understanding of current progress with regards to this engagement is explored further under the 'Assessment of Impacts' section of this response, which will first detail general impacts on the resource followed by site-specific impacts.

4.6.13 The MWPA would further note that representatives of National Grid have met directly with officers from the MWPA to discuss and resolve emerging issues outside of the formal consultation period, which has been welcomed.

Safeguarding

4.6.14 At the local level, the safeguarding of mineral takes two forms. One is the safeguarding of the mineral resource itself whilst the other is the safeguarding of the infrastructure required to work it, which includes quarry sites and mineral

processing plants. In both cases, land surrounding the resource and/or infrastructure is also safeguarded, as adjacent development likewise has the effect of sterilising mineral and/or prejudicing the current and future use/operation of mineral infrastructure. These safeguarding mechanisms are addressed in turn below.

Safeguarding Mineral Resources

4.6.15 Paragraph 223c of the NPPF requires MWPAs to define Mineral Safeguarding Areas ("**MSA**"s) and adopt appropriate policies within their local plans to ensure that locations of specific mineral resources of local and national importance are not sterilised by non-mineral development.

4.6.16 Land containing sand and gravel, silica sand, chalk, brickearth and brick clay are where MSAs are required to be designated in Essex as they have the potential to contain a workable resource with a market use. The British Geological Survey ("**BGS**") provide the best available geological information on the broad extent of these mineral resources in Essex. The spatial extent of these minerals has been deduced from the latest information available, which at this time is the BGS Digital Mineral Resource V3 data-set. This was then used to define the Mineral Safeguarding Areas associated with sand and gravel, chalk, brickearth and brick clay.

4.6.17 The purpose of MSAs is to ensure that mineral resources are adequately and effectively considered in land-use planning decisions such that the sterilisation of resources that are of national and local importance, and which are environmentally feasible and practical to extract, does not unnecessarily occur. As such, the MWPA will normally object to development that would sterilise resources contrary to these principles. Proposed site allocations within an MSA meeting the appropriate threshold set out in Policy S8 of the Essex MLP (2014) are required to include a Minerals Resource Assessment as part of its evidence base to assess the practicality and environmental feasibility of the prior extraction of mineral ahead of the primary development such that mineral resources are not sterilised where this is unnecessary.

4.6.18 A MRA (APP-183) was duly submitted by the Applicant. The MWPA accepts that the normally requested sampling techniques to inform an MRA were not practical given the spatial extent and form of the proposed development. It is also recognised that the actual prior extraction of land within the Order Limits would not be practical in any extent given the linear form of the development. This satisfies the test of

whether prior extraction is practical and environmentally feasible as required by NPPF Paragraph 223d.

4.6.19 The MWPA further accepts that quarrying activities and the routeing of overhead lines may not be incompatible. For example, it may be possible to oversail extraction areas, or for mineral extraction to take place beneath aerial cables, with standoffs just required for the base of pylons. It is also the case that should the powerline be decommissioned, it would be possible to completely remove the proposed scheme, with the underlying mineral being undisturbed, meaning that the resource would again be available for extraction.

4.6.20 In summary, whilst the Order Limits cover approximately 1.1% of the total sand and gravel MSA in the County, impacts on the economically viable mineral resources of the County have been appropriately considered and proactively minimised. It is further noted that the working of mineral within the Order Limits is not necessarily prohibited, with the mineral sterilised primarily being that associated with the construction pads for the pylons rather than the entirety of the land within the Order Limits.

Safeguarding Mineral Infrastructure

4.6.21 Ensuring that there are sufficient mineral resources to facilitate sustainable growth and development is not just about extracting minerals from the ground. There are a number of different types of mineral facilities that together provide a range of functions that contribute to ensuring that society has access to a steady and adequate supply of minerals. This range of facilities, including the extraction sites themselves, are collectively known as 'mineral infrastructure' within the MLP.

4.6.22 Paragraph 223e of the NPPF states that when preparing their local plans, MWPAs should include policies to "safeguard existing, planned, and potential sites for: the bulk transport, handling and processing of minerals, the manufacture of concrete and concrete products, and the handling, processing and distribution of substitute, recycled and secondary aggregate material". Alongside these, the MWPA will safeguard mineral extraction sites either allocated through the MLP or already permitted. The NPPF is also clear (at Paragraph 200) that existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established, and this includes mineral infrastructure.

4.6.23 Several Minerals Infrastructure sites are located within the Study Area; however, these sites are mostly located outside of the Order Limits or within areas where the Project proposes only to use the existing access tracks.

Impacts of the DCO on Safeguarded Mineral Resources

4.6.24 The MRA (APP-183) sets out that it has followed national and local policy requirements, including the National Policy Statement EN-1 and Essex Minerals Local Plan, which seek to protect mineral resources of economic importance from unnecessary sterilisation. It is confirmed that parts of the proposed cable route, both underground and overground, and associated infrastructure intersect mineral safeguarded zones. Within Essex, the mineral resources upon which the DCO has safeguarding implications are sand and gravel, silica sand and brickearth. The report identifies that the project's footprint within Essex is relatively narrow and primarily involves underground cabling and substation works. While it is noted that these works will temporarily restrict access to underlying mineral deposits, the scale and nature of the development mean that only small volumes of safeguarded sand and gravel would be sterilised. To address potential conflicts with mineral safeguarding policies, the project design incorporates measures to minimise sterilisation, such as limiting excavation depth and avoiding unnecessary disturbance beyond the cable corridor. The Environmental Statement confirms that these measures align with Essex County Council's safeguarding objectives and national guidance. Further, the MRA states that the temporary nature of construction and the absence of permanent foundations over large areas ensure that future mineral extraction remains feasible outside the immediate cable route.

4.6.25 The assessment concludes that the impact on Essex's mineral resource availability is negligible in the context of the county's overall reserves. No significant long-term effect on mineral supply or infrastructure is anticipated.

4.6.26 With regards to this conclusion, the MWPA notes NPPF Paragraph 222 which sets the purpose of mineral safeguarding as being the need to make 'best use' of minerals 'to secure their long-term conservation', rather than quantifying any degree of impact within the context of the county's overall reserves. For mineral safeguarding matters, local abundance is not a material planning consideration. However, the MWPA accepts the rationale for concluding that prior and incidental extraction are not practical in relation to this project as presented under MRA Paragraphs 9.5.27 and 9.5.28, amongst others. The MWPA further accepts that due to the nature of the development, should the route or part of the route of the NSIP be cleared for any reason, the underlying mineral would be unaffected by both the

associated surface and below-surface development, such that the mineral would no longer be sterilised.

4.6.27 With respect to brick clay specifically, Paragraph 9.5.8 of the MRA refers to the fact that future pylons associated with the NSIP have been sited outside of the brick clay safeguarded areas as far as practicable to reduce the impacts on the brick clay mineral. The MWPA had previously raised that this is a limited resource in the County which is vital for the restoration of historic buildings and, as such, welcomes those amendments to the routing which removes any impact on this resource.

4.6.28 Impacts on silica sand deposits are assessed below.

Impacts of the DCO on Existing Mineral Infrastructure

4.6.29 Paragraph 9.5.9 of the MRA states that where existing 'minerals infrastructure is within the Order Limits, the Project has where practicable, placed the infrastructure outside of each sites' boundary'. The MWPA welcomes this commitment.

4.6.30 Before addressing points of detail, the MWPA would like to note that Chapter 4 of the ES (APP-130) makes a number of references to flexibility in the final routeing of the NSIP which is presented as Option A and Option B in that chapter. Option B is presented as being a revised route to reduce impact on an existing site or should a Candidate Site be allocated in a future MLP. The MWPA welcomes the approach and considers that this demonstrates effective engagement and a commitment to iterative working. The MWPA would however note NPPF Paragraph 222 which sets the purpose of mineral safeguarding as being the need to make 'best use' of minerals 'to secure their long-term conservation'. As such, NSIP routes should minimise their impact on economically viable resources in the long-term i.e. beyond the time horizon of any one plan, rather than making decisions solely on the basis of existing sites or whether a Candidate Site may be capable of adoption at this point in time. The MWPA accepts that the NSIP promoters must justify Option B deviations alongside other planning considerations, and said deviations need to be justified against National Grid's own routeing principles. This point is therefore raised only as a matter of principle, and it is noted that in terms of quantum of mineral, the difference in the amount of safeguarded mineral sterilised between Option A and Option B is largely minimal, whilst with the general routeing requirements makes making it largely impossible to avoid significant tracts of mineral bearing land.

4.6.31 With respect to impacts on existing sites, Paragraphs 9.5.10 through to Paragraph 9.5.15 of the Minerals Resource Assessment (APP-183) set out the relationship between the NSIP scheme and existing mineral extraction sites in Essex. Of the four sites assessed, a potential impact is only foreseen with Crown Quarry, Ardleigh. Paragraph 9.5.10 states that 'There is currently one pylon proposed within the boundary of the quarry (TB20), along the northern boundary of the site along Wick Lane' with Paragraph 9.5.11 stating that 'A review of the plans for Crown quarry on the Essex County Council planning portal suggests that the northern part of the site along Wick Lane is not proposed to be worked as the mineral is not expected to extend that far. Further discussions with the quarry operator will be undertaken to agree any mitigation that may be required and minimise impacts on the working area so that significant effects are unlikely'. In matters relating to land-use, the MWPA would, in principle, seek to maintain the primacy of its planning permissions. However, should it be later demonstrated that there is a potential impact, it may be the case that National Grid and the operator at Crown Quarry come to a private resolution, to which the MWPA would respond accordingly. The MWPA currently has no further comment to make on this matter, but this may change depending on the outcome of conversations between these two parties as well as the MWPA itself.

4.6.32 The MWPA agrees that on the basis of the evidence submitted, there will be no material impact on the existing Bradwell Quarry, Sheepcotes and Roxwell Quarry. It is however again noted that the MWPA in principle would seek to maintain the primacy of its planning permissions and reserves the right to make further comment should any potential impact be assessed differently at a future date. Any such comment will be weighed in the planning context as it exists at the time the issue is raised.

Impacts of the DCO on Candidate Mineral Sites Promoted through the Minerals Local Plan Review

4.6.33 Paragraph 9.5.17 of the Minerals Resource Assessment (APP-183) confirms that the Order Limits and Study Area overlap with several Candidate Sites that have been submitted for future allocation under the MWPA's Call for Sites for the emerging Essex MLP. The MRA notes that these sites have not currently been allocated but that they could become so in the new MLP once adopted. Regarding these sites, the MWPA acknowledges that the Candidate Sites currently carry little to no weight as part of any planning judgement respective to land-use matters relating to the NSIP scheme. The MWPA therefore welcomes that National Grid have created flexibility where possible through Route Options which will enable the minimisation of the impact on any Candidate Sites which may be selected as Preferred Sites and subsequently allocated in the future.

4.6.34 Paragraphs 9.5.18 to Paragraph 9.5.20 of the Minerals Resource Assessment (APP-183) detail potential impacts to Candidate Sites A85 and A86. These sites are being promoted as an extension to an existing quarry which extracts both silica sand and sand and gravel. As set out by the MWPA in previous correspondence, silica sand is a rarer and more valuable resource than the building/ concreting sand found across much of Essex due to its specialist uses. A British Geological Survey fact sheet (Appendix F) states that for most applications, silica sands have to conform to very closely defined specifications, and consistency in quality is of critical importance. This makes deposits of silica sand more difficult to substitute even with other silica sand deposits and consequently different grades of silica sand are usually not interchangeable in use. This in part allows silica sand to command higher prices than construction sands and they serve a wider geographical market because of it, making this resource nationally significant. The same fact sheet lists an Essex producer as being an important producer in England, and it is from this part of the county, represented by the proposed site extensions at Martells Quarry (A72, A73, A85, A86 and A87), where the only deposits have been found. The MRA (APP-183) notes at Paragraph 9.5.19 that 'the Project needs to connect to the new EACN Substation and there are other constraints in this area that limit the route options. The route has been amended to reduce the impact on this candidate site as far as practicable'. Further, Paragraph 9.5.20 states that 'The Limits of Deviation for the overhead line and underground cable and the Order Limits have also been widened within this area to facilitate further adjustments to the Project if the site becomes allocated in a future minerals plan'.

4.6.35 The MWPA welcomes the acknowledgement of the potential impact on this nationally important resource and the additional work that has been carried out to minimise the impact upon it. The MRA does not explicitly state that the Candidate Sites are now effectively sterilised and therefore additional work will be required with the site promoters to understand whether the sites are still capable of being delivered as part of the emerging MLP should the MWPA, following re-assessment, be minded to allocate either site as a Preferred Site. Until such conversations and assessments are progressed, the MWPA can only note these highlighted impacts on this nationally important resource. For its own part, National Grid has modified its previous position of objecting to the allocation of A85 and A86, as set out through consultation on the MLP Review Regulation 18 2040 consultation, given its understanding of the importance of the resource. In communication received in December 2025, National Grid stated that:

In light of further information and in particular that the A85 and A86 sites are among a limited number of sites proposed to provide silica sand being progressed

within the EMWP process, National Grid has modified its position and the Project design from those previously stated. The proposed Order Limits for the National Grid project encompass both temporary and permanent works with the temporary works unlikely to be in conflict with the proposed minerals recovery. In design terms we have proposed a permanent infrastructure design based on seeking to route as many of the underground cables as possible to the north of Litte Bromley Road (which forms the northern boundary of the two sites), on the basis that positioning the three pylons required to the south of the road imposes a lower restriction on the mineral resource recovery than would the positioning of cables. National Grid continues to liaise with the site promoters to seek to reduce the extent of conflict. The impact of the interaction with the NtoT Project on mineral resource recovery and on any potential claim value for unrecovered resource, can be further reduced if some flexibility can be encouraged in the siting of any retained and undisturbed environmental areas to coincide, where possible, with proposed pylon positions. National Grid's position is therefore modified to favour allocation of other sites capable of providing the silica sand requirement whilst maintaining an objection in respect of A85 and A86 only where opportunities to reduce the residual conflict are not taken by or encouraged from relevant parties.

4.6.36 Both the MWPA and National Grid note that this is a temporary position with further work to take place. Without prejudice, further discussions may enable National Grid to remove the above objection, but it is noted that the above is the current position.

4.6.37 With respect to the other four Candidate Sites highlighted within the MRA, the MWPA notes that no significant operational impacts are envisaged by National Grid should these sites be allocated. Whilst it is incumbent on the MWPA to formally qualify this with site promoters for its own planning responsibilities, the MWPA currently has no reason to doubt those conclusions and will not be in a position to progress these discussions further ahead of the deadline for this Local Impact Report. Whilst not at this point separately confirmed by the MWPA, the MWPA is satisfied that National Grid have raised potential impacts with the promoters of Candidate Sites.

4.6.38 Through information received from National Grid in November 2025, it is understood that in two cases the Order Limits of the DCO have been extended to allow National Grid and prospective operators to devise alternative design arrangements (the published DCO design is referred to as Option A, with alternatives referred to as Option B in associated documentation) that reduce the extent of interactions. In a third case, an adjustment has already been made to reduce the incursion of underground cables into the candidate area by changes to

the relative positioning of these cables and pylons. In this context promoters of affected sites will be requested to confirm their intention to still promote them through the MLP Review in the knowledge of, where relevant, both Scenario A and Scenario B (The MWPA assumes that the references to Scenario A and Scenario B in Volume 6: Environmental Statement – Document: 6.4 Environmental Statement Chapter 4 - Project Description equate to that referred to as Option A and Option B in other documentation). Promoters will be requested to confirm that their sites remain viable and deliverable under any of these circumstances. It is reiterated that this is work in progress and therefore the MWPA has not been able to review any finalised route proposal and therefore corroborate the National Grid assertion that there will be no operational impact on those potentially impacted Candidate Sites that may be allocated as Preferred Sites in the future other than potentially A85 and A86. In the absence of such certainty, the MWPA is currently proceeding on the basis that all Candidate Sites potentially impacted will have that impact mitigated such that the Candidate Sites would be able to make their expected contribution to mineral supply should they be allocated. The MWPA will continue to monitor this position.

4.6.39 It is further noted that MRA Paragraph 9.2.31 describes Blixes Farm, located in Rank's Green, Chelmsford, as a safeguarded existing minerals infrastructure site that the Order Limits and Study Area of the NSIP interact with. The MWPA clarifies that this is a waste management site (slaughterhouse). However, as the NSIP only proposes to utilise an existing access road and the proposed Project infrastructure will be outside of the site's boundary, there is no material impact as a result of the misclassification.

4.7 Flood Risk, Drainage and Surface Water

4.7.1 ECC as Lead Local Flood Authority ("**LLFA**") is responsible for managing risk of flooding from surface water, ground water and from ordinary watercourses. As such, the LLFA has engaged collaboratively with the Applicant's drainage consultants to scope the detail required to assess the proposed Surface Water Drainage Strategy and other supporting documents including the Flood Risk Assessment ("**FRA**") (APP-331), Ground Investigation Report (APP-214), Water Quality Assessment, and Flood Management Plan during the construction phase of the scheme.

National Policy

Overarching National Policy Statement for Energy (EN-1)

4.7.2 NPS-EN1 outlines the aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to steer new development to areas with the lowest risk of flooding (Paragraph 5.8.6).

4.7.3 In this regard, Paragraph 5.8.12 advises that development should be designed to ensure there is no increase in flood risk elsewhere, accounting for the predicted impacts of climate change throughout the lifetime of the development. There should be no net loss of floodplain storage, and any deflection or constriction of flood flow routes should be safely managed within the site. Mitigation measures should make as much use as possible of natural flood management techniques.

4.7.4 Paragraph 5.8.13 of EN-1 raises that a site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3 in England…In Flood Zone 1 in England…, an assessment should accompany all proposals involving:

- Sites of 1 hectare or more
- Land which has been identified by the EA ….as having critical drainage problems
- Land identified (for example in a local authority strategic flood risk assessment [**SFRA**]) as being at increased flood risk in future
- Land that may be subject to other sources of flooding (for example surface water)
- Where the EA..., Lead Local Flood Authority, Internal Drainage Board or other
- body have indicated that there may be drainage problems'.

4.7.5 Furthermore, Paragraph 5.8.14 states that FRAs 'should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these floods risks will be managed, taking climate change into account'.

4.7.6 The minimum requirements for FRAs are set out in Paragraph 5.8.15 and include that an FRA should *'be proportionate to the risk and appropriate to the scale, nature* and location of the project [and] consider the risk of flooding arising from the project in addition to the risk of flooding to the project'.

4.7.7 This paragraph also requires any FRA to consider how the ability of the of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems. Information should include:

i) Describe the existing surface water drainage arrangements for the site;
ii) Set out (approximately) the existing rates and volumes of surface water run-off generated by the site. Detail the proposals for restricting discharge rates;
iii) Set out proposals for managing and discharging surface water from the site using sustainable drainage systems and accounting for the predicted impacts of climate change. If sustainable drainage systems have been rejected, present clear evidence of why their inclusion would be inappropriate.

4.7.8 In addition, it also requires the FRA to set out which opportunities to reduce the causes and impacts of flooding have been identified and included as part of the proposed sustainable drainage system and explain how run-off from the development will be prevented from causing an impact elsewhere.

NPS for Electricity Networks Infrastructure (EN-5)

4.7.9 NPS EN-5 covers resilience to climate change and the need to look to design for flood resilience.

4.7.10 Paragraph 2.3.2 of EN-5 states *'Applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and as appropriate, how it would be resilient to: flooding, particularly for substations that are vital to the network'.*

4.7.11 Paragraph 2.3.3 of EN-5 further advises that *'the resilience of the project to the effects of climate change must be assessed in the Environmental Statement (ES) accompanying an application'*, also stating that *'future increased risk of flooding would be covered in any flood risk assessment'.*

Local Policy

4.7.12 ECC is the LLFA, responsible for overseeing and managing the risk of flooding from surface water, groundwater, and ordinary watercourses in Essex. As part of ECC's responsibilities, it is required to prepare and maintain a Strategy for Local Flood Risk Management ("**LFRMS**"), the purpose of which is to sets out ECC's aims and actions to reduce the impact of local flooding to the community. In planning for future flooding, ECC aims to gather a better understanding of surface water flood risk within the county.

4.7.13 Published in 2018, the Essex Local Flood Risk Management Strategy ("**LFRMS**") focuses on examples from around the County showing exactly how this strategy is delivered.

4.7.14 In support of this, ECC has undertaken a Preliminary Flood Risk Assessment ("**PFRA**") and flood risk areas which were reviewed during 2017 and updated, using all current flood risk data and information. This updates the council's original PRFA report published in 2011.

4.7.15 ECC also publishes Surface Water Management Plans ("SWMP") which are key strategic documents that help the LLFA do this, highlighting areas where ECC can consider focussing resources to reduce surface water flood risk within local communities.

4.7.16 The Sustainable Drainage Systems Design Guide for Essex (Supporting Sustainable Development) provides guidance on the planning, design and delivery of attractive and high-quality Sustainable Urban Drainage Schemes ("**SuDS**") which should offer multiple benefits to the environment and community. It advises that within a Flood Risk Assessment (FRA), any risk of flooding that the development may be subject to should be made clear. This should include fluvial flood risk, reservoir flood risk, ground water flood risk and surface water flood risk. Appendix 5 to the Guide shows the surface water flooding map for the entirety of Essex.

Locally Significant Effects

4.7.17 'Local' flooding in Essex means the risk of water from man-made drainage systems, small watercourses and rainfall off the land. This includes temporary works and for Norwich to Tilbury, the primary concern is with respect to surface water runoff from temporary haul roads and compounds.

4.7.18 The development as proposed, has been assessed in relation to national planning policies, local standards and guidance documents and industry best practice standards (NPPF 2021, NPS-EN1, Suds Design Guide 2020, Ciria SuDS Manual C753, Flood and Water Management Act 2010).

4.7.19 The proposed project comprises a mix of permanent and temporary works on largely greenfield land. The LLFA requests further clarity on the location of permanent and temporary construction works especially given the limits of deviation, but all works will require appropriate flood mitigation and surface runoff management, to ensure any excess runoff from drainage systems does not impact

third party land. The LLFA therefore recommends the drainage proposal for the areas under Essex should comply with SuDS Design Guide.

4.7.20 In particular and with reference to the submitted FRA (APP-331), the LLFA would make the following comments:

iv) Where construction takes place in flood zone 3 it should be ensured that surface water is not forced off site to increase the flood risk elsewhere. Measures should be put in place to mitigate this risk and detailed in a Drainage Strategy;

ii) Any work on or around a watercourse requires permission under Sect 23 of the Land Drainage Act 1991. Section 23 consent should be applied for timeously;

iii) The LLFA request that pylons are placed a minimum of 5 metres from the edge of a watercourse.

iv) A Construction Management Plan is essential to detail how surface water will be managed during the construction phase. It should detail how surface will be stored during an event and where and how the surface water will be dealt with including treatment prior to be discharged at an appropriate rate.

4.7.21 With regard to Rainfall Allowance, the LLFA would highlight that in areas of Essex the climate change allowance is 45%. It is requested that the Applicant check with the Environment Agency for appropriate climate change allowances in Essex.

4.7.22 It is also understood that SuDS will be used for flood resilience, however, a drainage strategy and liaison with the LLFA should take place at the earliest opportunity. Early liaison ensures the Sustainable Systems Guide for Essex and appropriate protocols have been followed to ensure surface water within Essex is dealt with in a way that does not put areas downstream at increased risk of flooding.

4.7.23 Mindful of the above and the objective of reducing local flooding, it is therefore considered important that the following are captured as part of a detailed Construction Environmental Management Plan ("**CEMP**")

- Any temporary works (culverts) to ordinary water courses/drainage channels for the purpose to give access to the project location.
- The surface water management during the construction of office, storage compounds.
- Required mitigation to prevent onsite/offsite flooding.
- Measures taken to prevent any pollutants entering surface water or ground water.

- Appropriate measures to deal with spills and leakages onsite.

4.7.24 All of the above comments have been raised in previous consultation responses by the LLFA and Country Council in ECC's Relevant Representation (RR-1083). Furthermore, concerns were raised when responding to the targeted consultation about the revised placement of pylons which would located in Flood Zone 3. At this time however, the LLFA has not received any information to address the aforementioned concerns.

4.7.25 In principle, the management of surface runoff from these sites should mitigate any increased risk of flooding. However, based on the submitted information, the LLFA retains certain concerns that have not been addressed from previous discussions and that have been set out in consultation responses, without feedback or discussion from the Applicant. This uncertainty gives cause for concern for the project.

4.7.26 The LLFA is also concerned that the dDCO, Draft Schedule of Requirements and Explanatory Memorandum do not highlight the existing flood risk, the need for managing said risk and/or the presence of overland flows. This issue is relevant for both pre and post construction. ECC suggests that the Flood Risk Assessment and the Surface Water Management Principles document be listed as 'CERTIFIED DOCUMENTS' of the DCO and that the Construction Environmental Management Plan is drafted to control works that affect ordinary watercourses/drainage channels, surface water drainage, and the control of pollutants. ECC also suggests that the use of SuDS be referred to in a Green Infrastructure Strategy.

4.8 Socio-Economics

Policy context

National Policy

4.8.1 Socio-economic impacts of energy NSIP's are covered in Section 5.12 in NPS EN-1. This section highlights a number of key factors to consider when assessing the socio-economic impacts of development including changes in local population dynamics, cumulative impacts with other projects and associated impacts such as on tourism from visual impacts. It also encourages any legacy benefits that can be secured from the development.

Local Policy / Guidelines

4.8.2 ECC local policy and evidence base includes:

- ECC (2021) Everyone's Essex
- ECC (2020) Developers' Guide to Infrastructure Contributions
- ECC (2022) Essex Sector Development Strategy
- ECC (2022) Levelling Up Essex: An Essex White Paper
- ECC/Mace (2020) Construction Growth in Essex 2020-2040
- ECC/Mace (2022) Green Skills Infrastructure Review for Essex
- ECC Skills and Employment Principles for Major Projects and Developments
- ECC (2022) Essex Skills Plan Local Skills Improvement Plan (Appendix G)

4.8.3 'Everyone's Essex' is the County Council's plan for levelling up Essex. It sets out 20 commitments under four headings:

i) the economy
ii) the environment
iii) children and families
iv) promoting health, care and wellbeing

4.8.4 The Essex Developers' Guide to Infrastructure Contributions is a well-established vehicle for setting out planning obligation requirements relating to ECC's work. It contains specific requirements around the preparation of Employment and Skills plans/strategies to ensure residents of the County benefit from opportunities presented by development projects.

4.8.5 ECC is currently engaged with 12 NSIPs, four garden communities and several other major projects across the county. Subsequently there is increased development pressure, with socioeconomic cumulative impacts and opportunities across the geographic area. ECC is looking to collaborate with the Applicant to secure tangible benefits for the delivery of skills, employment and the supply chain. Recommendations for this application are summarised below:

- Input from relevant education stakeholders to deliver appropriate skills and training
- Embedding local suppliers in every stage of the project - inception, design, construction, operation and decommissioning
- Local suppliers to benefit from positive discrimination in the bidding process, favourable weighting based on local connections
- Contracts that will be up for tender to be shared as early as possible to assist

local firms who are looking to make necessary adjustments to their work practices so they can bid for the work

- Existing mechanisms across the region be explored as a route to access local suppliers and local employment

Local issues

4.8.6 Essex is home to some of the world's leading companies with concentrations of high-skill, high-wage jobs as well as two leading universities and cutting-edge skills providers. Economic growth is the engine that will drive and enable so many of ECC's wider ambitions – as set out in Everyone's Essex.

4.8.7 ECC is concerned that the Norwich to Tilbury project could result in detrimental socio-economic impacts for Essex, particularly affecting local businesses, residents, and the tourism sector. The scale and nature of the development, alongside other concurrent infrastructure projects, raises the risk of cumulative disruption to the local economy, including reduced footfall for tourism-dependent areas, strain on local services, and displacement of existing business activity. It is essential that the Applicant proactively explores mitigation strategies to minimise these impacts and works closely with local partners to identify opportunities to support and strengthen the local economy. This includes ensuring that Essex-based businesses are able to benefit from the project through meaningful engagement with the supply chain, procurement opportunities, and targeted support to help them meet project requirements. This should be set out in an Employment, Education, Skills and Supply Chain strategy for the project and secured with appropriate funding through a Section 106 agreement.

4.8.8 A coordinated approach to infrastructure planning and delivery, including co-location and alignment with other schemes, will be vital to reducing adverse effects and maximising socio-economic benefits for the region.

Jobs and skills

4.8.9 The potential socio-economic impact of the Norwich to Tilbury proposal is substantial. This development forms part of a wider cluster of energy focused NSIPs in and around Essex, which are critical to achieving national net zero targets and supporting post-pandemic economic recovery. Given the acute national and local skills shortages, the employment and skills benefits—both during construction and operation—are significant and must be fully recognised and planned for.

4.8.10 The proposed development is a major project which could result in increased demand for construction skills and equipment at a time when other major projects may also commence with similar timeframes and result in shortages. ECC welcomes the opportunity to work collaboratively with the Applicant to maximise the education, skills and employment benefits of the project for Essex residents. According to MACE's Construction Growth in Essex 2020–2040 report, which was commissioned to identify the construction skills and jobs required across the county, considering the impact of nationally significant infrastructure projects, garden communities, and other major developments on the sector's workforce in Essex, these major projects across the County could generate demand for up to 15,000 additional workers at peak, with shortages expected to intensify by 2031. The Essex Local Skills Improvement Plan ("**LSIP**") further highlights the cumulative impact of NSIPs on the construction skills landscape. The Plan covers Essex, Southend and Thurrock ('Greater Essex') and is one of the largest LSIPs nationally. The geography has a population of nearly 1.9 million (1,863,314) of which 62.2% are of working age and is home to nearly 81,000 businesses (80,800). The LSIP identifies a number of objectives with skills and recruitment needs remaining a key priority for businesses locally and are a key focus of the Essex LSIP.

4.8.11 The Applicant should therefore work with relevant partners, including ECC and representatives of other major projects across the county and in collaboration with ECC, to use the Employment, Education, Skills and Supply Chain strategy to reduce the likelihood and severity of skills and construction worker shortages, as other projects may come forward within similar timeframes. Mitigation is likely to require investment in further education, apprenticeships, and training within the local area to deliver the required workforce for the construction phase, in order to reduce the risk of disruption to this projects and other projects coming forward. The Applicant should consider the potential opportunities resulting from looking at how this project will run alongside other projects and the potential employment opportunities that this could offer, including the potential for skills training programmes, shared apprenticeships and traineeships. Approaching this within the wider context of various concurring schemes will ensure that social value is maximised. ECC recognises the need for discussions on this subject but expects to see commitments to this and the measures mentioned within the Employment, education, skills and supply chain strategy.

4.8.12 As highlighted in paragraphs 15.5.13 and 15.5.20-15.5.22 of Environmental Statement Chapter 15 - Socio-economics Recreation and Tourism (APP-265) A, there is an existing skills gap, which will only be exacerbated by the cumulative developments taking place and the Applicant therefore needs to ensure they work with the relevant LPAs, other projects and relevant organisations to provide

opportunities to upskill local residents so that they may undertake the employment opportunities that the project creates. The ES acknowledges that “economic activity rates are generally high”, suggesting a generally strong workforce population across the area, with some local variations, for example Mid Suffolk and Tendring, which exhibit a below national average economic activity rate. The workforce shows diverse occupational distribution, however there is a noticeable skills gap, with higher proportions of the population with lower or no qualifications compared to regional and national figures.’ As concluded in the ES (APP-265) at 15.5.22, “Although there is a readily available labour force, there is also potential skills gap in the area’”

4.8.13 To enable effective planning and ensure Essex residents are equipped to take advantage of employment opportunities arising from this project, ECC strongly urges the Applicant to provide detailed labour market demand data as early as possible. This will allow for timely coordination with local education and training providers, enabling the development of targeted upskilling programmes and reducing the risk of workforce shortages that could delay project delivery.

4.8.14 Securing employment and skills benefits must be a central focus of this development. There is a real opportunity not only to mitigate potential negative impacts but to leave a lasting legacy by upskilling Essex residents and addressing existing sectoral skills gaps. ECC expects the Applicant to work with local partners to ensure that jobs created by the project are accessible to local people and that appropriate training pathways are in place.

4.8.15 There is potential for disruption to access to workplaces and businesses for local residents during construction. The Applicant should seek to minimise the disruption caused during the construction phase and allow access to be maintained as far as possible to mitigate the impact that the work will inevitably have on local residents and businesses.

<u>Adequacy of the application/DCO</u>

4.8.16 The structure and methodology of the Environmental Statement Chapter 15 - Socio-economics Recreation and Tourism (APP-265) is generally accepted, although it is noted Essex County Council is not included in the study area, despite both Norfolk County Council and Suffolk County Councils being included. While this omission might be an oversight, it should be addressed as going forward, ECC will be an important participant in the discussions and the delivery of the Employment, Education, Skill and Supply Chain Strategy.

4.8.17 ECC wish to minimise short term negative impacts during the construction phase of development. ECC believe there is potential for significant (although) short term impact to businesses along the planned route, including in particular wedding venues, education facilities and equestrian centres. Although the disruption will be short term, it has the potential to have a significant financial impact if not all parts of the site are usable, or accessibility is impacted. This needs careful management and consideration to ensure appropriate mitigation and compensation for these businesses.

4.8.18 For example, ECC is concerned that the Project would harmfully impact upon the operation and function of the Equine Unit; which is both a Further Education (FE) and Higher Education (HE) teaching facility, at Cow Watering Lane, Writtle - in respect of both permanent operational and construction effects leading to economic harm to the operation of the site.

4.8.19 The proposed construction access route would extend through the site, severing the operation of the Campus, affecting access and parking provision and would likely cause disruption to neighbouring teaching rooms, stabling blocks and menage. The Project would likely impact upon health and safety, increased noise pollution and increased traffic along the highway network. The Project therefore has potential to affect the function and operation the site, leading to the loss of practical learning with associated impacts and cause detrimental harm to staff, students and animals by reason of increased noise and vibration. ECC also questions whether, separately and unrelated to planning, there may also be safeguarding issues.

4.8.20 The cumulative impact of the significant construction/infrastructure projects in the county requires consideration. Consideration should include the timing/phasing of the projects and inter-project impacts – including the transportation of construction materials and availability of labour. This should be considered as part of the 'future baseline' scenario.

4.8.21 Currently there is no reference to an employment and skills plan or strategy. An Employment, Education, Skills and Supply Chain strategy should be prepared prior to the commencement of construction and submitted to ECC for approval. The details of what should be included in the plan are set out below.

4.8.22 ECC has produced a 'Skills and Employment Principles for Major Project and Developments' document, which outlines ECC's expectations of what a Local Employment and Skills Plan should cover. The requirement for the skills and employment plan/strategy is justified in the Essex Developers' Guide to Planning

Contributions document which details the scope and range of contributions towards infrastructure which ECC may seek from developers in order to mitigate the impact in a consistent and transparent manner where developers and local residents can understand how development is making a positive contribution to local communities.

4.8.23 ECC would therefore seek a Skills and Employment Plan or strategy to be secured by way of a Requirement in the dDCO. This strategy should help to maximise positive gains for the local economy, including upskilling the construction workforce, including within education settings to support emerging renewable technology innovation, jobs and skills retention within Essex. ECC would also welcome assurances on how any employment and skills strategy will be monitored and the process for reporting on the progress against the objectives set within the strategy, consistent with the Construction National Skills Academy Key Performance Indicators established by Construction Industry Training Board ("**CITB**").

Opportunities/legacy – Employment, Education, Skills and Supply Chain strategy

4.8.24 As already highlighted Norwich to Tilbury project has the potential to generate lasting regional economic growth and prosperity for the county. For Essex and its local authority partners the focus is to drive strong strategic leadership and partnerships which promote the development of a highly-skilled local workforce and sustainable employment. A responsive and flexible local skills system together with increased opportunities for the local supply chain, will help mitigate dependencies on single large local employers which can, potentially, drive out other opportunities or make communities vulnerable to economic shocks.

4.8.25 ECC would therefore like to see the Norwich to Tilbury project make a significant contribution to support our Essex skills and employment landscape.

4.8.26 The way in which this can be secured, as already suggested, is for an Employment, Education, Skills and Supply Chain strategy to be put in place.

4.8.27 The strategy should outline the plan for the delivery of employment and skills opportunities, including opportunities for apprenticeships, work placements, school engagement and skills programmes/initiatives. It should also outline an intention to help those furthest from the job market into employment and upskill local residents to enable them to access employment opportunities through the development. These measures seek to enable local residents to benefit economically from new developments by reducing long-term unemployment,

increasing skills and employability levels as well as providing employment and in-work progression opportunities for Essex residents.

4.8.28 The strategy should set out measures that the Applicant will implement in order to advertise and promote employment opportunities associated with the proposed development locally. Further the Applicant should also make a skills and education contribution to assist and encourage local people to access apprenticeships and training. These elements should be secured by way of a DCO requirement / S106 obligation and should help maximise positive gains for the local economy, including upskilling the construction workforce, including within education settings to support emerging modern green methods of construction, jobs and skills retention within Essex.

4.8.29 The strategy should include a commitment to ensure local economic benefit through job creation, training schemes and use of local contractors where possible. Interventions/programmes should be based on research and engagement with the local community to establish skills, education and employment needs within the local community. Sustainability and legacy of any intervention or programme should be at the forefront of considerations from the outset and initiatives should continue through from construction to operation.

4.8.30 To support this approach, ECC would encourage the Applicant to form a working group of key stakeholders to help inform and contribute to any initiatives.

4.8.31 While it is acknowledged there is a need for further discussion with the Applicant around these objectives, ECC believes the following are the types of projects or programmes that should be supported by the Applicant in recognition of the projects impact on the host communities:

1. Sustainable Skills Innovation Centre at Tendring Colchester Borders Garden Community – A new facility that will provide students with the opportunity to develop their knowledge in energy and modern methods of construction. This centre will play a vital role in supporting student learning and upskilling at a time when numerous energy Nationally Significant Infrastructure Projects (NSIPs) and major construction schemes are being planned. There is an opportunity for National Grid to support the development of this centre through funding.

2. Destination Renewables Programme or similar – Programme currently delivered as part of the Longfield Solar Farm development from EDF Renewables with local colleges to the project – Chelmsford College and

Colchester Institute. Programme aimed at raising awareness of careers within the energy sector – involves academia and industry working collaboratively – good example of this.

3. Skills Bootcamps

4. Connect to Work

5. Essex Levy Transfer Service – Seek a commitment to gift levy to local businesses to enable them to train and upskill staff.

6. Grid for Good Programme – Localised and targeted at Essex residents

7. Reiteration of Tendring Future Skills Programme – Bringing to live the energy sector to young people in North Essex. Carried out through engagement with students in primary and secondary education. Providing them with practical and engaging workshops that begin to shape their vision of future work.

8. Technical Excellence College Status bid for energy, National Grid may want to support Colchester Institute with any asks they may have.

9. Apprenticeship grant programme

10. Support for the Harwich Innovation Centre/Hub

11. Support for/engagement with the Supply Chain Portal that ECC will launch March 2026

12. Support for/engagement with the employment brokerage service that ECC will launch in 2026

4.9 Health and Wellbeing

Policy Context

National Policy

4.9.1 ECC has a statutory duty under the Health and Social Care Act 2012 to improve and protect Public Health. While ECC is the lead authority for public health across Essex, ECC works in partnership with all districts, city, and borough councils on these matters.

National Policy Statement for Energy (EN-1)

4.9.2 Overarching National Policy Statement for Energy (EN-1) presents key requirements, ES Chapter 10 – Health and Wellbeing (APP-193) refers to the following paragraphs:

- Paragraph 4.4.1 - Energy infrastructure may have negative health impacts that must be assessed;
- Paragraph 4.4.3 - Indirect impacts (e.g., access to public services, transport, open space) must be assessed;
- Paragraph 4.4.4 - ES must identify all potential adverse health effects and measures to avoid or mitigate them;
- Paragraph 4.4.5 - Applicants must assess cumulative health impacts;
- Paragraph 4.4.6 - Applicants should promote local improvements to encourage health and wellbeing especially for vulnerable groups and protected characteristics.

National Planning Policy Framework

4.9.3 The NPPF sets out the following principles relevant to this LIR including: promoting healthy, inclusive communities, ensuring safe, accessible environments supporting physical activity, protecting and enhancing green and blue infrastructure and reducing noise, pollution and other health risks.

4.9.4 Paragraph 96 of the NPPF states:

Planning policies and decisions should aim to achieve healthy, inclusive and safe places which:

- *a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;*
- *b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of well-designed, clear and legible pedestrian and cycle routes, and high-quality public space, which encourage the active and continual use of public areas; and*
- *c) enable and support healthy lives, through both promoting good health and preventing ill-health, especially where this would address identified local*

health and well-being needs and reduce health inequalities between the most and least deprived communities – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.

National Planning Practice Guidance

4.9.5 The National Planning Practice Guidance ("NPPG") 2024) supports the NPPF and provides guidance across a range of topic areas, including healthy and safe communities. As stated in the NPPG, planning and health need to be considered firstly in terms of creating environments that support and encourage healthy lifestyles, and secondly, in terms of healthcare capacity. In addition, engagement with individuals and/or organisations, such as the relevant Director(s) of Public Health, will help ensure local public health strategies and any inequalities are considered appropriately.

Local Policy

Health and Wellbeing Strategies

4.9.6 The Essex Joint Health and Wellbeing Strategy (2022 – 2026) as referenced in the ES Table 10.1 (APP-192), identifies health priorities including mental health and wellbeing, physical activity and prevention, levelling up inequalities, healthy ageing and wider determinants of health.

Local Health and Wellbeing Strategies (District-level).

4.9.7 Local health strategies emphasise prevention, access to green space, social cohesion, community resilience and tackling health inequalities. Currently two Integrate Care System ("ICS") areas are relevant - Mid & South Essex ICS and Suffolk and North East Essex ICS with Joint Forward Plans highlighting mental health burden, multi-morbidity, obesity, social isolation and inequalities requiring upstream action.

Adopted Local Planning Policy

4.9.8 Local Plan policy across the local planning authorities requires use of Health Impact Assessment and use of the Essex Healthy Places Guidance. Other relevant policy documents are the Essex Green Infrastructure Strategy, Local Green Infrastructure and Nature Recovery plans and Active Travel strategies.

4.9.9 Below are relevant local planning policies specific to health and wellbeing.

Tendring

4.9.10 Adopted Local Plan Section 2: 2017 – 2033

- Policy HP1 Improving Health and Wellbeing

The Council will work to improve the health and wellbeing of residents in Tendring by:

a. *working in partnership with the NHS and Public Health to ensure that our residents can access high quality primary and secondary health care services, and that new and improved services are put in place, where appropriate, to serve the growing population;*

b. *supporting the NHS (including local GP Surgeries) and Public Health to deliver a service which meets the needs of residents in Tendring District;*

c. *working with stakeholders on projects that provide better service integration, locating services where access can be improved, particularly for vulnerable groups and communities;*

d. *encouraging healthier communities through targeting of unhealthy lifestyles such as smoking and those which cause obesity as identified in the Joint Strategic Needs Assessment. The Council will work in collaboration with partners, including Public Health, to avoid a concentration of fast-food takeaways, where the number of outlets would be likely to harm public health objectives, particularly in deprived communities; local areas of poor health and near schools;*

e. *requiring a Health Impact Assessment (HIA) on all development sites delivering 50 or more dwellings, all development in Use Class C2(Residential Institutions) and all non-residential developments delivering 1,000square metres or more gross internal floorspace. The HIA should be carried out in accordance with the advice and best practice published by Public Health England and locally through the Essex Planning Officers Association;*

f. *seeking mitigation towards new or enhanced health facilities from developers where new housing development would result in a short fall or worsening of health provision; and*

g. *ensuring increased contact with nature and access to the District's open spaces and offering opportunities for physical activities through the Haven Gateway Green Infrastructure and Open Space Strategies.*

Colchester

4.9.11 Adopted Local Plan Section 2: 2017 – 2033

- Policy DM1: Health and Wellbeing

  - *All development should be designed to help promote healthy and active lifestyles and avoid causing adverse impacts on public health through:*

    - *(i) Ensuring good access to health facilities and services;*

    - *(ii) Providing a healthy living environment where healthy lifestyles can be promoted including green space and creating attractive opportunities for activities including walking, cycling, horse riding and formal sport, as well as clearly seeking to improve opportunities to increase levels of physical activity within the community; and*

    - *(iii) Providing appropriate mitigation to avoid harmful emissions.*

  - *Health Impact Assessments (HIA) will be required for all residential development in excess of 100 units and non-residential development in excess of 2500 square metres and for other developments where the proposal is likely to have a significant impact on health and wellbeing. The purpose of the HIA will be to identify the potential health consequences of a proposal on a given population, maximise the positive health benefits and minimise potential adverse effects on health and inequalities. Any HIA must be prepared in accordance with up-to-date advice and best practice for such assessments.*

  - *All developments with the potential to cause a deterioration in air quality will be required to provide comply with Policy ENV5.*

  - *Measures to mitigate any adverse impacts of the development will be provided and / or secured by planning conditions, Section 106 contributions or CIL.*

  - *Developments which will have an unacceptable significant adverse impact on health and wellbeing which cannot be mitigated, or that fail to offer reasonable provisions, will not be permitted.*

Braintree

4.9.12 Local Plan adopted July 2022

- Policy LPP 49: Health and Wellbeing Impact Assessment

    - *To ensure new development is designed to promote good health all developments over 50 residential units all C2 development and non-residential developments over 1,000sqm will be required to undertake a Health Impact Assessment having regard to the Essex Design Guide Supplementary Guidance on Health Impact Assessments and the guidance of Public Health England. Negative health impacts identified in a Health Impact Assessment must be resolved in the development or mitigations secured through planning condition(s) and / or a Section 106 Agreement.*

    - *Development proposals will be required to assess their impact upon health and wellbeing, the capacity of existing health services and facilities, and the promotion of health improvement activities.*

    - *For hot food takeaways, a Health Impact Assessment will be required to be included in an application.*

    - *Where an unacceptable adverse impact on health is established, permission will not be granted. Where significant adverse health and wellbeing impacts are identified, planning permission will be refused unless infrastructure provision and/or funding to reasonably meet the health service requirements of the development are provided and/or secured by planning obligations or by the Community Infrastructure Levy (CIL) as appropriate*

Chelmsford

4.9.13 Emerging Pre-submission Local Plan (Regulation 19)

- Strategic Policy S14 – Health and Wellbeing

    The Council is committed to improving the health and wellbeing of our residents and communities, promoting more active and healthier lifestyles, creating healthy living environments and reducing health inequalities through high quality placemaking.

The Council will achieve this by ensuring that new development:

- *Contributes towards the strategic priorities of the Chelmsford Health and Wellbeing Plan to help reduce inequalities including health*
- *Has good access to services and facilities to support daily life and provide for the needs of their communities including education, employment, retail, public transport, healthcare, social, community and greenspace*
- *Is well designed to create safe, inclusive and accessible places for all users and encourage social interaction and wellbeing*
- *Creates opportunities for healthy and active lifestyles including access to and the provision of new multifunctional green and blue infrastructure, spaces for play, recreation and sports, and better active travel including provision for safe, attractive and well-connected pedestrian and cycle routes*
- *Provides good quality housing both externally and internally, to provide a healthy living environment now and in the future*
- *Supports the provision of cultural infrastructure and public art to create a sense of place and identity*
- *Is climate resilient and as sustainable and energy efficient as possible to promote healthy environments*
- *Provides opportunities for access to nature to support physical and mental health*
- *Provides appropriate mitigation to avoid harmful health impacts/emissions.*

In addition to the above, all new strategic scale residential development (defined as development for 100 or more units) will be required to demonstrate how they have considered the following in their place making objectives:

- *Opportunities for community involvement in the long-term management and stewardship of the new development*
- *Opportunities for growing food such as allotments, community gardens and orchards to improve access to local healthy food*
- *Creation of walkable neighbourhoods to support people to live healthy lifestyles having regard to the Essex Design Guide – a New Development Model for Essex*
- *Livewell Development Accreditation Scheme*

Brentwood

4.9.14 Brentwood Local Plan 2016-2033 was adopted March 2022

- Policy MG04: Health Impact Assessments (HIAs)
    - A*: To ensure new development is designed to promote good health, a Health Impact Assessment, will be required for residential proposals of 50 or more units*

(or less than 50 units at the discretion of the planning authority where the number of units could propose a significant impact on the community and infrastructure) and non-residential developments of 1,000m2, or more, and hot food takeaways that are not within a designated town, district or local centre and are within 400 metres of a school entrance. The Health Impact Assessment will be prepared in accordance with the advice and best practice as published by Public Health England and locally through the EPOA HIA Guidance Note, using the most up to date guidance. The purpose of the Health Impact Assessment is to identify opportunities of positive health impacts and potential negative impacts and how they might be mitigated.

- *B: Health Impact Assessment is to identify opportunities of positive health impacts and potential negative impacts and how they might be mitigated.*

Basildon

4.9.15 Emerging Local Plan – Reg 18

- Policy HC1: Health and Well-being Strategy

The Council will improve and promote strong, vibrant and healthy communities through ensuring a high-quality environment, with local services to support health, social and cultural well-being and reduce inequalities. Measures that will help contribute to healthier communities and reduce health inequalities must be incorporated into a development where appropriate.

The Council, with its partners, will improve the health and well-being of residents by:

1. *Ensuring residents can access high quality primary and secondary/acute health care services are put in place, where appropriate, to meet the needs of residents and serve the growing population;*

2. *Providing better service integration, locating services where access can be improved, particularly for vulnerable groups and communities;*

3. *Directing new development to sustainable locations that incorporate active travel principles;*

4. *Requiring a Health Impact Assessment (HIA) on all development sites delivering:*

    a. *50 or more dwellings;*

b. *All development in Use Class C2*
c. *All non-residential developments delivering 1,000 square metres or more gross internal floor space; and*
d. *'Sui Generis' hot food takeaways*

5. *Promoting well designed and safe places to ensure climate resilience, increased access to open spaces, leisure and recreation, which offer opportunities for physical activities through green infrastructure and open space strategies*

4.9.16 The above policy frameworks place clear responsibilities on the Applicant to support health and reduce inequalities.

Accurate health baseline and sensitivity of the local population

Overview of the ES Baseline

4.9.17 ES Chapter 10 (Section 10.5) (APP-193) provides a demographic, socioeconomic and environmental health baseline drawing on Census 2021, Lower Layer Super Output Areas ("**LSOA**") indicators, deprivation scores, and local health data. This includes:

- Indices of deprivation ("**IoD**") mapping (Figure 10.3)
- Sex, ethnicity, English language proficiency, disability levels (Figures 10.4–10.10)
- Obesity prevalence (Figures 10.11 & 10.12)
- Green/blue space access (Figure 10.13)

4.9.18 This dataset is adequate in breadth, but significant issues arise in how the data has been applied to sensitivity classification, linked to environmental determinants, used to assess vulnerable groups and interpreted in the context of health inequalities

4.9.19 ECC's position is that the ES (APP-193) underestimates the sensitivity of populations along the route and has not used its own dataset to meaningfully evaluate differential health effects.

Deprivation, inequalities and demographic sensitivities

Deprivation (IMD) – application within the ES

4.9.20 Figure 10.3 of the ES (APP-192) shows that large parts of Tendring, Basildon, and Colchester fall within the most deprived deciles nationally. However, the ES uses

ward-level IMD averages, which mask pockets of deprivation at LSOA level, directly contradicting ECC's feedback at PEIR stage.

4.9.21 It is also noted that the ES (APP-192) IMD data used is from 2019, despite the Government's update scheduled for October 2025 meaning the assessment risks being immediately outdated and misaligned with EN-1's requirement to identify how health impacts may fall disproportionately.

4.9.22 There is no discussion in the ES (APP-192) of domain-level deprivation, despite health being influenced separately by income, employment, education, access to services, crime, and environment.

4.9.23 ECC's Relevant Representation (RR-1083) already highlighted this deficiency, requesting granular LSOA analysis and renewed IMD data to prevent under-assessment of effects on vulnerable groups. This remains unresolved in the SoCG (ID 3.5.3, 3.5.6, 3.5.10).

4.9.24 Overall, it is considered by the County Council that ES baseline is not sufficiently granular, underestimates vulnerability, and does not meet EN-1's expectation to assess how projects may impact different populations differently.

Linguistic vulnerability

4.9.25 Figure 10.6 of the ES (APP-192) identifies significant clusters of residents who do not speak English as a main language. These groups face documented barriers related to receiving construction information; understanding Electromagnetic field ("EMF") health communications; participating in consultation and navigating changes to PRoWs, traffic diversions, etc.

4.9.26 Despite this, linguistic vulnerability is not included in sensitivity scoring, nor in mitigation. ECC raised this in its Relevant Representation (RR-1083), but the ES provides no adaptation measures, no inclusive communication strategy, and no acknowledgment of compounded anxiety within communities with language barriers.

4.9.27 Non-English-speaking populations should be classified as highly sensitive, and mitigation should include translated materials, interpreters, and targeted engagement. Failure to address this undermines procedural fairness and effective participation. ECC consider this must be addressed by the Applicant.

Disability and long-term conditions

4.9.28 Figure 10.10 within the ES (APP-192) shows elevated disability prevalence in several Essex wards, with some areas exceeding 20% of the population.

4.9.29 The implications include greater sensitivity to construction noise, dust and vibration; higher reliance on predictable, accessible transport routes; reduced resilience to stress and environmental disruption and greater mental health vulnerability, including social isolation impacts.

4.9.30 However, the ES (APP-192) does not link disability prevalence to transport severance, PRoW closures, landscape change, or noise impacts. Sensitivity scoring appears inconsistent with WHIASU guidance, which requires that disability be treated as a determinant of heightened susceptibility.

4.9.31 The County Council considers therefore that disabled populations are highly sensitive receptors and must be assessed as such for all determinants including noise, visual change, access, and community severance.

Obesity, inactivity, and physical activity vulnerability

4.9.32 The ES (APP-192) presents adult and child overweight/obesity prevalence (Figures 10.11 and 10.12), with several study areas significantly above national averages.

4.9.33 Given this, PRoWs and green space access are major determinants of health, and any loss or disruption should have been assessed with elevated sensitivity. Yet, the ES concludes that active travel impacts are “negligible to minor”, despite clear evidence to the contrary in Table 10.13 of the ES (APP-192) (physical activity impact by ward). The ES does not evaluate population groups where physical inactivity is already a major burden and ignores that temporary severance can pose long-term behavioural consequences, especially in low-activity populations.

4.9.34 Overall, it is considered that the baselines point to clear health vulnerabilities. Therefore, impacts on PRoWs, footpaths, and cycling routes should be considered major adverse unless comprehensively mitigated.

Mental Health Baseline

4.9.35 Although mental health is discussed in the ES Section 10.5 (APP-192), the ES does not identify mental health prevalence by ward, nor does it include any qualitative engagement on mental health, despite Suffolk County Council recommending

MWIA workshops. The ES also does not assess baseline levels of community anxiety around EMFs or landscape change, despite acknowledging concerns.

4.9.36 Mental health prevalence in LSOAs in Tendring, Basildon, and Colchester is known to exceed regional averages, however, the ES treats mental health as a secondary or perception-based issue, which is inconsistent with EN-1 (para 4.4.4 – 4.4.6).

4.9.37 Mental health must be treated as a core determinant of health, not an afterthought. ES baseline does not reflect the reality and underestimates risk.

Assessment of impacts

4.9.38 Upon review of the ES Chapter 10 (APP-192) and associated documents, ECC concludes that significant adverse effects remain under-assessed, under-mitigated omitted, particularly in relation to:

- Mental health and wellbeing
- Vulnerable groups
- Inequalities
- Active Travel
- PRoW disruption
- Community cohesion
- Landscape/visual impacts
- Cumulative effects
- EMF-related anxiety

4.9.39 The ES frequently describes impacts as negligible or minor, despite evidence showing that communities along the route are disproportionately sensitive due to deprivation, disability, language barriers, poor mental health, and dependency on green/blue spaces. The assessment needs to more precautionary, more realistic and more reflective of lived experience within Essex.

Overview of impacts considered

Negative impacts

Public Rights of Ways and Active Travel

4.9.40 PRoWs are used for daily walking, active travel, dog-walking, recreation, and social connectedness. Many PRoWs intersect directly with Order Limits (ES Table 10.12 (APP-192) and PRoW survey data). Construction will introduce closures, diversions, severance, and reduced safety (HGVs, heavy plant), Visual and noise intrusion. This

is significant for health and wellbeing as Essex has high levels of inactivity and obesity, particularly in Basildon, Tendring, and Colchester (Figures 10.11 & 10.12). Green and blue space access is a core determinant of physical and mental health. Disruption to these will reduce physical activity, reduce opportunities for social cohesion, increase isolation and sedentary behaviour, impact children, older adults and disabled users disproportionately.

4.9.41 The ES concludes that impacts on physical activity are negligible to minor (Table 10.13) (APP-192). However, given the baseline, poor physical actively levels, high chronic disease burden, limited alternative routes, dependency on PRoWs in rural communities and vulnerable populations concentrated along portions of the route, there should be consideration of PRoW enhancement plan with commitments to pre-programmed diversions that maintain route continuity, permanent GI improvements along affect routes. There should be clear signage, safety measures and accessibility provisions and compensation to parishes where PRoW access forms part of community identity and tourism.

Landscape, visual and amenity impacts

4.9.42 Landscape and visual impacts are strongly linked to mental wellbeing, tranquillity, and community cohesion. ES Chapter 13 (APP-227) identifies numerous landscape effects. ES Chapter 10 (APP-192) states that mental health impacts occur due to loss of rural character, dominance of pylons, views from homes and public spaces and night-time lighting (construction).

4.9.43 It is considered significant because loss of views and green space is associated with stress, anxiety and reduce quality of life, rural communities attach strong identity to landscape, and ECC's statutory consultation response emphasised the need to evaluate localised mental health effects. The ES states effects are mixed or neutral overall, and acknowledges negative visual effects but does not conclude health significance. ECC Public Health consider that landscape and visual impacts may have mental wellbeing effects for areas with strong rural character, areas near Dedham Vale National Landscape, communities with little baseline resilience, older and isolated residents and areas with heritage and identity tied to landscape.

4.9.44 Mitigation should seek to include strategic planting and mounding as cited in ECC's statutory consultation response and enable community-led design of visual mitigation and seek compensation or community benefit schemes for most affected parishes.

Noise and vibration

4.9.45 The ES states that construction will cause excavation noise, construction plant noise and temporary night-time lighting. Noise is a known risk factor for cardiovascular strain, stress and anxiety and sleep disturbance. The ES chapter draws on Chapter 14 (APP-256) and concludes impacts are generally minor with standard mitigation. However, there should be consideration to ensure impacts are not underestimated, especially for children, residents with anxiety or depression, disabled people, older adults, non-English speakers unable to interpret construction warnings and residents already exposed to A12 works.

4.9.46 In Ardleigh, where the EACN as proposed by N2T adjoins with North Falls, Five Estuaries and ultimately Tarchon, and where 3 substations and a converter station are proposed in combination, noise either from one source or from multiple could be an issue, and this needs to be properly considered and mitigated against. If noise is generated, which is considered to be highly likely, then ECC needs assurances that any noise complaints are handed swiftly and appropriately by the developments causing this alleged nuisance, in the interest of neighbouring amenity.

4.9.47 The ES uses average exposure, not peak disruption and lacks a mental-health sensitive analysis. Mitigation should consider noise insulations grants, quiet working protocols, no-nighttime works near sensitive receptors and real-time noise monitoring published online.

Air quality and dust

4.9.48 The ES Chapter 10 (ES Table 10.4) (APP-192) highlights that air quality impacts arise mainly during construction. The ES states that operational impacts are negligible, and construction impacts minor. It is important to consider that in areas of deprivation and poor health, even temporary reductions in air quality increase respiratory risk, dust and emissions near PRoWs, schools and homes disproportionately affect disabled residents and children.

4.9.49 A mitigation plan should be prepared by the Applicant that considers air quality monitoring with public reporting, dust suppression commitments, avoiding HGV routing past schools or care homes and temporary re-routing of active travel corridors.

Community cohesion, identity and social wellbeing

4.9.50 Linear NSIPs can fracture communities, cause severance (physical and perceived), uncertainty and anxieties, decline in neighbourly interaction due to disruption and loss of public space. The ES has minimal qualitative assessments and no MWIA workshops were undertaken. ECC considers based on the mental health assessment framework used (MWIA), impacts are moderate adverse and unmitigated. Communities in Tendring, and Braintree have low baseline social cohesion as identified in the Joint Strategic Needs Assessment. Landscape disruption and PRoW loss amplify these vulnerabilities. Mitigation plan should consider air quality monitoring with public reporting, dust suppression commitments, avoiding HGC routing past schools or care homes and temporary re-routing of active travel corridors.

Impact on Vulnerable Groups and Inequalities

4.9.51 The ES provides baseline maps but does not sufficiently apply these. The linguistic vulnerability is ignored, deprivation domain differences ignored, and disability prevalence not linked to impacts. Furthermore, mental health prevalence is missing and there is no differential impacts table despite baseline data – this should be considered by the Applicant further submissions.

Positive impacts

4.9.52 ECC Public Health recognise potential positive impacts, but notes they remain undeveloped and lack commitments from the Applicant to implement or deliver.

4.9.53 In respect of employment, skills and training provides benefits during construction, especially in deprived areas (e.g., Basildon and Tendring), ECC Public Health agrees with section 5.8 of this LIR that should be an employment and skills plan which seeks to maximise benefits for deprived area. Furthermore, ECC Public Health would wish to see the Applicant deliver opportunities to enhance PRoWs, GI networks, Biodiversity and Nature Recovery.

4.9.54 Furthermore, the Applicant must deliver a community benefit fund that invests in community benefits, active travel, support for mental health resilience projects and village enhancements in high impact localities.

4.9.55 Without additional mitigation as set out within this LIR, ECC Public Health consider that several health impacts should be reviewed to ensure that there is not an underestimation or unassessed impacts.

4.10 Landscape

National policy

Overarching National Policy Statement for Energy (EN-1) (2024)

4.10.1 In this section, the County Council has extracted relevant paragraphs from the NPS, and provided commentary in respect of the Norwich to Tilbury project.

Paragraph 5.10.6: *"Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate."*

4.10.2 ECC's position is that the approach to the project in relation to the use of pylons and the overhead line does not minimise harm to the landscape nor provides reasonable mitigation/compensation for the use of overhead infrastructure.

Paragraph 5.10.12: "*Outside nationally designated areas, there are local landscapes that may be highly valued locally. Where a local development document in England or a local development plan in Wales has policies based on landscape or waterscape character assessment, these should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development."*

4.10.3 County, district and local level landscape designation, as such, was not government policy in the late 1990s and 2000s, and Valued Landscape Assessments have not been carried out at a district or local level to replace local landscape designation. ECC is concerned this has led to harm to landscape not being minimised.

Paragraph 5.10.35: "*The scale of energy projects means that they will often be visible across a very wide area. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project."*

4.10.4 ECC consider the significant adverse landscape and visual effects at a wide scale need to be offset through landscape enhancement or compensation at a strategic scale.

Paragraph 4.3.4: "*To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as employment, equality, biodiversity net gain, community cohesion, health and well-being"*

4.10.5 The application does not show how the residual significant adverse landscape and visual effects of the pylons and OH line will be compensated for along its length.

Paragraph 4.6.1: "*Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only avoid, mitigate and compensate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements."*

4.10.6 This information has not been provided in relation to compensation for the residual adverse landscape and visual effects of the pylons and OH line along its length.

Paragraph 4.2.12: "*Applicants should set out how residual impacts will be compensated for as far as possible. Applicants should also set out how any mitigation or compensation measures will be monitored and reporting agreed to ensure success and that action is taken. Changes to measures may be needed e.g. adaptive management. The cumulative impacts of multiple developments with residual impacts should also be considered."*

4.10.7 ECC do not consider that residual landscape and visual impacts compensation for the overhead line or cumulative effects has been addressed in any meaningful way within the submission.

<u>Landscape and Visual Constraints</u>

4.10.8 The Project runs through one National Landscape (Dedham Vale National Landscape) and the Stour Valley Project Area.

4.10.9 In relation to local landscape designations, Paragraph 13.2.9 of Document 6.13.A2 Environmental Statement Appendix 13.2 Landscape Baseline and Assessment (APP-228) states "*There are no locally designated landscapes within the 3 km Study Area"*, without reference to the fact that the districts through which the Project line passes no longer designate landscapes locally, in keeping with National policy from the late

1990s and 2000s. It is concerning that judgements may be being made regarding landscape value and sensitivity based on an assumption that because there are no designations, the landscape lacks value. A caveat to the statement in the documentation needs to be made that recognises that fact.

4.10.10 Lack of local landscape designation does not imply lack of landscape qualities or value. The current Holford Rules advise "*Where possible choose routes which minimise the effect on Special Landscape Areas, areas of Great Landscape Value and other similar designations of County, District or Local value."* However, districts which adhere to national policy from the late 1990s and 2000s and base their policy on local landscape assessments not designation are effectively penalised via this advice. The Holford Rules were last updated in the 1990s. ECC is not aware of local authorities in Essex using Valued Landscape Assessment at a district scale to inform their local plans, except as part of landscape sensitivity assessment of specific sites.

4.10.11 Whilst nationally protected landscapes such as AONBs and their settings, have the benefit in landscape and visual terms of proposed cabling being substantially undergrounded, the remaining rural landscapes along the route are not identified as a constraint when it comes to alignment, even though some of these are of strong and distinctive local character, and ECC would suggest, could be identified as being 'Valued Landscapes'. Inclusion of landscape value criteria as part of the assessment (and not a Valued Landscape Assessment as ECC requested during preliminary consultations from 2024) were not made available until the submission of the ES and so have not, to ECC's knowledge, informed the alignment in any meaningful way. ECC consider the proposed alignment and consideration of undergrounding needs to be looked at again in light of this data.

4.10.12 Many of these landscapes have value at a local level but successive Local Plans have discarded local protections to fit with national policy. The treatment of undesignated landscape as blank space is compounded by adherence to Rule 5 of the Holford Rules which states that routes of overhead transmission lines, should "*… be kept as far as possible from smaller lines, converging routes and other poles, masts, wires, and vales to avoid a concentration or 'wirescape'*". This has the contradictory effect of distributing adverse impacts over a wider area of unspoilt countryside rather than containing them in a narrower corridor. ECC consider the Holford Rules need updating in light of these concerns.

4.10.13 Landscape Value - ECC welcome the inclusion of landscape value criteria as part of the landscape value assessment methodology, as identified in Table A13.1.4 Factors contributing to landscape value, based on The Landscape Institute's *Technical Guidance Note (TGN) 02/21 Assessing landscape value outside national designations*

(Landscape Institute, 2021) (Appendix H). ECC have some concerns that this value assessment has been carried out just at a character area level rather than looking at the details of the landscape value within the Order Limits and their setting. This could result in the downplaying of specific qualities and value related to the development corridor itself, particularly of river valleys. In order to reduce significant landscape and visual impacts at the operational stage over the length of the project, more consideration of undergrounding is required to protect valued local landscapes, notably river valleys, long-distant rights of way and rural amenity sites.

4.10.14 In addition, ECC is concerned that some of the evaluation in relation to landscape value is flawed, partly as the baseline evaluation and judgements appear to be made solely at a district level and not at a study area/setting level. As a result, they do not necessarily address the value of the key characteristics of the landscapes in the study area that are directly affected, particularly river valleys.

4.10.15 In relation to the landscape value assessments, ECC has concerns that the detailed assessments identified in Annex A to Appendix 13.2: Landscape Baseline and Assessment (APP-228) appear to undervalue factors, particularly in relation to '*Distinctiveness*', '*Perceptual*' and '*Functional*' criteria.

4.10.16 Value of the view - The value of the view has been judged substantially on identified viewpoints and promoted views in tourist-focussed documents however our position is that, in lieu of local landscape designation and district-wide Valued Landscape Assessments, the value of the view should be judged by how it relates to the LCA. The value of view indicators as presented in the assessment downplay the subtle character of East Anglian landscapes and appear concentrated on topography, woodland and water. This approach pre-determines visual value based on certain characters and not others.

<u>Landscape and Visual Impact</u>

Landscape Character Effects

4.10.17 At the construction stage, Chapter 13 – Landscape and Visual (APP-227) suggests that at Construction, significant effects occur generally within 1.5 Km of the Project. ECC generally accept this judgement, however, would consider that towards the end of the construction period the adverse effects, especially visual, could extend beyond this distance, especially in open landscapes as multiple pylons and overhead line runs become visible.

4.10.18 At the operational stage it is identified that significant landscape effects are predicted within 1.5Kms of the project line. However, many of the judgements suggest these impacts are moderate significant rather than major significant beyond 0.5Kms, which ECC question. This is particularly true where multiple pylons 50m high are visible in sequence coupled with the overhead line and often in landscapes where intervisibility is high.

4.10.19 The visualisations demonstrate that, the landscapes affected by the project are substantially undeveloped and rural where intervisibility is often high due to large scale flat or gently undulating landscapes or shallow river valleys, where the scale of the pylons and overhead wires means the effect is to industrialise the countryside in places up to 2Km away. These are often landscapes without existing significant detractors.

4.10.20 ECC position is that at the operational stage impacts are likely to still be major significant rather than moderate significant beyond 0.5Kms.

4.10.21 Further details on Landscape Character Effects on a district basis can be found in Appendix I.

Visual Effects

4.10.22 Generally, landscape and visual impact assessment has been supported by Photographic Baseline images and Wireline visualisations. Figures 13.7 Landscape and Visual Receptors and Viewpoints (APP-243) identifies viewpoint locations and Additional Historic Environment Viewpoints are also identified.

4.10.23 ECC welcomes the 206 Viewpoint assessments that have been identified over the whole project length which is a considerable increase on the number presented in the PEIR, but note that there are still considerable gaps in the provision including in VRA C12 Ardleigh (Longer distance), VRA D3 Great Horkesley and Horkesley Heath (Longer distance) VR10 D10 Copford VRA E3 Kelvedon VRA E4 Silver End (Longer distance), VRA F9 Edney Common (Longer distance) VRA F6 Chelmsford North-West (Longer distance) VRA G3 Brentwood East (Longer distance) VRA H1 Bulphan (Longer distance) VRA H2 Horndon on the Hill (Longer distance). The shortfall is particularly noticeable from beyond 1.5 Kms and is in danger of undervaluing the significance of the effects on the PRoW network in particular.

4.10.24 Theoretical visibility of Project- Fig 13.12 - ZTV of East Anglia Connection Node (APP-248) shows that theoretical visibility of the whole structure of the substation is extensive and goes beyond the 3 Km study area in several places, Including into the

Dedham Vale National Landscape. Fig 13.13 - ZTV of Great Horkesley EACN side CSE Compound and Figure 13.14 - Landscape and Visual -ZTV of Great Horkesley (Tilbury Side) CSE Compound show these are largely contained within the 3 KM study area. However, the structure is theoretically visible within the Dedham Vale National Landscape.

4.10.25 ECC considers that the visual assessment should more explicitly extend into sensitive areas beyond the 3Km line including the National Landscape in order to demonstrate the effects are not significant.

4.10.26 Figure 13.15 - Landscape and Visual -ZTV of Fairstead (EACN Side) and Fairstead (Tilbury Side) CSE Compounds (APP-251) shows that theoretical visibility of the whole structure of the substation is extensive and goes beyond the 3 Km study area in several places. ECC consider that the visual assessment should more explicitly extend into sensitive areas beyond the 3Km line in order to demonstrate the effects are not significant.

4.10.27 Figure 13.9 - Landscape and Visual - ZTV of Proposed 400kV Overhead Line (proportions of structures visible) (APP-245) indicates relatively widespread theoretical visibility of the whole pylon structure and overhead line both within the 3 km study area and beyond 5Km, including from villages, the PRoW network, National Cycle Network routes in this area, from the rural lanes and road network. This highlights how widespread the potential significant negative landscape and visual effects of the scheme are and also suggests that some visual assessment needs to extend beyond the 3Km study area

4.10.28 ECC consider that the visual assessment should more explicitly extend into sensitive areas beyond the 3Km line in order to demonstrate the effects are not significant.

4.10.29 Visual Receptors and Groupings - The Landscape Assessment (APP-226) groups the visual receptors into Visual Receptor Areas. These Visual Receptor Areas have been identified based on geographical location, shared landscape characteristics and a similarity in the nature of views. ECC understand that, as the project area is so large, the Visual Receptor Areas are a pragmatic way of organising the data, but fear clarity and detail around individual receptors has been lost as a result.

4.10.30 Generally, ECC do not agree that the value of the view should be judged substantially on identified viewpoints and promoted views in tourist-focussed documents and argue that in lieu of local landscape designation and district-wide Valued Landscape Assessments. The value of the view should be judged by how it relates to the LCA. The value of view indicators as presented in the assessment downplay the subtle

character of East Anglian landscapes and appear concentrated on topography, woodland and water. This approach pre-determines visual value based on certain characters and not others.

4.10.31 Paragraph 13.7.18 (APP-226) Visual Effects - the assessment acknowledges that at Year 1 of operation, there would *"…be significant adverse visual effects on visual receptors within most of the VRAs which are directly affected by the Project".* This is related to the introduction of the proposed overhead line, CSE compounds, substations or substation extensions into close to medium distance views. ECC acknowledge that by Year 15, effects on some visual receptors in proximity to CSE compounds, substations and substation extensions would reduce as a result of landscape mitigation within Environmental Areas. However, this implicitly recognises that the significant adverse visual effects caused by pylons and overhead lines are not mitigatable and do not reduce.

In relation to the Visual Receptor Areas: Summary position

4.10.32 Policy: ECC position is that the proposals as they stand do not meet (EN-1) 4.3.4 which states "… the applicant must … show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy…". ECC judge this policy has not been followed as there is no compensation offered for the significant adverse landscape and visual effects of the overhead line and pylons.

4.10.33 Visual effects: The ES acknowledges that the proposals will have a significant negative visual impact over the length of the project. This is identified as up to 1.5Km from the project line in most situations. Generally, beyond 1.5Km ECC accept that individual impacts will not be significant. However, as a result of open landscapes, multiple pylons in view and cumulative effects when passing from one visual receptor area to another along the line, ECC consider that the cumulative effect is likely to result in an overall significant adverse effect generally within the study area at both construction and operation.

4.10.34 Value of the view: Generally, ECC do not agree that the value of the view should be judged substantially on identified viewpoints and promoted views in tourist-focussed documents and argue that, in lieu of local landscape designation and district-wide Valued Landscape Assessments. The value of the view should be judged by how it relates to the LCA. The value of view indicators as presented in the assessment downplay the subtle character of East Anglian landscapes and appear concentrated on topography, woodland and water. This approach pre-determines visual value based on certain characters and not others.

4.10.35 Landscape effects: The Colchester Borough Landscape Assessment has been updated since the PEIR was submitted, however, there are still references to it in the ES. ECC advise that the judgements are updated to reflect the Colchester Landscape Character Assessment (LUC November 2024) if that has not already been done.

4.10.36 The ES acknowledges that the proposals will have a significant negative landscape impact at both construction and operational stages over the length of the Project. Where negative effects are judged not to be significant further away from the Project line, the visual character of the landscape and its perceptual nature is likely to combine to significantly negatively affect the landscape over a wide area, reducing scenic beauty and tranquillity, aesthetic enjoyment, a sense of place, history and identity, and inspiration for learning throughout the landscape and visual study area.

4.10.37 Landscape Value: Valued landscape criteria have now been included in the landscape assessment; however, ECC is concerned that some of the evaluation is flawed. In addition, as the baseline evaluation and judgements appear to be made solely at a district and not a site/setting level, they do not necessarily address the value of the key characteristics of the landscapes in the study area that are directly affected, particularly river valleys. In order to reduce significant landscape and visual impacts at the operational stage over the length of the Project, more consideration of undergrounding is required to protect valued local landscapes, notably river valleys, long-distant rights of way and rural amenity sites.

4.10.38 Dunton Hills Garden Village: There are profound concerns regarding the likely significant impact of the pylons running through the eastern margin of the Dunton Hills Garden Village. ECC do not consider the Project fits with the vision for the garden village and seek a review of the alignment and/or the choice of an overhead solution. This matter is also discussed in section 4.3 of this LIR.

4.10.39 Compensation: There does not appear to be any compensation offered in relation to the significant residual adverse landscape and visual effects created by the pylons and OH line along its length. Our position is that the Project should not go ahead, without a substantial funded landscape and visual compensation scheme, alongside but distinct from any proposed community benefits, to recognise the long-term significant residual negative and un-mitigatable operational effects on both landscape and visual receptors that this Project will generate.

4.10.40 Generally: ECC recommends that any changes to the text of the Landscape Assessment must be presented as track changes document so ECC officers can identify the changes are made. It was challenging to understand what updates had

been made since the PEIR was submitted. ECC have not made reference in detail about issues relating to vegetation removal in this response, but it is expected for these to be fully quantified and identified, including on plan, in the emerging LEMP and/or other emerging documents. ECC reserve the right to raise additional issues as the pre-examination process progresses.

Compensation

4.10.41 An element identified as Landscape Compensation has now been included in the 7.4 Landscape and Ecological Management Plan (APP-321). Whilst the inclusion of this element of compensation within the LEMP is to be welcomed, it has been confirmed by National Grid that this refers only to Replacement Planting on a 3:1 basis of trees to be removed within the Order Limits. ECC do not consider this to be 'compensation' in Landscape and Visual Impact terms, judging it to be at best reinstatement for existing mature and semi-mature vegetation that is to be removed during construction. It does little to compensate for the permanent significant adverse landscape effects caused by the construction of the pylons, overhead line and CSE's within the district and does not address any of the significant permanent adverse visual effects that will occur.

4.10.42 Overarching National Policy Statement for Energy Policy (EN-1) 4.3.4 states *"To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy*…". There does not appear to be any compensation offered in relation to the residual negative landscape and visual effects of the pylons and OH line along its length.

4.10.43 ECC position is that a significant strategic landscape compensation package should be put in place as part of the submission or a significant strategic financial compensation package put in place as a side agreement to offset the landscape and visual harm across the route of the overhead line.

4.11 Green Infrastructure

4.11.1 ECC currently provides advice on green infrastructure for major developments. ECC have been consultees on GI since 2018. Although there are no statutory requirements for GI, the 25 Year Environment Plan and Environment Act (2021) place significant importance on protecting and enhancing GI, accessibility and biodiversity net gain.

Policy Context

4.11.2 In providing advice ECC look to ensure that adequate provision, protection and improvements of high-quality GI comply with the objectives and planning principles set out in the following documents:

- Local Planning Authorities (LPA) Green Infrastructure Strategy/ SPD or equivalent green and open space strategies provides further guidance on the LPA's Local Development Plan policies regarding the Council's approach to green infrastructure provision in the local authority area.
- Essex Green Infrastructure Strategy, 2020, aims to enhance the urban and rural environment, through creating connected multi-functional GI that delivers multiple benefits to people and wildlife. It meets the County Council's aspirations to improve GI and green spaces in our towns, city and villages, especially close to areas of deprivation.
- Essex Green Infrastructure Standards, 2022, provide clear guidance on the requirements on both planning policy and planning application and processes.

GI impacts and proposed mitigation

4.11.3 ECC has reviewed the Design and Access Statement ("DAS") (APP-353) which acknowledges permanent access proposals and embedded mitigation measures such as SuDS, reinstatement planting, and new non-motorised user ("NMU") routes. However, these measures are presented primarily as visual mitigation rather than as part of an integrated GI strategy. The DAS should be strengthened to explicitly link these interventions to local GI strategies and Essex's LNRS priorities, ensuring they deliver multifunctional benefits such as habitat connectivity, climate resilience, and recreational opportunities. This approach would align with local plan policies (e.g., Chelmsford DM25) and the Essex Green Infrastructure Standards.

4.11.4 It is recommended that the DAS consider how LNRS priorities will inform the design of Environmental Areas and mitigation planting. Opportunities for habitat restoration, hedgerow enhancement, and riparian improvements should be clearly identified, particularly in sensitive areas such as the Dedham Vale National Landscape. National Grid should work collaboratively with Local Nature partnerships, wildlife organisations and local authorities to co-design GI and BNG interventions that contribute to wider ecological networks and nature recovery targets.

4.11.5 The current DAS (APP-353), OLEMP (APP-321) and associated documents demonstrate some positive steps, such as commitments to BNG and Environmental

Areas of the CSE Compound and EACN substation. However, these measures lack enforceable detail and strategic integration with Essex's GI and LNRS priorities. ECC requests that these recommendations are incorporated into the DCO to ensure compliance with statutory requirements and Essex's strategic environmental objectives.

4.11.6 The LIR in respect of Green Infrastructure builds on earlier submissions and should be read alongside Essex County Council's Relevant Representation (RR-1083) which set out a review regarding Green Infrastructure, Biodiversity Net Gain, and Local Nature Recovery Strategy alignment.

4.11.7 ECC promotes the delivery GI though the 'Lawton Principle' which advocates for a landscape-scale approach to conservation and the enhancement of connection between green sites- either through physical green corridors or through 'stepping-stones'. A bigger, better, and connected approach to GI delivery ensures the delivery of multiple functions and benefits to people and wildlife. For example, the approach enhances biodiversity (both through the delivery of new habitats and wildlife corridors) alongside natural screening, Flood and water management and improves the character and sense of place.

4.11.8 ECC recommends the following measures are included within the application.

- Secure a GI Strategy within the Development Consent Order (DCO) or Landscape Strategy to ensure multifunctional benefits, habitat connectivity, and climate resilience.
- Mandate +10% BNG for all habitats, with a Biodiversity Gain Plan approved prior to commencement and robust monitoring/reporting obligations within the DCO.
- Align all mitigation and compensation measures with LNRS priorities, including habitat creation and species corridors.
- Extend maintenance periods for planting and GI features to ensure long-term success (minimum 10 years for landscaping or reset five-year maintenance period upon replanting failed plants; 30 years for BNG areas).
- Strengthen compensation provisions, including a minimum 3:1 ratio for priority habitats delivered within Essex.

4.11.9 The proposed development will result in notable ecological and landscape impacts within Essex. Key concerns include the loss of hedgerows, trees (as considered in Articles 50 and 51 of the dDCO (APP-056)), temporary land use powers (as considered in Articles 27–29 of the dDCO (APP-056)), and priority habitats, which are vital for species movement and identified as LNRS corridors.

4.11.10 ECC considers that the absence of a clear requirement for 10% BNG within the dDCO and its monitoring and a comprehensive GI strategy raises the risk of net biodiversity loss.

4.11.11 Additionally, the project intersects flood-prone areas and major transport corridors, increasing vulnerability to climate-related risks and habitat fragmentation. Furthermore, it includes limited integration of nature-based SuDS and climate adaptation measures.

4.11.12 Sensitive receptors include designated wildlife sites, public rights of way, and heritage landscapes. These could undermine LNRS objectives unless offsetting and GI requirements are strengthened.

4.11.13 To mitigate impacts, ECC requests BNG delivery, alignment of planting and habitat creation with LNRS priorities secured via the Development Consent Order or any other appropriate mechanism as determined by the ExA. Furthermore, there should be the consideration and securing of long-term maintenance of GI features, for those areas under ownership or managed by the Applicant to 30 years. For those areas that are not under ownership or management of the Applicant, an amendment is suggested securing a 5 year maintenance plan from time of planting and if a tree for instance needs to be replaced, that maintenance time resets, alongside measures such as sustainable drainage systems and habitat compensation within Essex. Furthermore, there should be annual monitoring and reporting obligations required by the Applicant.

4.11.14 ECC would also wish to make the ExA aware of the Big Green Internet. The Big Green Internet project aims to plant and connect the woodlands from Tendring to Epping Forest, which potentially, the path of this proposal may well pass through. The opportunities to contribute to and the potential effects of should be considered by the Applicant.

4.12 Ecology & Biodiversity Net Gain

Policy Context

National policy

4.12.1 EN-1 Overarching Policy Statement for Energy EN-1

4.12.2 The following EN-1 paragraph highlighted in this in relation to this section of the LIR relate to Applicant assessment, mitigation and Secretary of State decision making:

5.4.17 Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including those outside England), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats.

5.4.35 Applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:

- *during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works*
- *the timing of construction has been planned to avoid or limit disturbance*
- *during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements*
- *habitats will, where practicable, be restored after construction works have finished*
- *opportunities will be taken to enhance existing habitats rather than replace them, and where practicable, create new habitats of value within the site landscaping proposals. Where habitat creation is required as mitigation, compensation, or enhancement the location and quality will be of key importance. In this regard habitat creation should be focused on areas where the most ecological and ecosystems benefits can be realised.*

5.4.44 The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into, in order to ensure that any mitigation or biodiversity net gain measures, if offered, are delivered and maintained. Any habitat creation or enhancement delivered including

linkages with existing habitats for compensation or biodiversity net gain should generally be maintained for a minimum period of 30 years, or for the lifetime of the project, if longer.

5.4.45 The Secretary of State will need to take account of what mitigation measures may have been agreed between the applicant and the SNCB and the MMO/NRW (where appropriate), and whether the SNBC or the MMO/NRW has granted or refused, or intends to grant or refuse, any relevant licences, including protected species mitigation licences

National Planning Policy Framework

4.12.3 The following NPPF paragraphs highlighted in this in relation to this section of the LIR are

192. To protect and enhance biodiversity and geodiversity, plans should:
a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity[68]; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation[69]; and
b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

193. When determining planning applications, local planning authorities should apply the following principles:
a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Local Plan policy

4.12.4 Chelmsford Local Plan 2013 – 2036

- Policy DM16 – Ecology and Biodiversity

A) Internationally Designated Sites

Developments that are likely to have an adverse impact (either individually or in combination with other developments) on European Designated Sites must satisfy the requirements of the Habitats Regulations, determining site specific impacts and avoiding or mitigating against impacts where identified.

Where appropriate, contributions from developments will be secured towards mitigation measures identified in the Essex Recreational disturbance Avoidance and Mitigation Strategy (RAMS) which will be completed by the time the Local Plan is adopted. Prior to RAMS completion, the authority will seek contributions, where appropriate, from proposed residential development to deliver all measures identified (including strategic measures) through project level HRAs, or otherwise, to mitigate any recreational disturbance impacts in compliance with the Habitats Regulations and Habitats Directive.

B) Nationally Designated Sites
Development proposals within or outside a SSSI, likely to have an adverse effect on a SSSI (either individually or in combination with other developments), will not be permitted unless, on an exceptional basis, the benefits of the development clearly outweigh both the adverse impacts on the features of the site and any adverse impacts on the wider network of SSSIs.

C) Locally Designated Sites
Development likely to adversely affect locally designated sites, their features or their function as part of the ecological network, will only be permitted where the need and benefits of the development clearly outweigh the loss and the coherence of the local ecological network is maintained.

D) Biodiversity and Geodiversity in Development
All development proposals should:
Conserve and enhance the network of habitats, species and sites (both statutory and non-statutory, including priority habitats and species) of international, national and local importance commensurate with their status and give appropriate weight to their importance; and
Avoid negative impacts on biodiversity and geodiversity, mitigate unavoidable impacts and as a last resort compensate for residual impacts; and
Deliver a net gain in biodiversity where possible, by creating, restoring and enhancing habitats, and enhancing them for the benefit of species.

4.12.5 Colchester Borough Local Plan 2017 – 2033

- Policy ENV1: Environment

The Local Planning Authority will conserve and enhance Colchester's natural and historic environment, countryside and coastline. The Local Planning Authority will safeguard the Borough's biodiversity, geology, history and archaeology, which help define the landscape character of the Borough, through the protection and enhancement of sites of international, national, regional and local importance. The Local Planning Authority will require development to be in compliance with, and contribute positively towards, delivering the aims and objectives of the Anglian River Basin Management Plan.

A. Designated sites
Development proposals that have adverse effects on the integrity of habitats sites, Sites of Special Scientific Interest or significant adverse impacts on the special qualities of the Dedham Vale Area of Outstanding Natural Beauty (including its setting) (either alone or in-combination) will not be supported.

B. Essex Coast RAMS
A Recreational disturbance Avoidance and Mitigation Strategy has been completed in compliance with the Habitats Directive and Habitats Regulations. Further to Section 1 Policy SP2, contributions will be secured from qualifying residential development, within the Zones of Influence as defined in the adopted RAMS, towards mitigation measures identified in the Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS).

C. Biodiversity and geodiversity
Development proposals where the principal objective is to conserve or enhance biodiversity and geodiversity interests will be supported in principle. For all proposals, development will only be supported where it:

Is supported with appropriate ecological surveys where necessary; and
Where there is reason to suspect the presence of a protected species (and impact to), or Species/Habitats of Principal Importance, applications should be accompanied by an ecological survey assessing their presence and, if present, the proposal must be sensitive to, and make provision for their needs and demonstrate the mitigation hierarchy has been followed; and
Will conserve or enhance the biodiversity value of greenfield and brownfield sites and minimise fragmentation of habitats; and
Maximises opportunities for the preservation, restoration, enhancement and connection of natural habitats in accordance with the UK and Essex Biodiversity Action Plans or future replacements; and
(v) Incorporates beneficial biodiversity conservation features, measurable biodiversity net gain of at least 10% in line with the principles outlined in the Natural England Biodiversity Metric, and habitat creation where appropriate.

Proposals for development that would cause significant direct or indirect adverse harm to nationally designated sites or other designated areas, protected species, Habitats and Species of Principle Importance, will not be permitted unless:
(i) They cannot be located on alternative sites that would cause less harm; and
(ii) The benefits of the development clearly outweigh the impacts on the features of the site and the wider network of natural habitats; and
(iii) Satisfactory biodiversity net gain, mitigation, or as a last resort, compensation measures are provided.

The Local Planning Authority will take a precautionary approach where insufficient information is provided about avoidance, mitigation and compensation measures and secure mitigation and compensation through planning conditions/obligations where necessary.

D. Irreplaceable habitats
Proposals that would result in the loss of irreplaceable habitats, such as ancient woodland, Important Hedgerows and veteran trees will not be permitted unless there are wholly exceptional reasons and a suitable compensation strategy, to the satisfaction of the local planning authority, exists.

E. Countryside
The local planning authority will carefully balance the requirement for new development within the countryside to meet identified development needs in accordance with Colchester's spatial strategy, and to support the vitality of rural communities, whilst ensuring that development does not have an adverse impact on the different roles, the

relationship between and separate identities of settlements, valued landscapes, the intrinsic character and beauty of the countryside and visual amenity.

The intrinsic character and beauty of the countryside will be recognised and assessed, and development will only be permitted where it would not adversely affect the intrinsic character and beauty of the countryside and complies with other relevant policies. Within valued landscapes, development will only be permitted where it would not impact upon and would protect and enhance the factors that contribute to valued landscapes.

4.12.6 Tendring District Local Plan 2013 – 2036

- Policy PPL 4 – Biodiversity and Geodiversity

Sites designated for their international, European and national importance to nature conservation: including Ramsar sites; Special Protection Areas (SPAs); Special Areas of Conservation (SACs); Marine Conservation Zones (MCZs); National Nature Reserves (NNRs); and Sites of Special Scientific Interest (SSSIs) will be protected from development likely to have an adverse effect on their integrity.

Where proposals for development are likely to significantly impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts. An Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) has been completed in compliance with the habitats Directive and Habitats Regulations. Contributions will be secured from residential development, within the Zones of Influence, towards mitigation measures identified in RAMS.

As a minimum, there should be no significant impacts upon any protected species, including European Protected Species and schemes should consider (and include provision, as may be relevant for) the preservation, restoration or re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations. Proposals for new development should also have regard to any published local Recreational Disturbance Avoidance and Mitigation Strategies and include any measures which may be necessary to support the aims of the strategy, to help to mitigate any likely recreational impacts arising from the development. Proposals for enhancement of special interest and features will be supported, subject to other material planning considerations.

Sites designated for their local importance to nature conservation, including Local Wildlife Sites (LoWS), Ancient Woodlands, Protected Verges, and aged or veteran trees will be protected from development likely to have an adverse impact on such sites or features. Proposals for enhancement of special interest and features will be supported, subject to other material planning considerations.

Proposals for new development should be supported by an appropriate ecological assessment. Where new development would harm biodiversity or geodiversity, planning permission will only be granted in exceptional circumstances, where the benefits of the development demonstrably outweigh the harm caused and where adequate mitigation or, as a last resort, compensation measures are included, to ensure a net gain, in biodiversity.

Proposals for new infrastructure and major development should consider the potential for enhanced biodiversity, appropriate to the site and its location, including, where appropriate, within Green Infrastructure.

Any proposed development on sites which may support protected species will require a relevant survey(s), undertaken by a suitably qualified ecologist. If protected species are present, a suitable mitigation plan will be required prior to planning permission being granted.

4.12.7 A comprehensive list of national, regional, and local policies relating to conservation and biodiversity is provided in the 8.2 Regulatory and Planning Policy Context section of the Environmental Statement Chapter 8.

Ecology Impacts and proposed mitigation

4.12.8 The Norwich to Tilbury project entails construction of an approximately 184 km new 400 kV electricity transmission route running from Norwich Main Substation to Tilbury Substation via Bramford Substation. Where the electricity connection will be via new 400kV overhead line and will require vegetation removal, a 40m wide swathe will be removed to facilitate construction activities. An additional up to 8m of vegetation either side of the 40m would be managed during construction, operation, and maintenance, to allow for clearance to be maintained, and an additional up to 22m of vegetation either side would potentially be affected. This adds up to a potential impact corridor of 100m width.

4.12.9 Where the electricity connection will be via underground cabling, this will be installed by a combination of open-cut trenching and trenchless techniques (e.g. horizontal directional drilling).

4.12.10 For the open-cut installation, a 120 m wide swathe of vegetation may be removed and up to 50 m of vegetation either side of this could potentially be affected during construction. Therefore, the potential impact corridor for open-cut installation would be 220m wide.

4.12.11 Trenchless installation still requires a 200m wide construction corridor, but the interaction with vegetation should be far less outside of the drilling/boring ingress and egress locations.

4.12.12 There will also be new cable sealing end compounds and substation developments with associated construction footprints.

4.12.13 The ecological receptors included for impact assessment within the ES Chapter 8 Ecology and Biodiversity (APP-158) are:

- International (Statutory) Designated Sites
- National (Statutory) Designated Sites
- Local (Non-statutory) Designated Sites
- Habitats
- Ancient Woodland
- Priority Habitats
- Species-rich/Important Hedgerows
- Groundwater Dependent Terrestrial Ecosystems
- Other Habitat
- Protected Species/Species of Conservation Concern (Flora)
    - Vascular and Non-vascular Plants and Fungi
    - Invasive Non-Native Species – Plants
- Protected Species/Species of Conservation Concern (Fauna)
    - Terrestrial Invertebrates
    - Aquatic Macroinvertebrates
    - Invasive Non-Native Species – Aquatic Macroinvertebrates
    - Fish
    - Reptiles
    - Birds (Schedule 1, breeding, wintering and passage)
    - Bats (roosting, foraging and commuting)
    - Hazel Dormouse
    - Otter
    - Water Vole
    - Badger

- Species of Principal Importance (common toad, brown hare, harvest mouse, hedgehog and polecat)
- Great Crested Newt

4.12.14 Based on ECC's review of the completed ecological survey work, the ES chapter (APP-158) generally provides an appropriate assessment of likely impacts on the identified ecological receptors. This includes for both statutory and non-statutory designated sites, habitats, and protected and Priority species.

4.12.15 The project's embedded mitigation has very largely avoided a potential for significant impacts on designated sites. The potential for impacts to the Stour & Orwell Estuaries SPA/Ramsar is, after proposed mitigation measures, rated as negligible. The predicted construction phase impacts to all LWSs falling within the Order Limits are rated as minor, temporary, and reversible, and the residual impacts post mitigation are all appraised as negligible.

4.12.16 For Colchester CC, this includes possible hydrological impacts to Black Brook LWS and a potential for accidental encroachment into ancient woodland at Harrow Wood LWS.

4.12.17 For Chelmsford CC, this includes the potential for accidental encroachment into ancient woodlands at Parson's & Queen's Wood LWS and at Osborne Wood LWS, tree loss at Langley's Deer Park LWS, oversailing at Great/Little Edney Woods LWS, and removal and undergrounding of the 11 kV UKPN overhead line at Writtle-Writtlepark Woods LWS.

4.12.18 ECC does not refute these assessments, although it is critical that the proposed mitigation measures happen to specification.

4.12.19 The project's embedded mitigation has also evidently aimed to avoid or otherwise limit the potential for negative impacts on habitats and protected species.

4.12.20 Hazel dormouse populations were confirmed at Survey Areas 18 (King Wood), 19 (Bosmore Wood), and 20 (Bushy Wood and Osborne's Wood), which all fall within the Margaretting area of Chelmsford CC. The negligible residual impact assessments for these hazel dormouse sites are not disputed.

4.12.21 ECC is concerned about the impact assessments (as mentioned in it's Relevant Representation (RR-1083)), is the approach taken to the tree bat roost surveys. Where static bat detector surveys within the Order Limits recorded barbastelle bat activity above a defined threshold, robust roost survey methods were employed,

including aerial inspections, dusk emergence surveys, backtracking surveys, and radio-tracking. This level of tree roost survey was undertaken at only 12 discrete locations, which covers only a fraction of the overall potential for bat roost tree impacts. The following statement is noted from the ES Chapter 8 (APP-158) "Tree removal would be required to facilitate construction. A total of 2,975 trees and 23.99 ha of tree groups within the surveyed area were identified that have the potential to support roosting bats. … Of these assessed trees, the trees that have been identified for complete removal comprise: 113 trees with PRF-M, 257 trees with PRF-I, 801 FAR trees and 16 trees with hibernation features. Of these assessed trees, the trees that would require management for electrical clearances, haul roads, etc., comprise: 50 trees with PRFM, 101 trees with PRF-I, 265 FAR trees and, three trees with hibernation features."

4.12.22 This survey deficit appears to be justified by the supposition that: (1) barbastelle are a more important conservation concern than other bat species (despite the roosts of other species having equivalent legal protection); and (2) simply going through the Natural England bat mitigation licensing process wherever it is found to be needed will ultimately and inevitably result in a neutral or positive impact outcome. ECC regard this as a flawed approach lacking evidence to support it. Impacts on all protected bat species need to be assessed with reasonable confidence and the proposed mitigation considered appropriate, prior to determination, to support a lawful decision. Supposing that a greater level of roost tree survey is not feasible pre consent, ECC advise an evidence-based, worst-case scenario estimation of the bat tree roost impact, and the design of a more confidently proportionate bat tree roost mitigation/compensation scheme.

4.12.23 It is also noted that most predicted habitat impacts are being regarded as temporary and ultimately of negligible significance because of the commitment to restore the habitats after the construction phase of the project. This temporary habitat loss reasoning is also applied to certain protected species/ species of conservation concern impact assessments (e.g. bat foraging and commuting). For long-term assessments, this is not an unreasonable deduction in principle; however, the potential short-medium term impacts on local fauna species populations are under-emphasised, as is the potential that not all habitat restoration may be successful to a like-for-like standard. The 5-year post completion time limit for habitat re-establishment is minimal and ECC consider that such short-term involvement in the habitat restoration is unlikely to result in comprehensive success. If the habitat re-establishment is not as successful as assumed within the ES, then habitat and protected species (e.g. bats and breeding birds) impacts from the project will be higher than predicted. With respect to habitats, a commensuration portion of the proposed BNG will actually be compensation as opposed to net gain. If increasing

the 5-year time limit for habitat re-establishment works is not feasible, then an evidence-based replacement planting failure percentage should be factored into the planned mitigation so that the 'negligible' habitat and protected species impact assessments are cushioned and more reliable.

4.12.24 ECC do approve of other mitigation measures and compensation commitments made, which are expected to be finalised in consultation with the LPAs and secured by Requirements of any DCO made (e.g. management plans).

4.13 Historic Environment

4.13.1 This section provides historic environment advice to inform the submission of a Local Impact Report concerning National Grid's Norwich to Tilbury project to reinforce the 400kV high voltage power network in East Anglia (including a new 400kV connection substation in the Tendring district).

4.13.2 The scope of the assessment in respect of archaeological impacts of the proposed Norwich to Tilbury project is within Essex and within the Colchester, Tendring, Chelmsford, Basildon, Brentwood and Thurrock planning authority areas.

Policy Context

National Policy

4.13.3 Relevant legislation and policies for archaeology are largely as listed and described in the Applicants submission in Section 11.2 of the ES Chapter 11 Historic Environment (APP-208).

Overarching National Policy Statement for Energy (EN-1) (Updated January 2024)

Section 5.9 Historic Environment.

4.13.4 EN 1 section 5.9 requires impacts (both direct and indirect) to be understood, and harm avoided or minimised through design and mitigation, with loss of archaeological assets preserved by record where justified.

5.9.11 "*Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based*

assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation"

4.13.5 From extensive discussions with the Applicant, it was agreed at an early stage that a field evaluation would be required to support the application and provide sufficient evidence to allow the determination of the impact of the scheme on archaeological remains. A programme of geophysical survey and trial trench evaluation was agreed with the identification of Priority Areas and non-Priority Areas. Priority areas were defined based on reduced design flexibility, construction methodology, and the associated extent of archaeological impact likely to result from their construction.

4.13.6 Geophysical survey of Priority Areas is near complete while trial trenching for Priority Areas is currently ongoing though near completion. The full results of the trial trench evaluations will not be available with time to review prior to determination of the application. A number of the trial trench reports submitted are interim only and do not include full assessment of the archaeological remains. The application fails to include sufficient evidence from the field evaluations carried out within Essex to support the baseline data across the scheme. The Applicant has failed to fully comply with the policy set out in paragraph 5.9.11 with regards to archaeology and geoarchaeology and National Planning Policy Framework (NPPF) Paragraph 207 (2024) "In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation."

4.13.7 Relevant National Legislation and Policy for archaeology is listed in Section 11.2.15 (APP-208). Archaeology is considered within Chapter 16 of the NPPF - Conserving and enhancing the historic environment.

4.13.8 The following National guidance is also considered relevant for archaeology, and should have been included in section 11.2.19 for compliance: National Planning Practice Guidance: Conserving and Enhancing the Historic Environment (2019)

Regional and Local Policy

4.13.9 Local Planning Authorities within the Order Limits comprise Colchester, Tendring, Braintree, Chelmsford, Brentwood, Basildon, and Thurrock. The following specific policies and paragraphs within each planning authorities' policy documents are relevant to archaeology:

4.13.10 Colchester Borough Local Plan: Section 2 2017-2033 (July 2022):

- Policy ENV1: Environment

The Local Planning Authority will conserve and enhance Colchester's natural and historic environment, countryside and coastline. The Local Planning Authority will safeguard the Borough's biodiversity, geology, history and archaeology, which help define the landscape character of the Borough, through the protection and enhancement of sites of international, national, regional and local importance. The Local Planning Authority will require development to be in compliance with, and contribute positively towards, delivering the aims and objectives of the Anglian River Basin Management Plan.

A. Designated sites
Development proposals that have adverse effects on the integrity of habitats sites, Sites of Special Scientific Interest or significant adverse impacts on the special qualities of the Dedham Vale Area of Outstanding Natural Beauty (including its setting) (either alone or in-combination) will not be supported.

B. Essex Coast RAMS
A Recreational disturbance Avoidance and Mitigation Strategy has been completed in compliance with the Habitats Directive and Habitats Regulations. Further to Section 1 Policy SP2, contributions will be secured from qualifying residential development, within the Zones of Influence as defined in the adopted RAMS, towards mitigation measures identified in the Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS).

C. Biodiversity and geodiversity Development proposals where the principal objective is to conserve or enhance biodiversity and geodiversity interests will be supported in principle. For all proposals, development will only be supported where it:

(i) Is supported with appropriate ecological surveys where necessary; and (ii) Where there is reason to suspect the presence of a protected species (and impact to), or Species/Habitats of Principal Importance, applications should be accompanied by an ecological survey assessing their presence and, if present, the proposal must be

sensitive to, and make provision for their needs and demonstrate the mitigation hierarchy has been followed; and (iii) Will conserve or enhance the biodiversity value of greenfield and brownfield sites and minimise fragmentation of habitats; and (iv) Maximises opportunities for the preservation, restoration, enhancement and connection of natural habitats in accordance with the UK and Essex Biodiversity Action Plans or future replacements; and (v) Incorporates beneficial biodiversity conservation features, measurable biodiversity net gain of at least 10% in line with the principles outlined in the Natural England Biodiversity Metric, and habitat creation where appropriate.

Proposals for development that would cause significant direct or indirect adverse harm to nationally designated sites or other designated areas, protected species, Habitats and Species of Principle Importance, will not be permitted unless:

(i) They cannot be located on alternative sites that would cause less harm; and (ii) The benefits of the development clearly outweigh the impacts on the features of the site and the wider network of natural habitats; and (iii) Satisfactory biodiversity net gain, mitigation, or as a last resort, compensation measures are provided. The Local Planning Authority will take a precautionary approach where insufficient information is provided about avoidance, mitigation and compensation measures and secure mitigation and compensation through planning conditions/obligations where necessary.

D. Irreplaceable habitats
Proposals that would result in the loss of irreplaceable habitats, such as ancient woodland, Important Hedgerows and veteran trees will not be permitted unless there are wholly exceptional reasons and a suitable compensation strategy, to the satisfaction of the local planning authority, exists.

E. Countryside
The local planning authority will carefully balance the requirement for new development within the countryside to meet identified development needs in accordance with Colchester's spatial strategy, and to support the vitality of rural communities, whilst ensuring that development does not have an adverse impact on the different roles, the relationship between and separate identities of settlements, valued landscapes, the intrinsic character and beauty of the countryside and visual amenity. The intrinsic character and beauty of the countryside will be recognised and assessed, and development will only be permitted where it would not adversely affect the intrinsic character and beauty of the countryside and complies with other relevant policies. Within valued landscapes, development will only be permitted

where it would not impact upon and would protect and enhance the factors that contribute to valued landscapes.

- Policy DM16: Historic Environment

Development that will lead to substantial harm to or total loss of significance of a listed building, conservation area, historic park or garden or important archaeological remains (including the setting of heritage assets) will only be permitted in exceptional circumstances where the harm or loss is necessary to achieve substantial public benefits that outweigh the harm or loss. Where development will lead to less than substantial harm this harm should be weighed against the public benefits of the proposal.

Development affecting the historic environment should seek to conserve and enhance the significance of the heritage asset and any features of specific historic, archaeological, architectural or artistic interest. In all cases there will be an expectation that any new development will enhance the historic environment or better reveal the significance of the heritage asset unless there are no identifiable opportunities available. In instances where existing features have a negative impact on the historic environment, as identified through character appraisals (or other method of identification of historic assets), the Local Planning Authority will request the removal of the features that undermine the historic environment as part of any proposed development. The Local Planning Authority will request the provision of creative and accessible interpretations of heritage assets impacted by development.

Conservation of the historic environment will also be ensured by: (i) Identifying, characterising, protecting and enhancing Conservation Areas; (ii) Protection and enhancement of existing buildings and built areas which do not have Listed Building or Conservation Area status but have a particular local importance or character which it is desirable to keep; (iii) Preserving and enhancing Listed Buildings, Scheduled Monuments, Historic Parks and Gardens, including their respective settings, and other features, which contribute to the heritage of the Borough; and (iv) Sites of archaeological interest will be clearly identified and protected, and sites that become known, whether through formal evaluation as part of a Planning Application or otherwise, will similarly be protected according to their importance.

Heritage Impact Assessments and/or Archaeological Evaluations will be required for proposals related to or impacting on the setting of heritage assets and/or known or possible archaeological sites, and where there is potential for encountering archaeological sites so that sufficient information is provided to assess the

significance of the heritage assets and to assess the impacts of development on historic assets together with any proposed mitigation measures.

4.13.11 Tendring District Local Plan 2013-2033 and Beyond: Section 2 (2022):

- Objective 7 Historic Environment

  To conserve and enhance Tendring District's historic environment, including: heritage; respecting historic buildings and their settings; heritage assets; landscapes; links; and views.

- PPL7: Archaeology

  Any new development which would affect, or might affect, designated or non-designated archaeological remains will only be considered where accompanied by an appropriate desk-based assessment. Where identified as necessary within that desk-based assessment, a written scheme of investigation including excavation, recording or protection and deposition of archaeological records in a public archive will be required to be submitted to, and approved by, the Local Planning Authority.

  Proposals for new development affecting a heritage asset of archaeological importance or its setting will only be permitted where it will protect or where appropriate enhance the significance of the asset. Where a proposal will cause harm to the asset, the relevant paragraphs of the NPPF should be applied dependent on the level of the harm caused. Proposals will be treated favourably where they:

  a. are explained and justified through an informed assessment and understanding of the significance of the heritage asset (including any contribution made to that significance by its setting); and
  b. are of a scale, design and use materials and finishes that respect the heritage asset.

  Within the District the Council keeps a record of scheduled monuments at risk of degradation. The Council will support proposals that protect and enhance heritage assets at risk.

  Proposals for new development which are not able to demonstrate that known or possible archaeological remains will be suitably protected from loss or harm, or have an appropriate level of recording, will not be permitted. This Policy contributes towards achieving Objective 7 of this Local Plan.

4.13.12 Brentwood Local Plan (2016-2033): (Brentwood Borough Council, adopted 2022)

- Policy BE16: Conservation and Enhancement of the Historic Environment

A. All Designated Assets

1. Great weight will be given to the preservation of a designated heritage asset and its setting. Development proposals affecting a designated asset, including a listed building, conservation area, registered parks and gardens, or scheduled monument, will be required to:

a. sustain and wherever possible enhance the significance of the assets and its settings (including views into and out of conservation areas and their settings);
b. be supported by a Heritage Statement providing sufficient information on the significance of the heritage asset (according to its importance), the potential impacts of the proposal on the character and significance of the asset and its setting, and how the proposal has been designed to take these factors into account. The Statement should make an assessment of the impact of the development on the asset and its setting and the level of harm that is likely to result, if any, from the proposed development;
c. provide clear justification for any works that would lead to any harm to the asset.

2. Proposals that make sensitive and appropriate use of heritage assets, particularly where these bring redundant or under used buildings or buildings on the At Risk Register, into appropriate use consistent with their conservation status will be supported.

3. Proposals designed to enhance an asset and/or its setting and which reinforce its significance and contribution to the character of an area will be supported.

4. Development proposals that would be likely to cause either less than substantial or substantial harm to, or loss or partial loss of, a designated asset or its setting will be assessed in accordance with the statutory framework and national planning policy.

5. Where a proposed development involves the loss or partial loss of a designated asset, applicants will be required to record and advance understanding of the asset in a manner proportionate to its importance and the impact which will be caused.

B. Conservation Areas In addition to satisfying the relevant criteria in A above:

1. Permission for proposals which involve the demolition or partial demolition of a building in a conservation area will only be granted subject to a condition and/or a planning obligation (as appropriate) that no demolition will take place until an enforceable contract has been let for the carrying out of the new development.
2. Development will be permitted in a conservation area where the siting, design and scale of the proposed development would preserve or enhance its character or appearance and important views into and out of the area are preserved or enhanced.

C. Non-Designated Heritage Assets Development proposals that affect non-designated heritage assets and their settings, including protected lanes, should seek to preserve and wherever possible enhance the asset and its setting. When considering proposals which are likely to cause harm to such an asset consideration will be given to: a. the significance of the asset and its setting; and b. the extent to which the scale of any harm or loss harm has been minimised.

D. Specific Requirements Specific requirements in relation to particular heritage assets identified in housing allocation policies should be read alongside the overarching requirements of this policy.

4.13.13 Chelmsford Local Plan (Chelmsford City Council, adopted 2020)

- Policy DM15 – Archaeology

Planning permission will be granted for development affecting archaeological sites providing it protects, enhances or preserves sites of archaeological interest and their settings. Applications shall have assessed the site in consultation with the Historic Environment Record and taken account of the archaeological importance of those remains, the need for the development, the likely extent of any harm, and the likelihood of the proposal successfully preserving the archaeological interest of the site by record.

<u>Assessment of Impacts</u>

4.13.14 Designated and non-designated heritage assets are presented in the ES Chapter 11 Historic Environment (APP-208) and supported by a number of assessments including:

- Historic Environment Baseline Report (Final Issue A)(APP-209)
- Historic Environment Assessment Tables (Final Issue B)(AS-070),
- EACN Substation Geophysical Survey Report (Final Issue A)(APP-211)

- Geophysical Survey Results Reports (APP-212, AS-072, AS-072, AS-074, AS-076),
- Trial Trenching Results Reports (APP-213 and AS-078), and
- Geoarchaeological Monitoring of Ground Investigation Works Report (Final Issue A)(APP-214)).

4.13.15 These are supplemented by the following submitted documents:

- Historic Environment Study Area (Final Issue A)(APP-216)
- Designated Heritage Assets Assessed in the ES Chapter (AS- 080),
- Non-Designated Heritage Assets Assessed in the ES Chapter (Final Issue A)(AS-081)
- Phase 1 and 2 Geophysical Survey Areas and Archaeological Trial Trenching Priority Areas (Final Issue B) (AS-082)
- Phase 2 Geophysical Survey Preliminary Results (AS-083).

4.13.16 The Applicant's assessment of the impacts of the project on the historic environment has been provided taking account of all proposed mitigation measures. The overall approach to mitigating the negative effects of the development is set out in document 6.5 Environmental Statement Chapter 5 - EIA Approach and Method (Final Issue A) (APP-135) of the submission. Mitigation has been split into three types by the Applicant in relation to heritage assets: embedded, standard and additional. Descriptions of these are outlined on pages 118-121 of document 6.11 Environmental Statement Chapter 11- Historic Environment (Final Issue B) (AS-069).

4.13.17 The level of impact upon non-designated heritage assets, specifically archaeological remains, set out in document AS-079: 6.11.A2 Environmental Statement Appendix 11.2 - Historic Environment Assessment Tables (Final Issue B) cannot be fully agreed until further assessment on archaeological and geoarchaeological remains is completed and the information made available for review.

4.13.18 Within Essex the project will include considerable sections of underground cabling, including two trenchless crossings of the River Stour as well as many kilometres of access roads to serve the overhead lines and pylons. New substations are proposed in Tendring (640m x 740m) and Thurrock (340m x 530m). The cable corridor in underground sections is likely to be up to 120m wide, pylon bases will be a minimum of 60m by 60m and haul roads would require topsoil strips of at least 21m wide.

4.13.19 In terms of archaeology and geoarchaeology, significant negative impacts are anticipated from the construction phase of the development where the groundworks proposed would cause truncation of potential archaeological remains. Impacts to the historic environment, specifically archaeology, are identified as direct physical and indirect effects during construction and are listed in section 11.4.23 (AS-069). They

include, but are not limited to, groundworks associated with the underground cabling, pylon bases, creation of access routes, temporary construction compounds and working/storage areas. In addition, the potential impact of other associated environmental mitigation, such as ecological habitat creation or landscape planting and drainage works. It is acknowledged that standard construction methods and groundworks for ecological and drainage measures are assumed to cause removal of all near-surface archaeology within the footprint of the works 11.4.33 (AS-069).

4.13.20 In addition, changes to the local water and burial environment could alter the preservation of archaeological sites within and beyond the development areas.

4.13.21 Deeper impacts, such as at Horizontal Directional Drilling (HDD) locations and piling for pylon bases could impact geoarchaeological sediments.

4.13.22 The route crosses areas where known archaeological remains are recorded on the Essex Historic Environment Record (EHER) as well as areas of unknown archaeological potential. Extensive cropmark complexes, identified through aerial photography, are recorded on the EHER along or adjacent to the route of the undergrounding section of the project. Features include a probable barrow cemetery, Roman settlement and other occupation, with some potential for nationally significant sites, especially on the valley slopes above the Stour and within the district of Thurrock.

4.13.23 Geoarchaeological deposits of high potential for palaeoenvironmental remains, dating and potential for Palaeolithic remains have been identified from Ground Investigation (GI) monitoring (APP-214) within Colchester, Tendring and Thurrock. There is potential for the presence of deposits which may contain Palaeolithic archaeological and geoarchaeological evidence that would contribute to national and regional research themes and priorities due to their rarity.

4.13.24 The application is supported by a suitable level of desk-based research, as listed in section 11.4.2 (AS-069).

4.13.25 Geophysical survey and archaeological trial trenching are currently ongoing. The first stage of geophysical survey for Priority Areas is largely complete. The ES chapter concludes that “the historic environment baseline presents a reasonable basis for assessment, but further information is forthcoming.” (AS-069 Section 11.4.32). It is agreed that the historic environment baseline provides a reasonable basis for known archaeological remains, however potential for further archaeological remains within the Order Limits has not been fully assessed through field evaluation and this information would be required to provide a more comprehensive basis for assessment.

4.13.26 At the time of submission one trial trench report on the EACN Substation (APP-211) is reported in full, however the remaining trial trench evaluations are presented as interim reports. Additional supplementary information has since been submitted including a further three geophysical reports and additional interim trial trench reports.

4.13.27 Despite the adequacy of desk-based research and ongoing field evaluations, the level of information submitted with the application fails to provide sufficient information on the nature, extent and significance of heritage assets in order to determine the impact on archaeological remains by the proposed scheme.

4.13.28 This is due to factors such as incomplete coverage of the non-Priority geophysical survey and trial trench evaluation across the scheme, lack of intrusive investigation to allow corroboration of the geophysical survey and cropmark data, and lack of full reporting on the trial trench evaluations that have been completed.

4.13.29 Within the scheme the site is divided into sections. For Essex this incorporates Section C to Section G. The level of field evaluation completed to date is listed below by section.

Section C (Tendring and Colchester)

4.13.30 One of seven Priority geophysical surveys remains to be completed within Section C. The Phase 2 (non-priority) geophysical survey is being carried out which demonstrates some correlation with existing cropmark evidence. One of two priority trial trench evaluations have been completed which indicates there may be continuation of activity associated with the Scheduled cropmark site South of Ardleigh (1002146).

4.13.31 Section C includes complex cropmark complexes near the River Stour which have not been fully investigated by geophysics or trial trenching, and which are likely to be of high significance.

Section D Colchester City Council

4.13.32 All nine Priority geophysical surveys have been completed within Section D. These have identified features of moderate significance including a potential moated feature and ring ditch features of possible ritual origin. Priority trial trenching has taken place on one of two Priority trial trenching sites identified for investigation. Site 10 has revealed a medieval farmstead and Romano-British enclosure complex

with metalled surfaces and material which indicates high status settlement. The second Priority trial trench area has not yet been undertaken.

*Section F Chelmsfor*d

4.13.33 Five of the six proposed Priority geophysical surveys have been completed within Section F. Possible new archaeological features have been identified within the surveys. Nine further Phase 2 geophysical surveys have been completed which has identified further archaeological remains including a circular enclosure near to a site of a possible Roman temple recorded on the HER. One site has been subject to trial trenching which revealed sparse archaeological remains previously identified as cropmark features.

Section G Brentwood

4.13.34 Three of five proposed Priority geophysical surveys have been undertaken within Section G and a further four areas of Phase 2 geophysical surveys have been completed which have not identified any potential significant archaeological remains to date, however these have not been corroborated by any intrusive evaluation, and one area of Priority trial trench evaluation remains to be completed.

Summary

4.13.35 Overall, with the additional trial trenching and geophysical surveys completed since the initial submission the application has provided a suitable amount of supporting information for parts of the scheme. While there appears to be some corroboration between the geophysical results and the features identified during trial trenching the reliability of the geophysical survey to detect archaeological features has been demonstrated to be inconsistent. The geophysical survey report (APP-211) suggests the likely poor magnetic contrast is due to the sandy nature of soils accounting for apparent lack of visibility. This is significant in areas such as Colchester and Tendring District where sandy soils are widespread. In addition, there are archaeological features that are of a nature and scale that are difficult to detect through geophysical survey and aerial photographic assessment. These include features such as cremations, small pits, graves and post holes which could represent sites of high significance.

4.13.36 Due to incomplete evaluation of the scheme through intrusive methods and the limitations of the non-intrusive methods employed the archaeological potential of the proposed scheme is not fully understood to the required level, and previously unknown archaeological remains are likely to be present within the proposed

scheme area. The risk of encountering high value heritage assets remains a significant risk.

4.13.37 The assessment has followed the EIA methodology (APP-135) to determine the impact on archaeological remains listed in the Historic Environment Baseline Report (APP 209) and assigned values based largely on desk-based research. Establishing the 'value' and significance of below ground archaeological remains and deeply buried geoarchaeological deposits requires evaluation (geophysical survey, trial trenching, coring, and deposit modelling), as required by EN-1. For this reason, the 'value' of many of the archaeological remains listed is unsubstantiated and the assessment methodology cannot be effectively used on all of the assets listed in the historic environment baseline report.

4.13.38 There is general agreement with the assessment of residual effects for archaeological remains of both designated and non-designated status where they are considered significant. However, without further information from the results of intrusive evaluation, the conclusions of the ES regarding what is significant in terms of residual effect cannot be fully determined. Specifically, those archaeological sites identified through cropmarks, finds scatters and geoarchaeological deposits. This information would be required to determine an appropriate mitigation strategy.

4.13.39 In addition, without further evaluation in areas where there is no record of archaeological remains, the potential presence of heritage assets or their significance remains difficult to assess to the required level. Further intrusive assessment by trial trenching and geoarchaeological assessment would provide clarity on significance and reduces project risk.

4.13.40 A number of Protected Lanes have been identified within the Order Limits. Negative impacts are anticipated on their significance from construction; in order to provide access or for underground cabling. While reinstatement of any lost trees/hedgerow following the completion of construction will assist in offsetting this negative impact, more certainty is required about the recording and monitoring of this impact.

4.13.41 Section 11.8.1 (AS-069) states that mitigation would be undertaken during pre-construction works or prior to the aspects of construction that would affect the heritage asset. This could include preservation in situ of archaeological remains, non-intrusive archaeological fieldwork and intrusive archaeological fieldwork. This should also specify geoarchaeological investigation to ensure any significant geoarchaeological remains have been identified prior to finalising the design for the trenchless crossings in the Stour Valley.iiThe development would potentially result in a direct permanent and harmful change to a range of non-designated heritage

assets. This would be a significant effect. The Applicants has provided information to inform the examination via the Historic Environment chapters of the ES. Further information and documents are however required to establish an appropriate programme of evaluation and mitigation for archaeology and geoarchaeology. This information is necessary to fully inform the decision-making process, and the planning balance as set out in the relevant policies.

4.14 Historic Buildings

Policy Context

National Policy

4.14.1 At a national level, the following policy document (and parts thereof) is particularly relevant to the consideration of the impact on the significance of built heritage arising from the development scheme:

Overarching National Policy Statement for Energy (EN-1)

- Section 5.9 Historic Environment

4.14.2 Paragraphs 5.9.9 to 5.9.15 relate to the Applicant assessment. Paragraph 5.9.7 relates specifically to the consideration of non-designated heritage assets ("**NDHA**"s).

4.14.3 ECC consider the Applicant's assessment is compliant with the policy set out in these paragraphs with regards to designated heritage assets.

4.14.4 Clarification has been sought from the Applicant regarding the identification of built NDHAs as part of the baseline assessment carried out for the Environmental Statement. Locally listed buildings *'or those of equivalent quality in their fabric or historical associations'* and *'Assets of local importance'* have been assigned a Low Value/Sensitivity in the Applicant's Assessment Methodology and the settings of these assets have not been assessed due to *'the lack of potential for any impacts to these assets to result in significant effects…'*. Further clarification has been provided by the Applicant that *'As they would not experience physical impacts there is no potential for significant effects as a result of change to setting for assets of these values.*'

4.14.5 The impact of the development on the setting and significance of some built NDHAs has, therefore, not been assessed.

4.14.6 Paragraphs of EN-1 5.9.16 to 5.9.21 relate to Mitigation.

4.14.7 Paragraphs 5.9.22 to 5.9.36 relate to Secretary of State decision making. Paragraph 5.9.27 and 5.9.28 are particularly relevant with regards to designated heritage assets. The highest level of harm to the significance of designated heritage assets identified by the Applicant (listed buildings and conservation areas) arising from the scheme is a mid-level of Less than Substantial harm.

4.14.8 Paragraph 5.9.33 of the same document requires that 'in weighing applications that directly or indirectly affect NDHAs, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'. The Applicant has not expressed impacts on built NDHAs specifically in terms of 'harm to significance.' Their assessment identifies whether any element of an asset would be physically impacted (lost/removed) by the project and assesses impact through change to setting that affects value for medium and high value non-designated heritage assets.

4.14.9 The following guidance is relevant to the consideration of built heritage assets, their setting and significance:

- National Planning Practice Guidance: Conserving and Enhancing the Historic Environment (2019)
- Historic England, Historic Environment Good Practice Advice Note 2: Decision-Taking in the Historic Environment (2015);
- Historic England, Historic Environment Good Practice Advice Note 3: The Setting of Heritage Assets (2017);
- Historic England Advice Note 1: Conservation Area Appraisal, Designation and Management, (2019, Second Edition)
- Historic England Advice Note 12: Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019)

Local Policy

4.14.10 The following local policy documents and specific policies and paragraphs are relevant to built heritage:

4.14.11 Colchester Borough Local Plan: Section 2 2017-2033 (July 2022):

- Policy ENV1: Environment (detailed in Section 4.13 of this LIR)
- Policy DM16: Historic Environment (detailed in Section 4.13 of this LIR)

4.14.12 Marks Tey Neighbourhood Plan:

- Policy Mt05 – Local Character and Design

All development proposals should contribute in a positive way to the quality of the built environment and settings in the parish.

Development proposals must be the result of a design-led process with regards to a scheme's location, layout, design, choice of building materials and density.

To be supported, development proposals must also be sympathetic to the existing character and history of Marks Tey including its built environment (whereby nearly all buildings in the parish are low in height, built either to ribbon or estate style development on good sized plots, using mainly brick and timber with some plaster work) and landscape setting; details of which are provided in the Marks Tey Character Assessment (available to view alongside this Neighbourhood Plan).
Innovative approaches to design will be welcomed where this will add to the overall quality of the neighbourhood and parish for example via self build or custom build development.

Key considerations and recommendations for all schemes include:

For proposals in the Little Tey Character Area:
- Protect the tranquil and rural environment along Church Lane.
- All development to be in keeping with existing pattern of low density linear development.
- Protect the open landscape between Little Tey and Marks Tey.
- Mitigate the residential amenity and traffic management issues as a result of the busy and congested A120 as the principal access corridor.

For proposals in the Long Green Character Area:
- Be sympathetic to the existing character, comprising low density residential development, away from busy through-roads connected through network of green spaces and pedestrian friendly routes
- Retain or enhance the rural lanes which provide a rural setting to the residential areas and connectivity to the public rights of way
- Respect, and not adversely impact the open views looking northwards from the A120 towards the Grade I listed St. Andrews Church (located in Roman River Character area).
- Mitigate the residential amenity issues and poor street scene environment created through the busyness on the A120.

For proposals in the Potts Green Character Area

- Retain or enhance the pedestrian links from Old London Road, up Dobbies Lane over the railway line to the Marks Tey estates.

- Mitigate the residential amenity issues created through the busyness of the A12.

- Retain or enhance connectivity to historic village green at Potts Green.

For proposals in the Roman River:

- Conserve or enhance the Grade I listed St Andrews Church and its setting.

- Retain the strong sense of tranquillity along Church Lane.

- Adequately address the constraints on any development created by the narrow bridge on North Lane and areas of flood risk along the Roman River.

For Proposals in The Village:

- Conserve or enhance the Grade II listed Marks Tey Hall and its setting.

- Take opportunities to improve the street scene environment around the London Parade shops.

- Take opportunities to improve the connectivity between the areas currently segregated by the road infrastructure through measures which improve the attractiveness of pedestrian routes and create more direct routes.

- Retain existing and take opportunities to create new green infrastructure.

- Prioritise design and layout that increases coherence and strengthens sense of place.

Development proposals which adopt innovative approaches to the construction of low carbon homes and buildings which demonstrate sustainable use of resources and high energy efficiency levels (for example construction to Passivhaus or similar standards) will be welcomed.

4.14.13 Tendring District Local Plan 2013-2033 and Beyond: Section 2 (2022):

- PPL8: Conservation Areas

  New development within a designated Conservation Area, or which affects its setting, will only be permitted where it has regard to the desirability of preserving or enhancing the special character and appearance of the area, especially in terms of:

  a. scale and design, particularly in relation to neighbouring buildings and spaces;

  b. materials and finishes, including boundary treatments appropriate to the context;

  c. hard and soft landscaping;

  d. the importance of spaces and trees to the character or appearance; and

  e. any important views into, out of, or within the Conservation Area.

Proposals should be explained and justified through an informed assessment and understanding of the significance of the heritage asset (including any contribution made to that significance by its setting).

Proposals for new development involving demolition within a designated Conservation Area must demonstrate why they would be acceptable, particularly in terms of the preservation and enhancement of any significance and impact upon the Conservation Area.

Where a proposal will cause harm to a Conservation Area, the relevant paragraphs of the NPPF should be applied dependent on the level of harm caused.

Within the District the Council keeps a record of conservation areas that are at risk of degradation. The Council will support proposals that protect and enhance the conservation areas at risk.

Development should conserve or enhance the significance of the registered parks and gardens (noting that significance may be harmed by development within the setting of an asset).

In collaboration with community groups and other interested parties, the Council will consider and support the designation of new Conservation Areas in line with the relevant criteria as set out within the NPPF and legislation. New Conservation Area Management Plans will be prepared in addition to updates to the existing Conservation Area Character Appraisals.

This Policy contributes towards achieving Objective 7 of this Local Plan.

- PPL9: Listed Buildings

Proposals for new development affecting a listed building or its setting will only be permitted where they will protect its special architectural or historic interest, its character, appearance and fabric. Where a proposal will cause harm to a listed building, the relevant paragraphs of the NPPF should be applied dependent on the level of harm caused. Proposals will be treated favourably where they:

a. are explained and justified through an informed assessment and understanding of the significance of the heritage asset (including any contribution made to that significance by its setting); and

b. are of a scale, design and use materials and finishes that respect the significance of the listed building (including any contribution made to that significance by its setting).

Within the District the Council keeps a record of listed structures and buildings that are at risk of degradation. The Council will support proposals that bring heritage assets into viable use.

This Policy contributes towards achieving Objective 7 of this Local Plan.

4.14.14 Brentwood Local Plan (2016-2033):

- Policy BE16: Conservation and Enhancement of the Historic Environment (detailed in Section 4.13 of this LIR)

Assessment of Impacts

4.14.15 ECC would refer to its commentary raised in its Relevant Representation (RR-1083) and does not wish to repeat them here. The level of impact upon the setting of designated heritage assets set out in the Environmental Statement Appendix 11.2 - Historic Environment Assessment Tables (APP-210) is agreed; this impact assessment is understood to be based upon the route shown in the Works Plans, documents APP-019, APP-020, APP-022 and APP-023 of the Examination Library.

5. Draft development Consent Order

5.1.1 Overview

5.1.2 As raised within ECC's Relevant Representation (RR-1083, section 6.1) the Applicant offered an opportunity to review some elements of the draft DCO ahead of the submission. On 28th July 2025, ECC provided detailed, considered comments. However, the Applicant failed to give any feedback, and it appears from the draft Development Consent Order ("dDCO") as submitted (APP-056) that many of ECC's comments have not been picked up. The Applicant has still not offered any explanation nor provided any feedback.

5.1.3 Consequently, comments on the DCO contained in this LIR may have previously been raised, but in the absence of any response, ECC feels it necessary to restate some of these points to facilitate further discussion with the Applicant. ECC looks forward to a positive working relationship with the Applicant and is looking for proactive engagement with both the Applicant and the ExA to progress this DCO alongside other local authorities.

5.1.4 Following Previously Approved DCOs, two important points arise:

(a) The need to move away from some precedents especially in respect of timescales, where justified because it better facilitates the approval and implementation of the DCO; and.
(b) The potentially unjustified omission of Requirements included in other National Grid DCOs.

5.1.5 In more detail:

(a) ECC acknowledges the drafting of the DCO follows the format and content of previously approved DCOs, however, ECC considers it important, when considering the wording of the DCO for Norwich to Tilbury, that the drafting must recognise local circumstances and experiences within Essex. In particular, when commenting on the dDCO, ECC has drawn on practical experience from the implementation of other NSIPs and how they have interacted with established internal procedures. It is respectfully considered both necessary and sensible to recognise local situations and available resources and apply flexibility to precedents and the use of standard text, where this better facilitates the discharge of requirements process and implementation of the DCO.

(b) ECC notes that several Requirements commonly included in other National Grid DCOs are absent, including provisions relating to artificial lighting, species-specific mitigation, residential amenity, construction compounds and noise and vibration controls.

5.1.6 The Council requests that the Examining Authority carefully consider whether additional Requirements are necessary (beyond what is requested within this LIR).

5.1.7 In what follows, ECC will refer to the Bramford to Twinsted DCO, or the B2T DCO (DCO reference EN020002).

5.1.8 ECC have confirmed their desire to enter into a Framework Highways Agreement or similar side agreement with the Applicant both verbally and in writing when responding to informal comments on the Protected Provisions. ECC have not received any confirmation from the Applicant and so have included this point in the Local Impact Report.

5.1.9 ECC would welcome further engagement on this point to provide a level of surety for ECC ahead of the close of the examination. This is of importance as ECC are not satisfied with the level of detail included in the Protected Provisions. As the LHA, ECC would expect (and indeed the public and County Council members would expect) a level of oversight and management of the local highway network. ECC believe the Framework Highways Agreement has worked well on Bramford to Twinstead, providing sufficient oversight, and collaboration between the local highway authority and the developer. From experience at the implementation stage, contractors welcome the 'business as usual' approach which is our standard practice rather than bespoke arrangements that neither the LHA or the contractor are familiar with.

5.2 Part 1 Preliminary

Article 2 – Interpretation

5.2.1 For consistency within the DCO, there are a number of definitions and drafting points to be addressed (such as the use of 'business day,' 'working day' and 'day' interchangeably; and 'discharging authority' and 'relevant authority'). ECC proposes that all periods of seven days or less be specified to be business days.

5.2.2 The Permit Scheme and Traffic Regulation Order ("TRO") definitions need to be aligned with each other in terms of timescales and process. For clarity, the Permit Scheme includes the temporary TRO process within it.

5.2.3 It is further queried whether the Environmental Permitting (England and Wales) Regulations 2016 and the Energy Act 2004 should also be mentioned in this section. They are relevant to the dDCO "Pre-commencement operations".

5.2.4 There are concerns with the definition of pre-commencement operations in respect of works 'excluded from the commencement of development' and associated with the establishment of construction compounds. These operations are extensive and include temporary laydown areas and compounds and the creation of bell mouths all of which could necessitate the potential removal of trees and hedgerows in advance of any Requirement for a Vegetation Retention and Removal Plan being discharged.

5.2.5 This is also of specific concern in respect of historic buildings where it is noted that specified pre-commencement operations could proceed without triggering necessary mitigation likely to be set out in the Requirements.

5.2.6 While the submitted ES assumes that the excluded works and operations would be unlikely to have any significant environmental effects, ECC is of the opinion the effects of some of these works could have major impacts locally that need mitigating, or which could cumulatively give rise to significant effects needing mitigation.

5.2.7 As a result, these works have the potential to be so significant as to give rise to materially new/different environmental effects which ought properly to be subject to further checks before being allowed to proceed. In light of this, ideally many operations (such as the establishment of construction compounds), should be excluded from the definition of pre-commencement operations. If this is not acceptable, a compromise could be the addition of a tailpiece:

'those operations which the relevant planning authority considers give rise to a materially new or different environmental effect beyond that considered in the Environmental Statement as notified to the Undertaker by the relevant planning authority'

5.2.8 Pre-commencement surveys of listed buildings should be included in the list of pre commencement operations, as they have the potential to be impacted by vibration once the development commences.

"Environmental Statement"

5.2.9 Given the scale and complexity of the project, it may be challenging to keep track of the up-to-date Environmental Statement which will include additional environmental material submitted to a variety of consenting authorities after the dDCO has been

approved. The Applicant should make available a central public repository where such additional environmental information will be made available for transparency/clarity.

"Maintain"

5.2.10 The definition of "maintain" includes a wide range of specified operations in relation to the authorised development, providing that as long as such works do not give rise to any materially new or materially different environmental effects to those identified in the Environmental Statement, these specified operations can take place without further consent.

5.2.11 To provide clarity and avoid any dispute, the DCO should incorporate a mechanism for assessing and determining whether such maintenance works give rise to materially new/different environmental effects. As a result, the definition of 'maintain' be amended to include "*provided such works do not in the opinion of the local planning authority give rise to any materially new or materially different environmental effects to those identified in the Environmental Statement, and any derivative of "maintain" must be construed accordingly*."

Omission of outline management plans

5.2.12 The dDCO omits reference to outline management plans which were included in the B2T DCO, namely: an Outline Construction Environmental Management Plan.

5.2.13 It also omits reference to an outline Noise and Vibration Management Plan (APP-306), and an outline Dust Management Plan (APP-304), both of which are envisaged in the Applicant's Environmental Statement (as appendices to the Code of Construction Practice, but worthy of separate definition in ECC's view, as these are seen as being absolutely necessary to protect enjoyed residential amenity).

5.2.14 The need for these plans is addressed further in the section concerning the Requirements. Any other outline management plans should also be defined in Article 2.

"Provisional Advance Authorisation"

5.2.15 A definition of "provisional advance authorisation" (as per Reg 2 Traffic Management Permit Scheme Regs 2007) should be included in the dDCO to ensure consistency with other DCO, including the Bramford to Twinsted project.

5.3 Part 2 Principal Powers

Article 3. Development consent etc. granted by the Order

5.3.1 While Article 3(1) confirms that, subject to the provisions of the Order (including the Requirements) National Grid is granted development consent, the extent of the consented development should be clarified by the addition of "to be carried out within the Order limits" (as defined in the dDCO). This is so that the scope and limits of the development consent are clearly set out and reflect the development subject to the examination.

5.3.2 Article 3(6) provides for the authorised development to include and permit the alteration, removal, clearance, refurbishment, reconstruction, decommissioning and demolition of any other building or other structure within the Order limits, to the extent that they relate to, are required by or are incidental to the carrying out of the authorised development. As this is not limited to the authorised development described in Schedule 1 (and "authorised development" is defined more broadly than that in Article 2), the dDCO should incorporate a mechanism for assessing and addressing any materially new or different environmental effects which have not previously been assessed in the Environmental Statement arising from the development authorised in Article 3(6).

Article 4 4. Maintenance of authorised development

5.3.3 As raised within Part 1 Preliminary, Article 2 – Interpretation, the scope of works permitted to maintain the authorised development is broad. The dDCO should incorporate a mechanism for assessing and addressing any materially new or different environmental effects which have not previously been assessed in the Environmental Statement arising from such works.

5.3.4 In addition, under this Article, there should be an 'in principle' obligation on the Undertaker to decommission (part of) the authorised works as and when they become obsolete due to improvements in technology or otherwise.

Article 5. Limits of Deviation (LoD).

5.3.5 ECC considers that the LoD potentially have significant implications for how the development is experienced and in terms of its relationship to a variety of receptors.

5.3.6 Firstly, at Article 5(1)(a) the term 'lines or situations' should be defined and added to list of definitions as the language lacks the clarity required given the importance and potential significance of this element of the DCO.

5.3.7 The Limits of Deviation (LoD) allow for longitudinal and lateral deviation within the limits shown on the Work Plans, as well as vertical deviation.

5.3.8 ECC notes that Article 5(1)(b)(i) would permit a vertical limit of deviation of 6 metres for the majority of the pylons. The Explanatory Memorandum (APP-057) explains that the rationale for the 6m limit is intended to provide a necessary but proportionate degree of flexibility. While noted, ECC is of the opinion this is a considerable extent of deviation, which as proposed, is not suitable for particularly sensitive areas such as nearby residential properties, in or nearby protected landscapes and nearby Grade 1 listed buildings, where the potential impact would potentially be greater than in other areas.

5.3.9 The limits of deviation are of particular potential concern with regards to the following designated heritage assets which are in closest proximity to the Order Limits and where a Mid-level of Less than Substantial Harm (LTSH) to their significance has been identified by the Applicant at the Operation and Maintenance phase of the project.

Colchester

Name	**List Entry**	**Grade**
1,2 & 3 Brick Cottages	1169966	II
The Old Rectory	1224447	II
King's Farmhouse	1266530	II
Knaves Farmhouse	1266773	II
Range South of Barn to South of Knaves Farmhouse	1266775	II
Barn to South of Knaves Farmhouse	1266822	II
Little Tey House	1266823	II
Barn to Southwest of Little Tey House	1266779	II*
Aldham Hall	1306270	II*
Wagon Lodge to North of Aldham Hall	1337391	II
Church of St Margaret and St Catherine	1170063	II*
Ford Street Conservation Area	N/A	N/A

Tendring

Name	**List Entry**	**Grade**
Bounds Farmhouse	1147743	II

Brentwood

Name	List Entry	Grade
Stable and Coach House at Hutton House	1197242	II
Ingatestone Bridge over River Wid	1207790	II
Hutton House	1279616	II
Wardropers Farmhouse	1293259	II
Ellices	1297247	II
Hutton Village Conservation Area	N/A	N/A

Basildon

Name	List Entry	Grade
Sudbury's Farmhouse	1170946	II
Botney Hill Farmhouse	1197182	II
Wayletts	1121459	II
Church of St Mary	1170946	II
Dunton Hall	1338380	II

5.3.10 These properties are provided as examples and are not intended to be an exhaustive list of all assets where there are potential concerns with regards to the limits of deviation. There is the potential for designated heritage assets that have been assessed as having a Low level of LTSH to their significance during the operational phase to instead experience a Mid-level of LTSH due to pylons, overhead lines and other permanent above ground structures being in closer proximity than the existing plans, due to the proposed lateral and longitudinal limits of deviation

5.3.11 It is therefore proposed that the limit vertical deviation should be no more than 4 metres, (as per Bramford to Twinstead DCO, which is a more local, and thus more relevant development than the Yorkshire Green Energy Project, to which the Applicant refers in the Explanatory Memorandum). Anything beyond this 4 meters should require prior approval from the relevant planning authority.

5.3.12 At Article 5 (1)(d)(ii), the draft Order would also allow underground cables to be moved downwards to such extent as the undertaker considers necessary or convenient. While this may be acceptable in certain locations, other locations may be more sensitive due to ground conditions, water tables, archaeology or the cumulative effects of other structures being constructed. In certain defined locations (which should be discussed and agreed with the district authorities) therefore; the limit of deviation downwards should be restricted unless otherwise

agreed by the local planning authority. This concern also extends to downward deviation permitted under Article 5 (3)(b).

5.3.13 The proposed level of deviation within Article 5(3)(a) allows permanent above ground structures, erections and apparatus forming part of the authorised development, including substations, converter stations and cable sealing end compounds to be located anywhere within the parameters shown by the pink dashed lines on the Works Plans. They may also be up to 10% above the maximum height shown on the table of parameters forming part of the Works Plans. This is not appropriate in designated sensitive areas, where this provision needs to be reduced. These sensitive areas must be discussed and agreed between the Applicant and all relevant authorities. In this regard, it is suggested for those designated locations, a lower level of deviation is agreed or a process of prior approval with the relevant local planning authority is introduced.

5.3.14 In addition, it is assumed that the level of deviation proposed is consistent with the principles of the Rochdale Envelope which involves defining a set of parameters (e.g., maximum building height, footprint, etc.) within which a development can vary. In any event, confirmation is requested that the impacts and worst-case scenarios arising from the limits of deviation are fully assessed in the Environment Statement.

5.4 Part 3 Streets

Article 11. Street Works

5.4.1 Article 11(3) would enable envisaged works in the highway to proceed without express consent from the Street Authority if a decision is not provided within 28 days. ECC agrees with the approach, but not with the timescale. The Bramford to Twinstead DCO included a timescale of 35 days which ECC requests for the Norwich to Tilbury DCO. Providing a longer timescale allows the authority to have sufficient time for necessary internal procedures to consider an application and has been achievable when working on Bramford to Twinstead. It also avoids the need to request repeated extensions of time which ECC has had to seek in respect of Longfield Solar Farm. Even with the longer time period in the Bramford to Twinstead DCO, extensions of time have been needed.

5.4.2 Further clarity is required on the process for works to take place outside the Order limits as referenced in Article 11 (2). ECC's concern is that the assessment of the works is based on the Order limits and anything beyond that will not have been reviewed as part of the DCO process.

Article 12. Application of Permit Schemes

5.4.3 ECC operates an established Permit Scheme which applies to all adopted streets. It applies to all works promoters, including the Highway Authority (ECC's own works). It involves the promoter applying for a permit to occupy the highway within a specified timescale for different levels of activity. Activities that require a Temporary Traffic Regulation Order ("TTRO") are defined as "Major Activities".

5.4.4 The Permit Scheme requires submission of a Provisional Advance Authorisation (PAA) at least three months in advance of a proposed activity, and a permit ten working days before the activity is due to start. As currently drafted, the DCO references the Permit Scheme and in doing so accepts the timescales associated with it. However, the TTRO (at Article 16(8) does not give the standard timescales expected for Permit Schemes. ECC are not able to agree to shorter timescales as the Authority deals with many requests from promoters and the standard timescales given allow sufficient time to deal with the full workload involved. As already shown through the cumulative impact section there is expected to be an overlap of works in Essex of other NSIPs, Garden Communities and Strategic Sites. These works are aside from the many other smaller scale developments and utility works which will all require Permit Scheme applications. Following ECC's established standard processes rather than trying to set up new processes with tighter deadlines will provide a more streamlined approach and collaborative working.

5.4.5 It is therefore requested that the timescales for the TTROs are altered to reflect ECC's standard timescales for the Permit Scheme and that the wording reflects that the Temporary Traffic Regulation Order is part of the Permit Scheme.

Article 14. Power to alter layout etc of streets

5.4.6 ECC do not accept the 28-day timescale as noted at Article 14(5) in relation to a street authority failing to respond to an application for consent. ECC request that the timescale of 35 days given in the Bramford to Twinstead DCO is included. This is on the basis that 28 days does not allow sufficient time for the necessary consultation and assessment to be carried out to consider the submitted details which has mostly been achievable when working on Bramford to Twinstead.

Article 16 Temporary closure of streets and public rights of way

5.4.7 ECC do not accept the 28-day timescale as noted at Article 16(8) in relation to a street authority failing to respond to an application for consent. This is on the basis that a Temporary Traffic Regulation Order for temporary closure of streets would be

required and as already highlighted above (under Article 12) is intrinsic within the Permit Scheme which takes 3 months to process. The Temporary Traffic Regulation Order for public rights of way would also require up to 3 months to process.

5.4.8 It has to be acknowledged that any closure of access will be difficult for residents – especially where the access is being used for a site compound which could be situated somewhere else/ or where it is for a vague/open-ended period. It is therefore requested that the length of time for a temporary closure is specified in the dDCO.

5.4.9 With reference to Art 16 (6), there have been discussions through the PRoW Management Plan around providing 4m wide routes for bridleways which may be a betterment to existing in some cases - however, this is because the horses need space to turn due to spooking associated with the construction works. In effect this is mitigation. This clause is potentially at odds with this 4m requirement and as such should be reworded.

Article 17 Access to works

5.4.10 Article 17(2) gives the street authority a 28-determination period for applications. Based on the experience of processing such requests and the availability of resources ECC do not agree that this timescale is sufficient. ECC request that the timescale of 35 days given in the Bramford to Twinstead DCO is included.

Article 18 Construction alteration and maintenance of streets and other structures

5.4.11 The wording of Article 18 does not set out how infrastructure will be maintained by the Applicant where the authority does not wish to adopt it. This will occur in particular with the proposed footway/cycleway provision on Bentley Road which is to remain temporarily in place until the works have been completed, because the infrastructure is only needed whilst the works are taking place due to the high level of HGV activity and the impact on cyclists. ECC require the infrastructure to be maintained by the Applicant until such time as it is removed and the land returned to its previous state so wording in the dDCO should be made clear.

5.4.12 The completion of works and maintenance timescale is more complex due to the need for multiple DCOs to use the proposed infrastructure. Further clarity is required on how these matters will be managed, and evidence in the form of a collaboration agreement between the various DCOs benefiting from the proposed mitigation. The infrastructure should be maintained at the same excellent standard as required by the LHA and with continuity between each DCO. The above should be included in the

DCO to ensure that the mitigation measures proposed will remain in good order for the duration of their availability to the public.

5.5 Part 4 Supplemental Powers

Article 20 Discharge of water

5.5.1 The timings set out within Article 20(9) must be increased to 42 days to give sufficient time for the Lead Local Flood Authority to consider any application for consent under this part of the DCO without having to arrange for an extension to the decision making period. This request reflects the available internal resourcing and the increase in time would also bring the DCO in line with other DCOs, such as Bramford to Twinstead.

5.6 Part 6 Miscellaneous and General

Article 48 Defence to proceedings in respect of statutory nuisance (s82 EPA 1990)

5.6.1 Given the extent of this article, ECC suggests that a Noise and Vibration Management Plan should be prepared, as envisaged in the Applicant's Environmental Statement (APP-306).

Article 49 – Traffic Regulation

5.6.2 ECC require the timescales at 49(10) for dealing with the permanent TROs to be 12 weeks to align with the Temporary Traffic Regulation Order process. This is to take account of resource and the cumulative impacts that are discussed at length in this LIR.

5.6.3 At Article 49(10) there is reference to consent having been deemed to be granted after 28 days. This is considered too short given the available resources and the requirement to consult with external consultees including the Police. It is requested this period be extended to 42 days.

Article 50 – Felling or Lopping

5.6.4 ECC recognised that this Article allows for wide powers to do the tree work which the undertaker reasonably believes to be necessary and this consequently gives the Applicant powers to lop prune, cut, trim, coppice, pollard, reduce in height or width any tree shrub, shrubbery, hedgerow or important hedge under or within the

overhanging or near part of the authorised development if it reasonably believes it necessary to do so to prevent obstruction/interference with construction, operation or maintenance of authorised development or any apparatus or from constituting a danger to persons constructing maintaining or operating the authorised development.

5.6.5 While a caveat about not causing unnecessary damage to trees / vegetation is included as is the requirement for consent where works involving trees / vegetation overhanging the highway, ECC maintains a concern that the use of the term 'near' is too ambiguous. This will lead to uncertainty and the potential for more works to be undertaken than absolutely necessary. As such, ECC consider that 'near' should either be removed, or defined as a specific value e.g. 2m, with works only occurring with some prior notice to the relevant LPA.

5.6.6 An open-ended option for vegetation to be removed without the impact of this being appraised is not supported as the impacts on protected hedgerows requires proper assessment.

5.6.7 It is also noted that the areas marked 'affected vegetation' would need careful review once available and it assumed that any additional works would be within the parameters of the approved OLEMP.

5.6.8 At Article 50(5) there is reference to consent having been deemed to be granted after 28 days. This is considered too short given the available resources and it is requested this period be extended to 42 days to allow for the appropriate consultation to take place with and to avoid the need to request extensions of time which has been the experience of the Authority when dealing with the discharge of Requirements under this Article on other NSIP schemes.

5.6.9 It is also considered the term 'affected vegetation' should be defined.

5.6.10 There is concern that as drafted, this section gives extensive powers and unless further defined in the Trees / Hedgerows to be Removed / Management Plans (i.e. to define limits to the extent of pruning of TPO beyond which prior approval would be required), the powers could result in harm to TPO trees with significant visual amenity. This will need to be reviewed once the Trees / Hedgerows to be Removed / Management Plans are submitted.

Article 50 Felling or Lopping / 51 Trees subject to Tree Preservation Order

Reinstatement and Compensation

5.6.11 Article 51 permits an undertaker to carry out extensive tree works to TP trees if it reasonably believes it is necessary to do so in connection with the implementation of the DCO and gives deemed consent to do so. Owing to the special importance of trees subject to TPOs, a definition of "near" is required for the avoidance of doubt (ideally defined as a specific value e.g. 2m for example, or as otherwise agreed).

5.6.12 Additional wording should also be included in this Article to the effect that advance notice of proposed works must be given to the Local Planning Authority and opportunity given for the planning authority to impose reasonable conditions (i.e.as to method of pruning/appropriate timing of tree work).

Article 56 Safeguarding

5.6.13 Article 56(3)(b) should be amended as follows: "they may not determine the application before the end of the period of 21 days, beginning five business days after the relevant planning authority has sent the notice to the undertaker by first class post or by such other means of service as may be agreed with the relevant planning authority, which will be deemed to be the date on which the undertaker receives the notice or copy of the application." This is to ensure that adequate time is offered for all parties engaged in the process.

5.6.14 ECC notes and accepts the following amend made to Article 56(5) "In determining an application for planning permission a relevant planning authority must take into account any representations received in accordance with this article".

5.6.15 The term "business days" is used in this Article but not elsewhere in the dDCO. ECC recommends that all time limits are expressed consistently.

Article 61 Service of Notices

5.6.16 It is acknowledged direct email contacts/ methods of service between the Essex Authorities and Undertaker to promote efficient communication is required with a preference for email communication.

5.7 Schedule 3 – Requirements

General

5.7.1 Given the scale and complexity of the project across multiple areas, ECC would encourage that the dDCO requires the Applicant to maintain a 'Register of Requirements' such as that seen in the Lower Thames Crossing Development Consent Order to ensure ongoing fairness, public confidence and transparency.

5.7.2 In various Articles of this Schedule, reference is made interchangeably to the term days or business days. For clarity, these terms should be defined and used consistently throughout the dDCO. All periods of seven days or shorter should be business days.

Requirement 1 - Interpretation

5.7.3 The definition of reinstatement planting needs to distinguish between replacement planting and what constitutes mitigation and compensation planting.

5.7.4 The definition of "*start up and close down activities*" is noted in its relevance to Requirement 7. A query is raised as to the level of potential noise which could be generated by these activities which may cause a noise disturbance to local communities. For example, it is not clear what is meant by "*low key maintenance*" and what this could involve. This matter is addressed further below concerning Requirement 7.

Requirement 3 - Stages of authorised development

5.7.5 Paragraph 3(1) should refer to "seven business days" to ensure consistency across the dDCO.

5.7.6 ECC's view is that submissions under this article to the relevant planning authority should be for approval as opposed to notification given the scale of the project and potential for cumulative impacts arising from the project. ECC thus requests that paragraph 3(1) is amended and "for approval" is added at end of the text at 3(2).

5.7.7 Paragraph 3(a) makes reference to "any revisions to the written scheme referred to in sub-paragraph (2) above must be submitted to the relevant planning authority in advance of the commencement of the stage of the authorised development to which the revisions relate" To avoid confusion and dispute, this paragraph should specify

how far in advance this should be provided to the relevant planning authority to ensure they have due notice.

5.7.8 In respect of Paragraph 4 and the reference to 28 days, ECC requests the term 'days' is defined with Requirement 1.

Requirement 4 – Construction Environment Management Plans

5.7.9 ECC seeks an explanation from the Applicant why it has not submitted a Construction Environment Management Plan ("CEMP"). The B2T DCO requires such a plan. It is not clear that a Code of Construction Practice (which is proposed) will provide the same sorts of protections as a CEMP. If it is intended to do so, in particular because of various outline plans appended to it, that should be made clear by the outline plans being listed. Furthermore, there are additional management plans which should be secured via this dDCO as detailed in section 6 of this LIR.

5.7.10 Reference is made to "Natural England" within Paragraph 4(1) – however there are many stakeholders who should also be engaged in consultation on these management plans which should be reflected within this requirement, including the Local Highway Authority for example.

5.7.11 At Paragraph 4(2), any agreement under this clause should be made in writing.

5.7.12 Paragraph 4(3) should refer to the approved outline management plans. As above any agreement should be made in writing. Furthermore, there should be a record of how amendments and updates will be captured and recorded to ensure transparency.

Requirement 5 – Archaeology

5.7.13 The Requirement wording for Archaeology does not currently take into account the post-consent programme of archaeological trenching required, or secure timescales for delivery of the Post-Excavation Assessments. It is suggested that Paragraph 5(4) is replaced with the wording below and a new Paragraph 5(5), is included. This will give clarity for sign-off and also provide reassurance of a robust mechanism for securing both the field and post-excavation works

5 (4) *Intrusive site preparation works must not take place until an archaeological or geoarchaeological written scheme(s) of investigation in accordance with the outline written scheme(s) of investigation as appropriate has been submitted to and approved by the discharging authority in consultation with Historic England. The*

archaeological or geoarchaeological written scheme(s) of investigation required under this sub-paragraph must be implemented as approved.

5 (5) *Unless otherwise agreed with the local planning authority.*

(a) No later than one year following the completion of the fieldwork specified in each site-specific written scheme of investigation, a site-specific post excavation assessment (PXA) for that site must be completed in accordance with the Written Scheme of Investigation and submitted to the local planning authority for approval.

(b) No later than one year following the approval of the final site-specific post excavation assessment, an archaeological updated project design for all applicable sites, must be submitted to the local planning authority for approval. The archaeological updated project design must be produced in general accordance with the detailed Written Scheme of Investigation for each stage, include details of the scope of post-excavation analysis and publication and have regard to the site-specific research agendas set out in the site-specific written schemes of investigation.

(c) Post-excavation analysis and publication must be carried out in accordance with the approved archaeological updated project design and provision made for the full archive to be submitted to the appropriate museum.

Requirement 6 – Design and layout plans (elevations)

5.7.14 ECC is concerned with the use of "*general accordance*" and the subjectivity that would be involved in the assessment of whether any materially new or materially different environmental effects from those identified in the environmental statement have occurred which informs "general accordance". No explicit consideration is given to how some areas may be more sensitive to departures than others.

5.7.15 The ES generally assumes the pylons as in the midline of the Limits of Deviation shown on the work plans. If a pylon is subsequently moved within those limits of deviation and closer to a receptor, but also higher, then there is likely to be a negative impact on said receptor experience of the development hence the concerns regarding the term "general accordance" and the desire to restrict the limits of deviation expressed.

5.7.16 ECC also considers that the host local planning authority should have a say in whether any changes from the design and layout plans give rise to any materially new or materially different environmental effects from those identified in the

environmental statement. As such, the wording of paragraph 6(2) should be updated:

The authorised development will not be in substantial accordance with the design and layout plans (elevations) to the extent that any departure from the design and layout plans (elevations) in the opinion of the Local Planning Authority gives rise to any materially new or materially different effects…

5.7.17 ECC considers this could operate by way of a prior approval process similar to that in effect for many areas of the TCPA regime.

Requirement 7 – Construction hours

5.7.18 ECC has considerable concerns with this requirement due to the cumulative noise and environmental impacts arising from the development. Taken together with the other projects, especially in the Tendring area, but all along the route, the proposals have the potential to lead to significant adverse effects on communities and the environment. It is crucial that respite is offered to the communities affected by the development through reasonable working hours and construction traffic management. ECC is therefore seeking substantially better controls within the dDCO and the Management Plans to ensure this respite is secured.

5.7.19 Construction activities have the potential to cause significant effects on nearby residents and the environment. It is therefore imperative that construction activities (and associated noise impacts) are appropriately controlled, as reinforced by Paragraph 5.12.18 of EN-1 (2023).

5.7.20 Focusing on Requirement 7(1) there should not be any construction works which take place on Sunday or bank holidays, ensuring that communities have some respite from any works which are taking place. In Paragraphs 7(1) and 7(2) the construction hours for Saturday should be 07.00 and 13:00. Consequently, ECC considers that if these reasonable construction working hours were adopted, i.e. Monday to Friday 07:00–19:00 and Saturday 08:00–13:00, in line with the recommended limits set out in BS 5228-1, and in combination with the other amendments identified above, the likely impacts on noise and vibration sensitive receptors (NSRs) would be significantly reduced.

5.7.21 ECC would also recommend that a communication and engagement strategy is prepared by the Applicant setting out how relevant authorities and the community will be kept up to date on construction works. This should also consider notification around when work is required outside of core hours.

5.7.22 Requirement 7(2) – The County Council recommends this is amended to remove reference to 'percussive' piling works. There should be "no progressive piling works outside the hours…". There must be clear consideration demonstrate of trenchless crossing and the noise implication of these works.

5.7.23 Requirement 7 (3) – It is recommended that no "HGV deliveries" is amended to "HGV movements" to ensure the sub paragraph takes account of all HGV activities which may take place and cause a disruption to communities. Engagement with ECC highways is needed regarding all AIL / HGV movements to ensure these are appropriately managed on the highway network.

5.7.24 Requirement 7(4) – ECC is concerned with the level of noise arising from these activities listed in this sub paragraph– there may be some locations where construction works are due to take place which will be more sensitive to these works taking place outside of core hours. A solution is for the sub paragraph to require a commitment to liaison and engagement with the relevant local authority and representatives or liaison groups regarding works undertaken outside of the core hours. Furthermore, ECC recommends a noise limitation is included within this Requirement – "A 50dBA noise limit (LOAEL) will apply at the nearest noise-sensitive receptors for start-up and close down activities up to one hour either side of the core working hours" – this would be in line with other comparable DCOs including Bramford to Twinstead.

5.7.25 ECC considers that the submitted noise and vibration assessment does not robustly reflect a worst-case scenario. Pylon construction has been assessed from fixed locations and defined construction areas, rather than across the full extent of potential longitudinal and lateral movement permitted by the Limits of Deviation (LoD).

5.7.26 Requirement 7(4)(g) – ECC recommends the following additional text to ensure the dDCO is comparable with other relevant DCOs – *"The completion of works delayed or held up by severe weather conditions which disrupted or interrupted normal construction activities at the undertaker and its contractor agree forms the critical path for the accepted construction programme. In such cases, the undertaker must, as soon as practicable, notify the relevant planning authority of the disruption or interruption and explain why that work could not be completed within the core working hours referred to in sub-paragraph (1)"*

5.7.27 Requirement 7(4)(m) – The Local Highway Authority must be engaged around the movement of any AILs and this should be secured in the Requirement.

Requirement 9 - Reinstatement Planting Plan

5.7.28 A Reinstatement Planting Plan is supported.

5.7.29 Requirement 9(7) currently specifies a five-year maintenance period for landscaping from the date planting is completed. ECC's Relevant Representation (RR-1083) recommend extending this period to ten years to allow for full establishment and replacement of planting. If a ten-year period is not feasible, it is proposed that the wording be amended to state that if any planting fails and requires replacement, the five-year maintenance period should reset from the date of replanting. Additionally, it is recommended that a 30-year maintenance and monitoring period be secured for all BNG and GI, within land owned or managed by the Applicant, in line with statutory BNG requirements and best practice.

5.7.30 There are measures for early establishment of new trees to be considered at the time of planting, which can boost the survival rate of young trees. This should include weeding, mulching and watering. All newly planted trees with a trunk diameter of 6cm or more will be watered for three years via a buried watering tube, irrigation bag or irrigation well; applying 60 litres per visit, at least 14 times between May and September. Mulch, stakes, ties and weed establishment will also be inspected and actioned as required. Stakes and ties should be removed 3 years after planting.

Requirement 10 – Reinstatement schemes

5.7.31 ECC notes the repeated reference to 'former use' within this part of the DCO and questions whether this should be defined to ensure that there is clarity around what is considered a 'former use' of a site. There needs to be clarity around who determines what the former use of a site, alongside any enforcement actions around this. It is therefore suggested that 'former use' is defined as "the condition and appearance of the land prior to the commencement of the development"

5.7.32 Requirement 10(2) – ECC notes the exclusion from the reinstatement requirement of land within 10 metres of any underground cables. It would be helpful to clarify what will happen to this land.

Requirement 13 – Decommissioning

5.7.33 ECC would welcome more detail around the decommissioning process, especially any impacts arising on communities and the local environment.

5.7.34 There is an expectation for restoration to contribute to sustainable land stewardship, climate change mitigation and adaptation, biodiversity and environmental net gain through the delivery of natural GI. If the restoration proposal is to return the site to arable land it will need to a better grade than before and demonstrate how it will deliver sustainable land stewardship with potential to link to Landscape recovery.

Suggested Additional Requirements

5.7.35 ECC recommends the inclusion of the following requirements.

Additional Requirement – Developers Forum

5.7.36 As set out section 4.5 of this LIR, to manage the cumulative impacts arising from this scheme, ECC is seeking the establishment of a Developers Forum. This should be in place to monitor and manage the impacts arising from this and other nationally and strategic developments in Essex. ECC would welcome engagement with the Applicant on how a requirement which secures a Developers Forum could be drafted to ensure that impacts on communities, the environment and the highway network are appropriately managed moving forwards.

Additional Requirement – HGV Parking

5.7.37 As set out in paragraphs 4.5.49-54 of this LIR, there is a need for surveys to be carried out and mitigation agreed before the commencement of works. ECC recommends that this is either captured within an appropriate management plan, or through an additional requirement and would welcome discussions with the Applicant on this matter accordingly.

Additional Requirement - Employment, Education, Skills and Supply Chain strategy

5.7.38 As set out in section 4.8, ECC recommends that a requirement should be included in the DCO which requires an Employment, Education, Skills and Supply Chain strategy to be submitted for ECC approval prior to commencement of construction as a mechanism to secure legacy benefits from the development.

Additional Requirement - Health and wellbeing mitigation strategy and monitoring framework

5.7.39 EN-1 requires applicants to avoid, reduce or mitigate adverse health impacts and monitoring where health effects are uncertain or where vulnerable groups may be

affected (ES Chapter 10 – paragraphs 4.4.4 – 4.4.6). Therefore, the dDCO should include a standalone Health and Wellbeing mitigation strategy and a health and wellbeing monitoring plan.

5.7.40 The dDCO relies on "embedded mitigation", however, it is unclear how the embedded mitigation addresses mental health impacts, protect vulnerable groups, ensure community benefit delivery and provide adaptive mitigation if impacts are worse than predicted.

5.7.41 Therefore, the additional requirements below are recommended to ensure public health protection is robust and enforceable. ECC would welcome engagement with the Applicant to discuss how these requirements could be appropriately worded.

a) Health and wellbeing mitigation strategy - Public Health recommend adding a new mandatory requirement requiring a Health and Wellbeing mitigation strategy that includes identification of vulnerable groups, community-specific mitigation packages, Mental Health Impact Action plan, engagement approach for EMF concerns, provisions for active travel support during construction, measures to maintain community cohesion and reduce severance and communication protocols in accessible and translated formats.

b) Health and wellbeing monitoring framework - A Health and Wellbeing Monitoring Framework must be submitted and approved. Monitoring must include air quality, noise, PRoW continuity, active travel metrics, green space access and community wellbeing indicators. Annual reports must be published and adaptive mitigation provided where adverse impacts exceed predictions.

Additional Requirement - Biodiversity Net Gain

5.7.42 A stark omission from the dDCO is any mention of biodiversity or BNG. The B2T DCO includes an Requirement securing that written evidence be provided to the relevant planning authorities on delivering at least 10% BNG.

5.7.43 A post-consent programme of ecological mitigation measures and a BNG delivery plan will both need to be secured through the dDCO Requirements.

5.7.44 The strength of the DCO Requirements in ensuring the delivery of the mitigation measures and BNG plan will be critical to determining what ecological impact the Norwich to Tilbury project ultimately renders (positive or negative) for Essex local authority districts.

5.7.45 The BNG Report (APP-299) based on current proposals predict that there will be a combined positive net gain of 10% for hedgerows and for +10.64% for watercourses, but there is a net loss of – 8.25% of habitats. This does not meet the statutory 10% requirement for habitats. Additional off-site biodiversity units will be needed to satisfy the trading rules.

5.7.46 It is acknowledged that on-site delivery might not always be feasible, and off-site delivery could offer additional benefits, including the protection of areas with local natural and wildlife value. It is recommended to discuss off-site and unit purchases, with the Local Planning Authorities to ensure that biodiversity benefits are delivered locally within Essex.

5.7.47 It is understood the BNG Assessment is to be updated once the landscape provisions for both on-site and off-site are determined and finalised. This is welcomed. However, while the DAS, BNG Report Environment Statement (Chapter 8 – APP-158) and OLEMP references a commitment to achieving 10% BNG, there is a lack of clarity on delivery mechanisms, monitoring of which should be included within the dDCO. Integration with LNRS objectives should also be considered. Transparent monitoring and reporting obligations should also be included to ensure compliance with the Environment Act 2021

Additional Requirement- Integrated Green Infrastructure Strategy

5.7.48 GI is only indirectly referenced through landscaping and mitigation planting, with no requirement for an integrated GI strategy. GI is not explicitly defined or required beyond basic landscaping measures, and there is no obligation to deliver multifunctional benefits such as habitat connectivity, climate resilience, or sustainable drainage systems (SuDS). ECCC recommends an additional requirement regarding a Green Infrastructure Strategy to address the alignment between measures set out in the OLEMP (APP-321) and BNG Report (APP-299). Ongoing discussions with the Applicant on how a requirement to secure this matter would be welcomed by ECC but suggested wording should include details such as: *"The undertaker must prepare and implement a Green Infrastructure Strategy or incorporated with Landscape Strategy. Landscape and Ecological Management Plans, in consultation with ECC and Landscape professional, demonstrating integration of habitat connectivity, sustainable drainage, and climate resilience."*

Additional Requirement - Monitoring & Reporting on BNG and GI delivery.

5.7.49 Additionally, the Environment Statement recommend other ecological enhancements not captured by the metric, such as bird and bat boxes and habitat

piles. These enhancement and mitigation measure identified are instrumental in contributing to producing quality GI therefore all these GI threads should be carried through to detail stages of the application and secured through a suitably worded Requirement. This should include requiring that all landscaping and ecological mitigation works align with Essex Local Nature Recovery Strategy priorities, including habitat creation and species corridors.

5.8 Schedule 4 Discharge of Requirements

Applications made under Requirements

5.8.1 At Paragraph 1(1) LPA's are required to give notice of their decision on the discharge of requirements within 28 days. This is considered too short given the available resources and the processes involved in the discharge of Requirements, some of which will no doubt be complex and supported (properly) by a lot of detailed information. This period should be extended to at least 56 days. This is consistent with the statutory determination period for the discharge of conditions under the TCPA regime.

5.8.2 In addition, at Paragraph 1(1)(b) where further information is required, the Clause should be altered from the day immediately following the date the information was supplied by the undertaker to the day after the receipt by the local planning authority of the further information.

Further information

5.8.3 At Paragraph 2 (2), the timescale should be increased to at least seven business days consistent with that specified in the Bramford to Twinstead DCO.

5.8.4 At Paragraph 2 (3) the timescales for the local planning authority to issue the consultation following the receipt of information / additional information should be increased to ten business days. In addition, the backstop date by which the relevant authority must notify the undertaker should be increased to ten business days after the 21-day consultation period or the receipt of the Requirement Consultees response requesting the need for additional information. This is to reflect the pressure on resources of likely required consultees and to the relevant authority having to seek an extension.

5.8.5 The burden on LPA's could be further reduced if the Undertaker were to notify the Requirement Consultee directly at same time as LPA so ECC. suggests discussion with the Applicant as to how that could work.

5.8.6 ECC is concerned about the process where the supplied information is not acceptable. While Schedule 4 paragraphs 2 and 3 deals with some aspects of that, it does not address circumstances where ECC only knows what further information is required once it has received comments from consultees. and does not address the issue. It is therefore suggested that:

i) In Schedule 4 Paragraph 2, replace ,"the relevant authority must, within 5 days of receipt of the application" with " the relevant authority must,
within 21 days of receipt of the application;
ii) In Schedule 4 Paragraph 3 delete "and in any event within 21 days of the receipt of the application" is deleted from Paragraph 3 of this Schedule.

Fees

5.8.7 ECC is giving further consideration to what the specified fee at part 3(b) should be and its relationship to prescribed fees and any post consent PPA and will update the Applicant and the ExA as soon as practicable.

5.8.8 The period within which the application has to be determined should be increased to 42 days, as should the period for the refund This more realistically reflects the processing time which will be needed to carry out the necessary consultation key consultees and for them to consider the submitted information which on a project of this scale will no doubt be extensive and detailed. This situation is further exacerbated by the number of DCO's may LPA's are currently having to process.

5.8.9 Any refund of application fee should be subject to a 20% retention to cover the initial administration costs of processing the submission.

5.8.10 The dDCO should clarify whether the fees will be index linked.

5.9 Schedule 16 Protective Provisions

Part 3 for the protection of drainage and flood authorities

Approval of Plans

5.9.1 Paragraph 3(1)(a) – The Lead Local Flood Authority recommends the inclusion of approval under Section 23 of the Land Drainage Act 199.

5.9.2 Furthermore, with reference to Paragraph 3(6), where the drainage strategy plan changes the LLFA should be consulted regarding the changes at the earliest opportunity to ensure there is adequate time to consider any request. A minimum of 20 business days is suggested.

Part 4 for the protection of the highway authorities

5.9.3 As mentioned previously, ECC's preference is to enter into a Framework Highways Agreement or similar side agreement with the Applicant to deal with the design approvals rather than the use of Protected Provisions. This is on the basis that ECC expect (as indeed the public would expect) a level of oversight and control of the local highway network. However, we have provided comments on the text in the dDCO should the Protected Provisions be the only route available.

5.9.4 The "Approval period" is defined as 14 days for Minor Works and 28 days for Major Works. ECC refer to the discussion points around this at Schedule 11 where ECC have requested that the formal decision period is extended to 35 days to be in line with the Bramford to Twinstead DCO.

5.9.5 A description of the types of work that constitutes "early works" is needed as is shown for the pre-commencement definition.

5.9.6 The agreed wording from the recently consented Five Estuaries DCO (Protected Provisions, Article 131) should be included for the definition of "road safety audits":

"(1) The undertaker must procure that an appropriately qualified RSA team (as defined in HPN039 or DMRB Volume 5 Section 2 Part 2 (GG 119) as advised by the local highway authority (acting reasonably) or any replacement or modification of that standard) undertakes road safety audit in accordance with the standard as set out in HPN039 or DMRB standard GG 119 as advised by the local highway authority (acting reasonably) for works which involve creation, alteration, expansion or other modifications of the local highway but not for works which consist only of trenchless installation beneath highways, and must provide copies of the reports of such audits

to the local highway authority within 10 business days of their receipt by the undertaker.

(2) The local highway authority must be invited to participate in the road safety audit conducted under sub-paragraph (1)

(3) No works on a local highway must be commenced out until a satisfactory Stage 1 and Stage 2 Road Safety Audit has been carried out and all reasonable recommendation raised by them or any exceptions are approved by the local highway authority (acting reasonably)

(4) Where the report of the stage 3 and 4 road safety audit identifies any recommended measures in respect of the local highway, the undertaken must carry out, at its own expense and to the reasonable satisfaction of the local highway authority, those measures identified as part of stage 3 and 4 audit which the undertaker considers necessary (acting reasonably) and for the avoidance of doubt any matters related to the health and safety will be considered as reasonable, and which do not give rise to any new or materially different environmental effects in comparison with those identified in the environmental statement."

5.9.7 The definition of "security" includes either (a) a letter of credit; or (b) such other information that evidences the credit standing of the undertaker. This is a non-standard way for ECC to deal with the form of security which is usually required as a bond. ECC notes the Applicant's solicitors were reviewing the form of security through ongoing internal discussions and the drafting was to be updated accordingly where necessary. It does not appear that there have been changes made and the Explanatory Memorandum (Document 3.2) offers no further detail on this point.

5.9.8 At paragraph 6 (2) ECC requests that a timescale is included to provide notice to the local authority on pre-commencement works. Currently the statement is vague.

5.9.9 Paragraph 8 requires wording to be added around suitably qualified persons to be involved in the initial and formal engagement with the local highway authority. ECC have had previous experience on other DCOs where there was a lack of knowledge of the design which meant that ECC were having to spend more time dealing with issues. Therefore, we believe this requirement should be tightened up.

5.9.10 Paragraph 11 (1b) sets out that the formal approval can only commence when the initial checking fee has been paid. It would appear reasonable to include this requirement in paragraph 10 such that the fee is paid in advance of the time involved for the initial engagement.

5.10 Schedule 19 Certified Documents

5.10.1 The dDCO should secure that certified documents remain readily available to local authorities engaged in the discharge of requirement, in the interests of clarity, efficiency of process and transparency.

6 Management Plans

6.1 ECC has undertaken a review of the outline management plans submitted as part of the application. ECC's review takes into account the experiences from other development consent orders which have been or are being implemented in Essex as well as the technical expertise of officers across the Council.

6.2 ECC appreciates that the various management plans have been submitted as outline, and commentary regarding how the detailed documents should be prepared and reviewed / discharged by the relevant authority is provided within the DCO section (Chapter 5) of this Local Impact Report.

6.3 It is important, that although these have been submitted in an outline form at this stage, the management plans must contain appropriate principles to assist in the development of the detailed management plans as a requirement of any consent Therefore, ECC would welcome further engagement with the Applicant to ensure the relevant amendments are made to these management plans, and that amended versions are submitted to the ExA accordingly.

6.4 Within this section, under relevant topic headings, ECC has provided commentary on:

i) the submitted outline management plans;
ii) where it considers further management plans are required; and
iii) where it is content with their absence.

<u>Minerals and Waste</u>

6.5 ECC as MWPA is pleased that consideration has been given to Candidate Sites. These Candidate Sites are within the MSA and therefore benefit from general safeguarding policy. The sites also have a willing landowner and operator such that there is the potential that these sites may be worked in the future (see NPPF Paragraph 225). The MWPA recognises that not all Candidate sites may be selected as Preferred Site allocations , so at this stage their status as Candidate sites is relevant to the weight to be given in the planning balance

6.6 Volume 6: ES – Document: 6.4 ES Chapter 4 - Project Description (APP-130) sets out a number of design scenarios to ensure flexibility within the DCO Project, including whether candidate mineral sites are subsequently allocated within a future minerals plan. The MWPA has reviewed this document insofar as it relates to potential impacts on existing and candidate mineral sites within Essex and confirms that the published findings are in line with those issues discussed with the Applicant at a liaison meeting in August 2025. It was further confirmed at that meeting that undertaking an 'Option B' route brings with it no operational challenges that would prohibit the option.

6.7 The final impact on Candidate Sites cannot at this point be ascertained as the exact final routing in terms of 'Option B' arrangements is still subject to ongoing engagement between the Applicant and the MWPA. However, the MWPA is satisfied that the Applicant is proactively seeking to minimise any potential impact on their future working.

6.8 Where planning permission to work a site has already been granted, it is again noted that whilst in principle the MWPA would defend the primacy of its planning permissions, where appropriate, engineering requirements for the construction of the project may mean that there is no option other than a route which would render existing planning permissions unimplementable or implementable in part or with variation. The appropriateness of the route within this context will be a decision for the ExA based on the weight in the overall planning balance given to the applicable material considerations.

6.9 Whilst ECC is mindful of the importance of safeguarding minerals, to ensure a steady and adequate supply of minerals as well as the Agent of Change principle, it is accepted that these are all to be weighed in the planning balance against the need for the DCO scheme which is identified as an NSIP. In that context, the MWPA is again satisfied that the Applicant either have, or are currently, taking appropriate steps to mitigate any impact on consented mineral extraction sites.

6.10 The MWPA understands that any reduced yield from a site with minerals consent that is attributable to the Norwich to Tilbury project as a result of its route would open up the potential for the site operator to be financially compensated. This is not a matter that would involve the MWPA beyond its duty of monitoring mineral supply.

6.11 In summary, the MWPA considers that existing evidence, as supplemented by ongoing discussions, represents sufficient management of the issues addressed in this report and therefore no additional management plan regarding minerals is required.

Health and wellbeing

6.12 The County Council has reviewed the management plans submitted and raises concerns from a public health perspective that the plans:

- Lack health-focused objectives;
- Do not reflect the vulnerability baseline;
- Do not account for linguistic, disability or deprivation inequalities;
- Do not embed mental health mitigation;
- Do not propose monitoring;
- Do not incorporate cumulative impacts;
- Are insufficiently detailed to understand how commitments will be enforced;
- Have no dedicated Health and Wellbeing section;
- Does not integrate WHIASU or MWIA as recommended by ECC and Suffolk during statutory consultation;
- Does not commit to vulnerability-sensitive measures, despite clear baseline evidence;
- Uses generic statements instead of location specific mitigation; and
- Provides no monitoring beyond compliance checks.

6.13 ECC continues to recommend that a mental health mitigation plan is prepared for submission by the Applicant. This was addressed during the Statutory Consultation response, and the SoCG (ID 3.5.6) (APP-091). The mental health management plan should address community stress and anxiety; perceived EMF risk; loss of control and autonomy; landscape and amenity disruption and support for resilience and inclusion.

6.14 An 'Inclusive communication and engagement strategy' should also be included within a management plan. The ES acknowledges language vulnerability but does not mitigate it. This inclusive communication and engagement strategy should consider and include:

- Translated materials for areas identified in the ES where English is not the main language;
- Visual / accessible formats;
- Regular updates timed to minimise distress;
- Proactive outreach to disability groups;
- Dedicated helplines for vulnerable residents;

6.15 In summary, ECC in respect of Health and Wellbeing, considers the proposals for Management Plans to be unacceptable. The proposals for management plans must include a mental health mitigation plan as well as an inclusive communication and engagement strategy; therefore, ECC is seeking further engagement with the Applicant to address the deficiencies outlines in the above paragraphs.

6.16 Outline Code of Construction Practice (CoCP) (APP-300)

Health and wellbeing

6.16.1 Real-Time Environmental Monitoring is currently included in the CoCP. ECC recommends that the CoCP should include live monitoring dashboards for noise, dust / air quality, vibration and EMF (where applicable). This would enable residents to access clear live data thereby maintaining trust and reducing anxiety during the construction process.

6.16.2 In respect of Sensitive Receptor Protection Protocol, ECC recommends that the CoCP should list and map:

- Schools
- Care homes
- Health facilities
- Disability services
- Densely populated residential clusters
- High deprivation LSOAs
- Communities with high disability prevalence (Figure 10.10)

6.16.3 ECC would also recommend that specific mitigation must apply at sensitive receptors (e.g., no night works, noise buffers, early warning systems) to safeguard residential amenity and this requires consideration within the CoCP.

Historic Environment

6.16.4 Standard and additional mitigation measures for archaeology are set out in the Outline CoCP (APP-300). Mitigation requirements are included within Section 6 (6.1.13) of the CoCP (APP-300) with reference to the Outline AMS and WSI (APP-328) and mitigation measures are listed in Table 6.1. Register of Environmental Commitments.

6.16.5 Historic Environment (archaeology) is covered under H01 to H05 of the CoCP, and are agreed as appropriate. However, in respect of H04 which considers when a previously unknown asset is discovered, or a known heritage asset has proved to be

more significant than foreseen at the time of the application, the following statement should be added: *The Principal Contractor(s) will be responsible for making sure staff are aware of what to do in the event of an unexpected heritage asset. This should include toolbox talks within site inductions*.

6.16.6 Mitigation for Protected Lanes is included under H06. In order to protect the historic features of protected lanes a permanent record should be completed prior to any changes which would allow for more accurate re-instatement. The requirement for this should be included under H06 and the mode and mechanism for this process included in the final Landscape and Ecological Management Plan (LEMP). It is noted that the measures proposed by the Applicant in their Bramford to Twinstead project (H05) included a more robust mechanism for their protection. It is recommended that this approach is adopted as set out below:

"A topographic survey will be undertaken in advance of construction of each Protected Lane (Essex) and Historic Lane (Suffolk) within the Order Limits where likely to be affected by physical works. The survey will include mapping of any historic earthwork features associated with the lane, including banks and ditches. During construction, the contractor will seek to limit the working area to the narrowest section of lane that is practicable for the works. Any historic features associated with the lane will be reinstated at the end of construction to the pre-work condition, including the replanting of hedgerows and reinstatement of historic earthworks."

6.17 <u>Outline Code of Construction Practice (Final Issue A) (APP-300) / 7.4 Outline Landscape and Ecological Management Plan (Final Issue A) (APP-321)</u>

Ecology and Biodiversity Net Gain

6.17.1 As stated in ECC's Relevant Representation (RR-1083), ECC considers that Ecological Clerk of Works ("ECoW") oversight and influence throughout the construction stage of the project will be critical to the faithful execution of the CoCP and LEMP directives and the resulting degree of mitigation success. A commitment / requirement should be made regarding the minimum qualifications / experience of the ECoWs to be used, together with clarity regarding the ECoW decision capability and hierarchy, assuming that there will be multiple ECoWs employed on the project.

6.17.2 The commitment to delivery of 10% BNG is welcomed. As stated in the 7.1 Biodiversity Net Gain Report (AP-299), "*There is currently no legislative requirement for BNG in respect of NSIPs; as such there is also no guidance for the application and delivery of BNG for NSIPs.*" Nevertheless, the protocol required by Defra for most new development projects (non-NSIP) is a helpful point of reference. The central

assumption of successful habitat reinstatement in all instances, with only a 5-year post completion time limit for management, is questionable. It would be preferable to apply the approach from the DEFRA protocol (Developers must deliver a minimum 10% biodiversity net gain, secured for at least 30 years).

6.17.3 ECC will continue to work with the Applicant's team to secure effective and functional BNG in line with the Essex Local Nature Recovery Strategy (LNRS) published on 10th July 2025. This includes on-site and off-site provisions.

6.18 Outline Site Waste Management Plan (Final Issue A) (APP-302)

6.18.1 Chapter 4 of the ES (APP-130) a provides appropriate detail with regards to the management of waste arising during the construction of the scheme. Paragraph 4.7.35 states that the Main Works Contractor(s) would produce a Site Waste Management Plan ("**SWM**P") prior to construction, which is a provision supported by the MWPA and required by adopted policy.

6.18.2 The MWPA notes that a SWMP would be expected to:

- present a site wide approach to address the key issues associated with sustainable management of waste, throughout the stages of site clearance, design, construction and operation,
- establish strategic forecasts in relation to expected waste arisings for construction,
- include waste reduction/recycling/diversion targets, and monitor against these,
- advise on how materials are to be managed efficiently and disposed of legally during the construction phase of development, including their segregation and the identification of available capacity across an appropriate study area.

6.18.3 Overall, the MWPA notes that the existing Outline SWMP provides a framework to reduce the generation of waste and includes appropriate measures to reuse and recycle materials where practicable. The commitment for the SWMP to identify appropriate waste facilities to dispose of materials is supported.

6.19 Outline Code of Construction Practice Appendix F - Outline Noise and Vibration Management Plan (Final Issue A) (APP-306)

Historic buildings

6.19.1 In document 6.14 Environmental Statement Chapter 14 - Noise and Vibration (APP-256) the Applicant has identified the potential for damage to a total of five buildings or structures due to construction vibration from potential compaction activities. Four

of these are located in Section C (Tendring District) and include the Grade II listed War Memorial (List entry number 1493299). Directly adjacent to another of the four buildings identified (Haywain, The Haywain, Bentley Road, Little Bromley, CO11 2PL (grid reference 610156, 227908) (Section C) is the Grade II listed timber framed and weatherboarded Pair of Cottages. These are approximately 10 metres south of the Fox and Hounds Public House (List entry number 1111418) and it is unclear why this listed building has not also been identified as having the potential for damage. Without further explanation from the Applicant, it should be included.

6.19.2 Construction Noise and Vibration Mitigation measures NV04 and NV05 are relevant but measures should also be put in place to avoid damage to these structures rather than rectifying any damage arising from the works after the fact. Site specific measures should be set out in the Main Works Contractor(s) Noise and Vibration Management Plan as set out in NV05 and agreed prior to relevant works commencing.

6.20 Outline Construction Traffic Management Plan (Final Issue A) (APP-309)

6.20.1 As mentioned in the Relevant Representation (RR-1083), ECC as Local Highway Authority has concerns around managing impacts on the Primary Access Routes (PARs) where there is school related activity on the local highway network. It is acknowledged that the Applicant has included restrictions on HGV movements which use routes on which schools are directly located during the school start/finish periods. However, ECC have requested from the Applicant further restrictions for routes passing other schools including PARs that are not necessarily directly passing the school but where ECC considers there is a level of activity on the route. The types of activity include students getting on/off buses and immediately crossing, students crossing at various locations along the route, large volumes of pedestrians walking in groups, presence of on street cyclists turning into the school access roads and parents with young children in buggies or on bikes/scooters.

6.20.2 The Applicant has reviewed the list ECC provided and determined that there is no additional risk with HGVs using the routes due to the presence of local infrastructure and/or that there are a low number of HGV numbers using the following routes:

- A129 and A176, Billericay – Quilters Infant & Junior School and The Billericay School (secondary school);
- B1018, Tye Green – Cressing Primary School; and
- Spinks Lane/Spa Road, Wickham – Maltings Academy (secondary school) and Powers Hall Academy (primary school).

6.20.3 Following a review of this information, ECC remains concerned and suggests that observations are undertaken during school drop off/pick up to more fully understand the movement of students and parents on the construction route in the vicinity of the school. It is the level of activity and how people move within the location of the school that needs to be considered.

6.20.4 While there are currently no planned schools on the PARs, ECC requires a commitment in the outline CTMP to include a review at the time of construction. This is to take account of any slippages in the programme which may coincide with new schools that are linked to new developments.

6.20.5 ECC notes there is no commitment in the CTMP for the contractor to consider ways of reducing freight by road which is a clear national policy requirement set out in NPS EN1 paragraph 5.13.14. ECC would expect this to be included in the CTMP with high level items included that should be considered by the Contractor such as the use of consolidation centres, working with other developers on shared delivery logistics (this could form part of the Developer's Forum discussions), alongside the wider considerations of the Multi-Modal Strategy using rail and port facilities to replace long distance road freight.

6.20.6 ECC has reservations on the front-loaded delivery profile option (Scenario 1) shown in Appendix G of the Transport Assessment (APP-340) for the Multi Modal Strategy as this has the potential to be more disruptive to the local highway network compared to the 'just-in-time' scenario (Scenario 2). However, ECC recognises the challenges and is open to discuss this further when a more detailed programme is available and more information is provided by the Contractor on the expected duration of impacts at specific locations. ECC would request that this is noted in the CTMP as a point for discussion between the Highway Authority and the Contractor.

6.20.7 One of the key assumptions in the Transport Assessment (APP-333) is that construction workers will travel to/from the site outside of the highway network peak hours. There has been no assessment of the impacts if the travel times are not adhered to. It is reasonable to assume that if workers were to travel during the peak hours, then there would be a worsening of road conditions on the local highway network. On this basis, it is imperative that this assumption is monitored and managed effectively to provide the necessary evidence that workers are not travelling through the local highway network during the peak hours particularly during the autumn/winter seasons with the worsening weather conditions and reduced daylight hours. Details of how the assumptions will be monitored, managed and enforced should be set out in the CTMP to provide some level of accountability.

In addition, confirmation of shift patterns within the CTMP would provide greater surety that the assumptions are realistic.

6.20.8 Another important point that needs to be included in the CTMP is a commitment to reviewing the number of HGV vehicles against the proposed numbers assessed in the ES. This is particularly the case on the rural road network where HGV flows are usually much lower and/or where there are cumulative impacts with other sites – for example, in the Ardleigh area (PAR 30) where there is an overlap in activity between Norwich to Tilbury and the two windfarms (North Falls and Five Estuaries). If there were to be an increase in HGVs, which could have a negative effect on communities and the highway network, then there should be a commitment to provide mitigation along with some examples of what this could entail for discussion at the appropriate time. An appropriate mitigation may be to extend the construction programme rather than overburden the network for example. A commitment to reviewing the number of construction worker vehicles is also necessary – however, this is discussed in more detail in the CWTP which looks to include monitoring of mode share and parking. Therefore, the commitment for monitoring the number of construction worker vehicles appears to be more sensibly included in the CWTP.

6.20.9 In addition to the above points that are noted for the existing network, it is requested that a commitment to a road safety review of the construction routes is included in the CTMP which includes a review of structures.

6.20.10 ECC would also request that the CTMP includes a commitment by the Contractor to remain flexible with the use of the construction routes to take account of external factors that may impact on the operation of the local highway network.

6.20.11 ECC requires the Applicant to include a commitment in the CTMP that the Contractor will undertake a comprehensive investigation of the construction of Bentley Road to inform the subsequent detailed design for the works.

6.20.12 ECC would welcome engagement with Applicant to ensure the proposals set out within this response are properly considered and the requisite amendments made to the CTMP, to the satisfaction of the Local Highway Authority, to ensure the impact on the road network arising from the project can be appropriately controlled.

6.21 Appendix B - Outline Construction Worker Travel Plan (APP-311)

6.21.1 Figure 2.3 in the CWTP in Appendix B of the CTMP (Doc 7.3) shows the number of daily construction staff in Essex peaking at over 1200 in Q1 2028, and generally around 800-1000 in 2028-2030. Table 2.1 of the same document shows the daily

peak traffic on all the PARs: the majority of the routes show around 30-50 vehicles, however there are higher usage routes ranging between 102-385. These daily peak traffic flows include all worker types (i.e. construction workers and office-based staff) with Paragraph 2.4.2 of the CTMP notes an assumed worst case of 86 office based staff per day.

6.21.2 It is recognised that there are distinctions made between different types of staff that attend site:

- office based staff with an assumed vehicle occupancy of one who arrive/depart during peak hours;
- overhead line construction workers to compound with an assumed vehicle occupancy of two who arrive/depart outside of the peak hours; and
- cables and substation construction workers with an assumed vehicle occupancy of two.

6.21.3 Notwithstanding that the assessment assumes construction workers will be arriving/departing outside of the highway network peak hours, it is anticipated that there will be a level of disruption on the local roads surrounding the site until the vehicles have dispersed onto the wider network. Therefore, it will be important to try to reduce the impact as much as possible by minimising the number of vehicles attending site.

6.21.4 Office based staff have been taken into account in the assessment in terms of impacts as they are travelling during the peak hours and so are included in the traffic flows for the junction modelling – however, managing the numbers will be an important part of mitigating these wider impacts also.

6.21.5 The existing site accessibility shown at Chapter 4, Table 4.1 indicates limited ability for staff to access active travel options due to the rural nature of the site compounds; rail and bus is presented as almost non-existent. The accessibility for rail has been presented based on whether staff can access the site using a bus route from the station but in many cases, a train station is nearby the site. One measure therefore, that ECC would want included as a commitment in the outline CTMP to mitigate the impact on local highway networks is to have mini-buses to pick up/drop off between the site and various key locations/transport nodes. This would connect staff with locations such as train stations, bus stops and shared accommodation, or other locations where there are clusters of staff. Those using the mini-bus could also have priority leaving the site at the end of the day to encourage uptake.

6.21.6 The CWTP includes car sharing as a measure to reduce vehicles to the site. However, there is a lack of detail demonstrating proactive commitment around how it will be

implemented. For example, engaging with staff prior to them travelling to site is an important part of the process so that vehicle numbers are reduced from the beginning helping to establish travel patterns early on. More detail should be provided as to how the Contractor would go about proactively identifying clusters of staff and/or transport hubs to assist with reviewing minibus drop off/pick up options, alongside encouraging car sharing; and how this would be promoted to the staff to encourage a high take up.

6.21.7 At paragraph 7.2.2 of the CTMP there is a commitment to providing an information pack which includes details of the Travel Plan to be included as part of induction onto the project. This is acceptable if the induction is to take place prior to staff being on site – if it is not, then the information pack should be provided beforehand so that staff think about travel beforehand and have assistance in making decisions about how they travel (particularly noting the minibus and car share measures). How the site is accessed could also be included in the recruitment process so that staff would understand the measures before committing to working.

6.21.8 Paragraph 7.3.1 states that staff parking at the construction compounds will be limited and all spaces will be allocated; and that all staff requiring a parking space will have to demonstrate that arriving by private vehicle is the most practicable option. It also highlights that car parking arrangements will be discussed in a site-specific induction and restrictions detailed which stipulate that parking on the roadside and any restricted locations is not permitted.

6.21.9 The above principles on parking are welcomed, but ECC considers further commitments are required for inclusion in the outline CTMP to detail the parking demand, and the supply of parking being provided together with the access design to the compounds. This must also be supplemented with cycle parking details. Also, it is requested that the site-specific induction is done in advance of workers attending site so they have a full understanding of their travel options alongside more detail on the consequences of staff parking on the roadside or restricted locations.

6.21.10 An important part of the Travel Plan will be monitoring and reviewing the mode share, car occupancy and parking on site to understand how effective the measures are and whether the assumptions included in the assessment have been realised. The monitoring and review should relate to the specific groups of staff so that it can be related back to the assumptions in the assessment (ie office staff – vehicle occupancy of 1, and construction workers – vehicle occupancy of 2) as well as the targets set.

6.21.11 There are two targets specified in the CWTP and no baseline information against which to assess them. They are included at paragraph 5.2.1 as 1) to achieve an average minimum occupancy of six personnel per crew van with no more than one car/van parked on site for every three people and 2) to achieve an average minimum occupancy of 1.3 personnel per car. It would seem more logical to make the first target (which is based on the assumptions in the assessment) as the baseline on the basis that these assumptions relate to previous experience on other projects. The second target would then be the only target for the CWTP of achieving the baseline conditions or a betterment. As currently shown the second target has no explanation as to the assumptions underlying it or how it relates to the first target – if this is to be retained then we would require some justification/understanding as to how it has been derived.

6.21.12 Another important part of any Travel Plan is what happens if the targets are not met – particularly when there are impacts experienced locally as a result of mitigation not achieving stated objectives of reducing traffic flows at key points on the network. Furthermore, the assessment for the scheme and the level of appropriate mitigation is on the basis of assumed car occupancy – if the assumptions are not met then there is potential for additional impact over and above what has been considered. Therefore, the CWTP must include interventions that will be implemented if the targets are not met– this could include restricting workers attending site as an example.

6.21.13 Section 5.2.3 includes a commitment from the Main Works Contractor to "encourage the use of a crew vehicle for the overhead line workers travelling from compounds to sites, to reflect the vehicle occupancy of six." ECC question whether the Main Works Contractor could "require" rather than "encourage" as part of the contract agreements and so commit to this in the CWTP.

6.21.14 A commitment in the PRoW Management Plan to confirm the rights over the haul road are retained and that the design of how the PRoW will cross over will be agreed with ECC prior to any development commencing, is requested.

6.21.15 ECC requests that the Applicant considers the matters raised within this response, and includes appropriate controls with the CTWP to ensure that impact on the highway network is limited, and communities and local businesses are not unduly affected by the project.

6.22 Outline Landscape and Ecological Management Plan (APP- 321)

Green Infrastructure

6.22.1 The OLEMP provides a framework for reinstating land, vegetation, and habitats post-construction, with species-specific mitigation and landscape proposals. While the OLEMP demonstrates good practice in vegetation retention and pollution prevention, ECC is concerned gaps remain regarding GI, BNG, and alignment with Essex's LNRS; all previously highlighted in ECC's Relevant Representation (Oct 2025) (RR-1083). ECC has recommended a separate Requirement in the dDCO that that the Applicant prepare a Green Infrastructure Strategy.

6.22.2 The OLEMP includes habitat reinstatement, tree and hedgerow protection, and species mitigation (e.g., bats, dormice, water vole, otter). Environmental Areas around substations offer enhancement opportunities, but the OLEMP focuses on reinstatement rather than strategic GI delivery. There is no integrated GI strategy linking mitigation to wider environmental benefits.

6.22.3 Although the OLEMP references Applicant's commitment to 10% BNG, this is not secured through enforceable DCO requirements. Off-site BNG delivery remains unclear, and there is no mechanism for monitoring or reporting. A Biodiversity Gain Plan and Habitat Management and Monitoring Plan should be required and approved by the relevant planning authority. ECC welcomes commitments such as a 3:1 tree replacement ratio and 30-year management for Environmental Areas, as well as consultation with LPAs and organisations (e.g., Essex Wildlife Trust, RSPB, National Trust and Woodland Trust). ECC also supports OLEMP's indication that off-site compensation may include creating or enhancing natural features outside the Order Limits, secured through planning obligations. ECC recommends these measures be formally secured in DCO requirements and delivered locally within Essex.

6.22.4 It is considered the management plan should reference Essex LNRS priorities such as habitat creation, species corridors, and nature recovery networks and integrate these into Environmental Areas and reinstatement plans. Current proposals lean toward visual mitigation rather than ecological connectivity or compensation. Compensation provisions lack quantified offsetting for habitat loss within Essex and do not secure delivery in line with LNRS priorities. As noted in ECC's Relevant Representation (RR-1083), the absence of a clear methodology for distinguishing mitigation, enhancement, and compensation remains a concern.

Historic Environment

6.22.5 The OLEMP (APP-321) includes measures to protect and reinstate historic landscape features including protected lanes, in addition to the commitment set out in H06 of the Outline CoCP (APP-300) which considers the maintenance of elements within the landscape. The plan does not include sufficient controls to ensure the accurate re-instatement of historic features should removal or changes be required during construction. The following should be added to Section 7.9 of the OLEMP to ensure there are sufficient controls in place:

Should removal of features, other than hedgerows, associated with the protected lane be required, such as banks, verges, earthworks, a suitable method of recording of all historic features associated with the protected lane should be carried out in order to facilitate accurate re-instatement.

6.23 Outline Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (AMS/WSI) (APP-328)

Historic Environment

6.23.1 The proposed approaches and commitments to archaeological investigations to be undertaken post-consent are set out in document 7.5 Outline Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Final Issue A) (APP-328) ("AMS / WSI"). This document will form the basis of a detailed WSI for archaeology and geoarchaeology. The document will be directly referenced in the DCO under Requirement 5 and therefore it is paramount that it is approved early in the examination process to ensure the completion of the evaluation of the archaeological and geoarchaeological resource following any consent and that appropriate measures are in place successfully to mitigate any archaeological or geoarchaeological remains that will be impacted upon by the scheme.

6.23.2 The Outline AMS/WSI are not currently adequate in relation to archaeology and geoarchaeology and requires amendments. Further detail is required in the Outline WSI as it forms the foundation of later strategies. It is therefore important for it to be clear how this work will proceed, and what is expected of the contracting unit(s) responsible for investigation. It has been agreed, with the Applicant's archaeological representatives that detailed comments will be provided separately in combination with other County Officers in order to come to agreement on the content of the Outline AMS/WSI.

6.23.3 The document states that "Appropriate and proportionate geophysical (magnetometer) survey and archaeological trial trenching has been undertaken to date (Section 1.3.4). The levels of evaluation proposed prior to submission were agreed between the Applicant and relevant parties during the pre-application stage. However, the evaluation, including geophysics and trial trenching, was not completed prior to submission and as a result, full reporting of these investigations has not been completed. This is less than ideal. Normally this would not be considered sufficient information to submit with an application.

6.23.4 The report proposes that post-consent archaeological evaluation would be limited in extent and to certain locations. ECC considers this position needs to be re-considered in light of the current stage of the evaluation fieldwork as it would normally be anticipated that all areas where impact to the archaeological or geoarchaeological resource is expected, would be evaluated through intrusive archaeological methods (archaeological trenching).

6.23.5 The document also requires clarity on the scope and extent of further evaluation needed prior to any agreed mitigation. ECC contends that evaluation will be required in all areas of potential impact where topsoil is to be removed, including (but not limited to) undergrounding, pylon bases, haul roads, ecological mitigation measures and drainage measures. This evaluation would include further geophysical survey, archaeological trial trenching and geoarchaeological investigation. Furthermore, the Outline WSI could be supported with the addition of a figure illustrating the areas that remain to be evaluated. This will allow all parties to be clear about the scope and level of evaluation that may be required should consent be given.

6.23.6 ECC considers the Outline AMS and WSI do not fully incorporate all potential methodologies and strategies for the post consent mitigation of the archaeological and geoarchaeological resource. While the main mitigation methods proposed are agreed in principle, including preservation in situ, excavation and strip, map and sample excavation and it is agreed that avoidance of significant archaeological remains would be the preferred approach to mitigation, it would not be acceptable to rely on archaeological monitoring and recording (Section 5.3.131- 5.3.138) as a mitigation method during construction unless undertaken on areas that have been previously evaluated and the extent/significance of potential archaeology has been adequately understood.

6.23.7 With regard to preservation of sites through burial, it is considered Section 5.3.6 to 5.3.11 may need updating in light of current research into the most suitable methods and materials. As a result, ECC feels the most up to date methods and practices for

burial or sealing of remains will need to be agreed in discussion with the Historic England Regional Scientific Advisor.

6.23.8 The sections covering geoarchaeological evaluation and mitigation lack detail in their methodologies and outputs and need further detail to be included as well as consideration of other geoarchaeological assessment techniques that may be more appropriate.

6.23.9 In this regard, Geoarchaeological deposit modelling is listed as an assessment technique however a methodology for this is not provided. Section 5.3.22 refers to archaeological site investigations where geoarchaeology may be recorded and inspected. There is also reference to historic borehole records being consulted. ECC considers this does not provide a robust strategy for the collection of geoarchaeological data to inform a deposit model. More details on sources and methodologies for the updating or creation of a deposit model should therefore be included.

6.23.10 ECC would also request that if there is potential for further monitoring of ground Investigation (GI) works across the scheme this should also be included as an assessment method and details of the proposed methodology provided. Any further GI works would need to be monitored under geoarchaeological control to enable recording and incorporation into the deposit model and included as a commitment in the Outline WSI as a mitigation method.

6.23.11 The evaluation methodology proposed for Geoarchaeological and Paleoenvironmental investigation (5.3.115) are boreholes or cores across the evaluation area. Any purposive borehole strategy should be guided by the updated deposit model.

6.23.12 Dependant on the depth, nature and extent of the geoarchaeological deposits to be investigated (which should be derived from a deposit model) there may be other more suitable geoarchaeological techniques which could better address the aims and objectives of the mitigation.

6.23.13 Geoarchaeological test pits and trenches should be included as potential geoarchaeological methodologies for mitigation in areas where the lateral extent and sampling methodologies would benefit from open excavations rather than borehole cores.

6.23.14 Section 6.1.1 makes reference to the processing of finds however no further details are provided. A section on finds processing and processes for the treatment and

conservation of metal finds should be included within the Outline WSI. Finds would need to be examined by a suitable qualified specialist so that the results can be included in the evaluation reports. This information would be required for the identification of mitigation areas.

6.23.15 The proposals for reporting and provision of updated information need further consideration. The full reporting of the previous, current and forthcoming evaluations is considered a priority as this will be the basis for the selection of sites for mitigation. The reporting of trial trench evaluations should be included as a separate section within the outline WSI as the information required to make a balanced decision on mitigation will differ from a site that has been chosen for mitigation.

6.23.16 Agreement on the content of the Post-excavation Assessment Report (6.3) needs to be discussed in conjunction with both Norfolk and Suffolk archaeological advisors to ensure the requirements do not clash across county boundaries. It would be preferable to only include Essex sites within each post ex report and not a combination across the counties unless the sites cover a landscape that crosses county boundaries such as the Stour Valley.

6.23.17 It is considered there would be scope to demonstrate a commitment to delivering enhanced public understanding/benefit and legacy as part of the mitigation (section 6.8) considering the significant size of the scheme and the interest in the heritage of the area. There is more opportunity for publication and outreach which should be expanded on in the Outline WSI.

Appendix A

1. Please give information describing the location including (where known):

a. **Working contact name, job title, and contact details of submission author**.

This is a joint submission on behalf Brentwood Borough Council, Basildon Borough Council, Thurrock Council and Essex County Council

The working group are Emma Goodings, Director of Place for Brentwood and Rochford Councils, Ashley Baldwin Thurrock Council, Christine Lyons Basildon Borough Council Executive Director Growth and Partnerships and Graham Thomas Essex County Council, Head of Planning.

The point of contact is [redacted]@brentwood.rochford.gov.uk

b. Name of organisation this submission is from and its type (e.g. combined authority / local authority / property developer / landowner).

This is a joint bid on behalf of Brentwood Borough Council, Basildon Borough Council, Thurrock Council and Essex County Council.

c. **Location details, including (if possible) postcode and National Grid coordinates of the location: Ordnance survey guidance on National Grid coordinates.**

The site is an extremely large area which is south of the A127 moving westward from the edge of Basildon, beyond West Horndon village and railway station. 51.566875289265504, 0.3431081569268513 are the grid references for the railway station. A concept masterplan is attached to this submission which sets out the location of the site.

d. Details of local authority / ties in this location (indicating whether the development crosses local authority boundaries) and the level of formal or informal local support for this development, if known.

The area includes land located within the boundaries of Thurrock, Basildon and Brentwood LPAs. Thurrock is a unitary authority, whilst Essex County Council is the upper tier authority for land in Basildon and Brentwood.

Dunton Hills Garden Village which is included within the site boundary is an allocated Local Plan site with permission in principle subject to S106, which is expected to be signed early in the new year. The larger concept masterplan has not yet been tested in public.

e**. Details of the land ownership and development promotion arrangements.**

We believe there are a small number of large landowners who own much of the land identified within the concept masterplan. Sites are being promoted individually by CEG, Iceni, Crest Nicolson, Vistry and others. More details on this can be provided in due course.

f. Stage of planning process (if commenced) and stage of master-planning process (if commenced).

The S106 agreement for Dunton Hills Garden Village (around 4,000 homes) is expected to be completed early in the new year and following marketing of the site it is expected that work on site will begin in 2026. A planning application for 2,000 homes in Thurrock is currently under consideration. Other parts of the site are being promoted individually by promoters or developers in the respective emerging Local Plans. Basildon have planning applications and developers seeking pre application advice for up to 300 new homes and a large mixed use employment site.

A very broad concept plan has been prepared which is submitted alongside this expression of interest, but no formal master planning of the site has taken place.

g. Potential start date (if known).

Phase 1 at Dunton Hills is expected to deliver homes from 2026.

2. How does this location meet the Taskforce's research remit as set out in Section A?

The site is located in the metropolitan greenbelt 25 miles from central London with Basildon to the east, Brentwood to the north and further west beyond the M25 Upminster. The concept masterplan includes the existing village of West Horndon which includes a railway station on the C2C line between Southend and Fenchurch Street. Travel time is approximately 20mins into east London and trains run every 15minutes in peak times.

Road links are also very good, with the A127 dual carriageway running to the north of the site and junction 29 of the M25 approximately 3.5miles from the site. This site acts as a gateway location to south Essex and should be developed with major infrastructure improvements associated with the development also benefiting the wider south Essex corridor.

No detailed master planning has taken place across the whole location, the site through additional modelling could accommodate approximately 20,000 homes, depending on density. Significant employment opportunities would also be accommodated on the site and would be popular in this gateway location in close proximity to London and the Thames ports (including Freeport).

The careful development of this area will provide significant open space and biodiversity net gain. This would include a large new country park style feature to the south east of the site (marked in green on the concept masterplan).

To the west of the location a large data centre and campus is in development and will be considered in due course under a Local Development Order to allow this to be reflective of the needs of future operators. The data centre operators indicated that there is significant potential to deliver a District heat network to the location which could provide energy for most, if not all, of the properties being built.

The joint Council teams would welcome further conversations regarding the requirements of the task force and how the location could accommodate those needs, including what governance arrangements may be considered for new towns. The Councils would welcome a discussion on this point and in particularly on the potential for locally led new town development corporations.

3. What would be the barriers to creating a new town in this location and what would be needed to overcome them (if known)?

The site is currently being promoted as a series of smaller developments, ranging from a few hundred to 10,000 homes. The delivery of a concept masterplan will require the landowners and promoters to come together to deliver a site of significant size and scale. This could be achieved by the government, Homes England or the joint local authorities taking a master developer or land interest in the site.

The site is almost entirely within the metropolitan greenbelt (with the exception of the land at Dunton Hills Garden Village which was removed from the greenbelt by the adoption of the 2022 Brentwood Local Plan), in an area where local housing need can only be fully met by greenbelt release. This is set out in the current Basildon Borough regulation 18 Local Plan consultation and from the adopted Brentwood Borough Plan that this borough is 87% greenbelt. As such we consider that if a new town is taken forward this location would contribute towards local housing need targets with the opportunity to deliver high quality infrastructure.

The delivery of large housing opportunity sites, require significant new infrastructure. Infrastructure modelling have not been undertaken to ascertain overall needs for this housing provision. However, this is expected to be substantial and may seek to deliver major upgrades to the highway network including the A127, A128 and the M25 junction 29. The location provides the opportunity for new cycle links and bus infrastructure increasing the site's sustainability in this rural setting. The delivery of significant onsite infrastructure and facilities befitting a development of this scale, should mitigate some of the offsite infrastructure required.

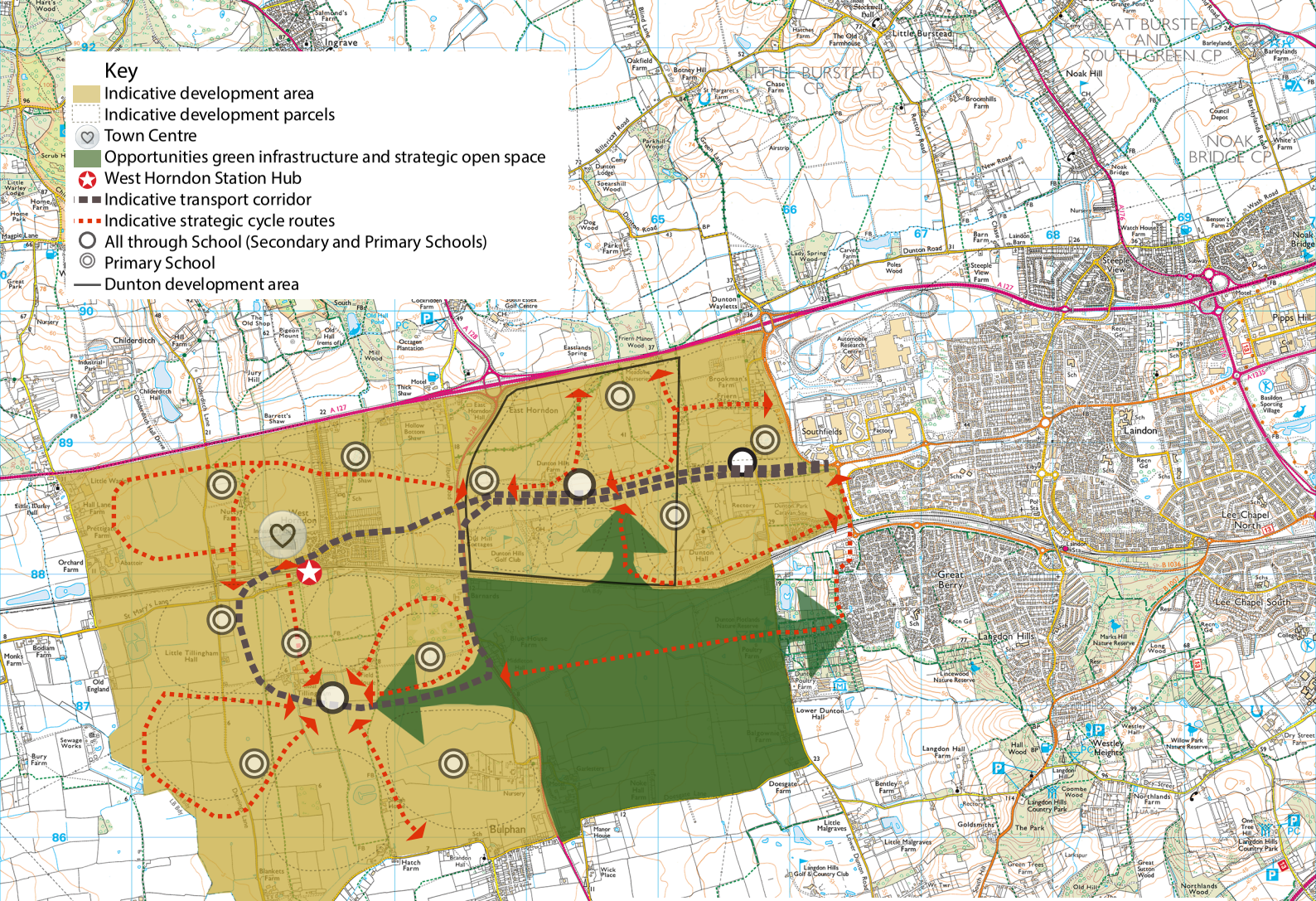
Delivering a new housing area of this scale requires a joint team to support the long-term planning and development from planning, community engagement, land assembly infrastructure support and work alongside strategic partners. Delivery requires financial and practical support to a development of this scale would be welcome.

The viability of this housing opportunity is important to achieve infrastructure, affordable housing and a high-quality development. Land value capture should be positive to ensure the delivery of this location. The stage at which the tri borough plan making has reached sees much of the land under option, as such there may be legal agreements or expectations on land value which would need to be addressed. This will impact the land value and one that may need to have further assessment.

4. Has this prospective development previously received government support (if known)?

If yes, please give brief details of the programme and the support received.

The Dunton Hills Garden Village has been supported via capacity funding from Homes England, no further support has been received. The wider concept masterplan has been communicated with Homes England, but no support has been given.


Key
Indicative development area
Indicative development parcels
Town Centre
Opportunities green infrastructure and strategic open space
West Horndon Station Hub
Indicative transport corridor
Indicative strategic cycle routes
All through School (Secondary and Primary Schools)
Primary School
Dunton development area
Land West of Basildon Growth Sites Concept Plan

Appendix B

BroadwayMalyan BM

ceg:

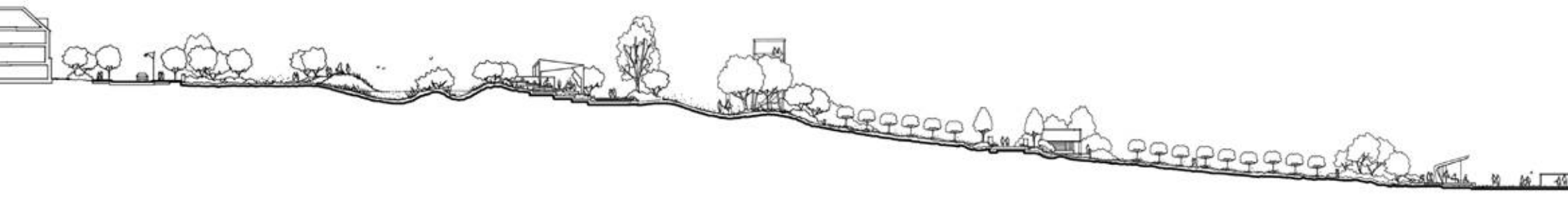
Dunton Hills
Garden Village

Framework Masterplan
February 2020



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BroadwayMalyan BM

ceg:

06 MOBILITY STRATEGY

07 SUSTAINABILITY STRATEGY

08 COMMUNITY, STEWARDSHIP AND LEGACY

09 PHASING AND DELIVERY

A1 SUPPORTING CONTEXT ANALYSIS AND TECHNICAL WORK

A2 SUPPORTING DESIGN INFORMATION



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EXECUTIVE SUMMARY

ES.

EXECUTIVE SUMMARY

“DUNTON HILLS GARDEN VILLAGE IS A NEW SETTLEMENT IN A BOROUGH OF VILLAGES. IT IS A PLACE WHERE PEOPLE’S LIVES ARE SHAPED THROUGH UNDERSTANDING THE VALUE AND PROTECTION OF THE LOCAL NATURAL ENVIRONMENTS. EDUCATION AND COMMUNITY FACILITIES AND AMENITIES ARE CENTRAL AND WELL INTEGRATED, CREATING AN PLACE THAT BECOMES A BLUEPRINT FOR HEALTHY AND SUSTAINABLE LIVING.”

OVERARCHING VISION FOR DUNTON HILLS GARDEN VILLAGE



KEY COMPONENTS OF DUNTON HILLS GARDEN VILLAGE

Up to 4,000 new sustainable homes as well as provision for elderly residents

New sports facilities including football and cricket pitches

Approximately 123ha of attractive and accessible open space

New community facilities provided within the Village Centre and Neighbourhood Hubs

Homes provided over a range of typologies

Community food production centred around the existing farm house

Designated employment land as well as flexible working space within the Village Centre and Neighbourhood Hubs.

Community concierge for online deliveries and a range of retail facilities at the Market Square

3 new primary schools, each at the heart of the community

Centrally located secondary school with community sports facilities

Electric vehicle charging stations and car clubs

Mobility Hub and Mobility Corridor facilitating bus, walking and cycle connections to West Horndon Station.

Integrated network of pedestrian and cycle paths

Accessible play facilities for all ages

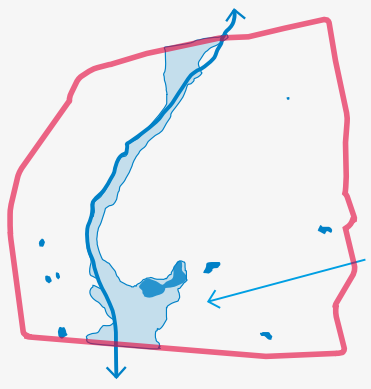
A 6.2 km wellness trail set within a landscaped setting



MASTERPLAN DRIVERS
PHYSICAL DRIVERS

Following on from an understanding of the sites constraints and opportunities, a number of spatial design drivers were developed for the site. As well as responding to the site features, the drivers reflect the discussions with Brentwood Borough Council, key stakeholder and Design South East.

1.

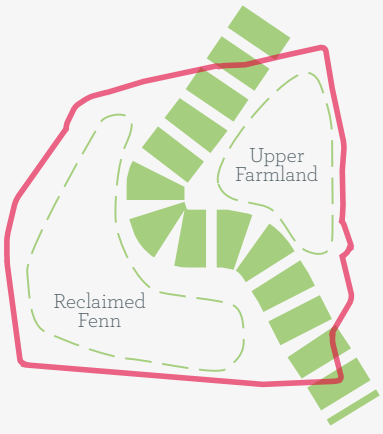


BLUE - WATER

Several water elements influence the site:

- Eastlands Spring, which runs north to south across the site
- The floodplain in the south of the site as well as the existing ponds. These together create a wetlands area

3.

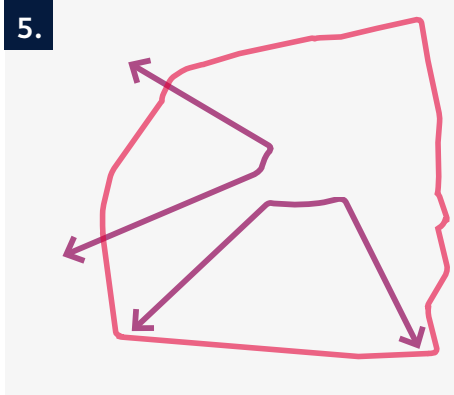


LANDFORM AND CHARACTER

There is a distinctive landform which the masterplan needs to respond to, comprising:

- A key ridge-line that snakes its way north to south
- Higher land to the north-east forming a plateau
- Low lying, reclaimed Fenn land to the west and south of the site

5.

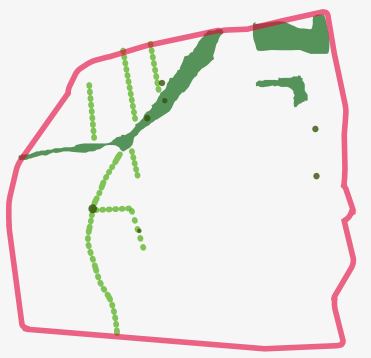


SCENIC VISTAS

The plateau in the north east of the site occupies an elevated position that:

- Affords distant views towards the central London skyline in the west
- Allows distant views across to the North Downs in Kent to the south

2.

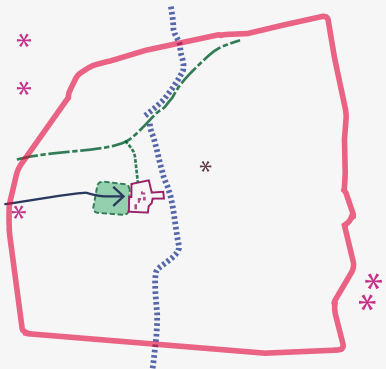


GREEN - TREES AND WOODLAND

There is an established green framework across the site. This will be incorporated into the open space and ecology network and comprise:

- Ancient woodland belt (in the north)
- Further woodland belts and blocks across the site
- Existing key (ecologically important) hedgerows and Cat A trees

4.

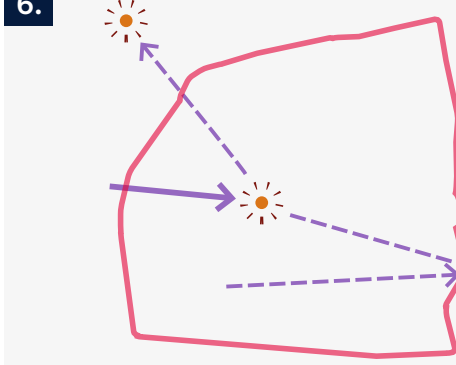


PAST AND HERITAGE

There are a number of historic features both within and outside of the site, the setting of which needs to be preserved and respected. These comprise:

- Dunton Hills Farmstead which is a Grade II Listed Building and a prominent feature and orientation point within the agricultural and surrounding “Fanns” landscape
- Key historic features and routes through the site, including Nightingale Lane and the former Farmstead Driveway
- Key historic and gateway buildings surrounding the site

6.



LOCAL VISTAS

The site, its internal features and its immediate surroundings create a number of local vistas, comprising:

- Potential avenue view to Dunton Hills Farm from the A128 to the west
- Views out towards the neighbouring churches in the north west and south east

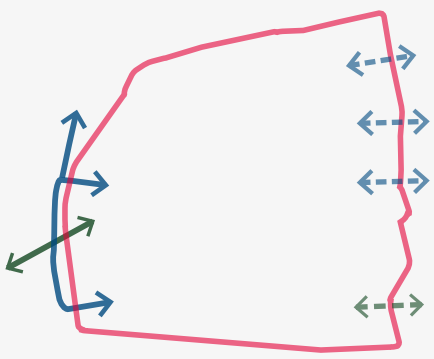
7.

INFRASTRUCTURE

The site is bounded by transport infrastructure on three sides. These are major connectivity drivers but also barriers to movement/noise and pollution generators:

- A127 - busy, strategic road to the north
- A128 - busy, strategic road to the west
- A127/A128 interchange to the north west
- Main railway line to the south
- High pressure gas main line along eastern boundary

8.



ACCESS AND ARRIVAL

The configuration of the adjacent road network means that:

- The main vehicular access points will be from the A128 to the west
- The Station Road link to West Horndon Station to the west of the site is of key importance for pedestrians and cyclists
- Connections east towards Basildon need to be future proofed

21ST CENTURY DRIVERS

Dunton Hills Garden Village must also be a place fit for the future and its design must take into account key trends, influences and societal changes. These include.

SUSTAINABLE PLACE-MAKING

We need to plan and design for a village that is fit for purpose for current and future generations. Densities will not just seek to replicate our traditional impression of a rural village but will cater for a mixed community with housing facilities and spaces catering for families, the young and the old as well as those who choose to work from home. Renewable energy technologies will also need to be incorporated into the design of the village and its buildings.

MOBILITY

The Garden Village will accommodate a range of transport modes and have consideration for the role of new technologies such as automation and vehicle electrification. A Mobility Hub and Community Concierge will be provided at the heart of the village, providing for centralised deliveries, charging points as well as a car club and bike hire stands.

Mobility routes will provide dedicated pedestrian and cycle routes, promoting sustainable travel across and beyond the site.

EDUCATION AND LEARNING

Learning across different environments is becoming more and more important, particularly in relation to providing active social learning and apprenticeships.

For younger people within the community, the school locations will maximise their connection with the landscape, encouraging outdoor learning and promoting car free travel, ensuring children get regular exercise.

EMPLOYMENT AND WORK PATTERNS

Workspace will offer a wealth of opportunities for the next generation of workers including local co-work spaces that allow for people to live and work within the village and reduce the need to travel. The Garden Village will provide adaptable buildings and workshops with “grow on” floorspace for small start-ups to move to as they expand, helping to retain them within the village. New infrastructure with high speed digital connectivity will connect every home within the community, further facilitating working from home.

FOOD PRODUCTION

A productive landscape strategy is embedded in proposals for the new Garden Village. This could include provision of allotments and community gardens as well as orchards. Provision of these facilities not only promotes healthier lifestyles it also encourages community involvement, further physical activity, interaction with nature and provides opportunities for outdoor education.

RETAIL AND COMMUNITY FACILITIES

A 21st century village needs to respond to changes in the economy and consumer behaviour, particularly the growth of online shopping and the decline of the High Street. Community owned shops are a growing trend and shall be supported, alongside viable community and retail services and facilities. The importance of “meanwhile” and temporary uses will need to be explored to ensure the village is catered for at the offset.

A LANDSCAPE-LED MASTERPLAN

The landscape settings of the fenland and hills meet within the site, creating a diverse green and unique infrastructure network. A number of key existing character areas are identified that will be strengthened and interpreted into the design of the different neighbourhoods that will form the Garden Village. Significant areas of green infrastructure shall be safeguarded in the masterplan, celebrating the true and inherent nature of the site.

The distinctive landscape character areas are:

01 **Dunton Fanns**

02 **Eastlands Spring**

03 **Dunton Wetlands**

04 **Ridge**

05 **Dunton Woods**



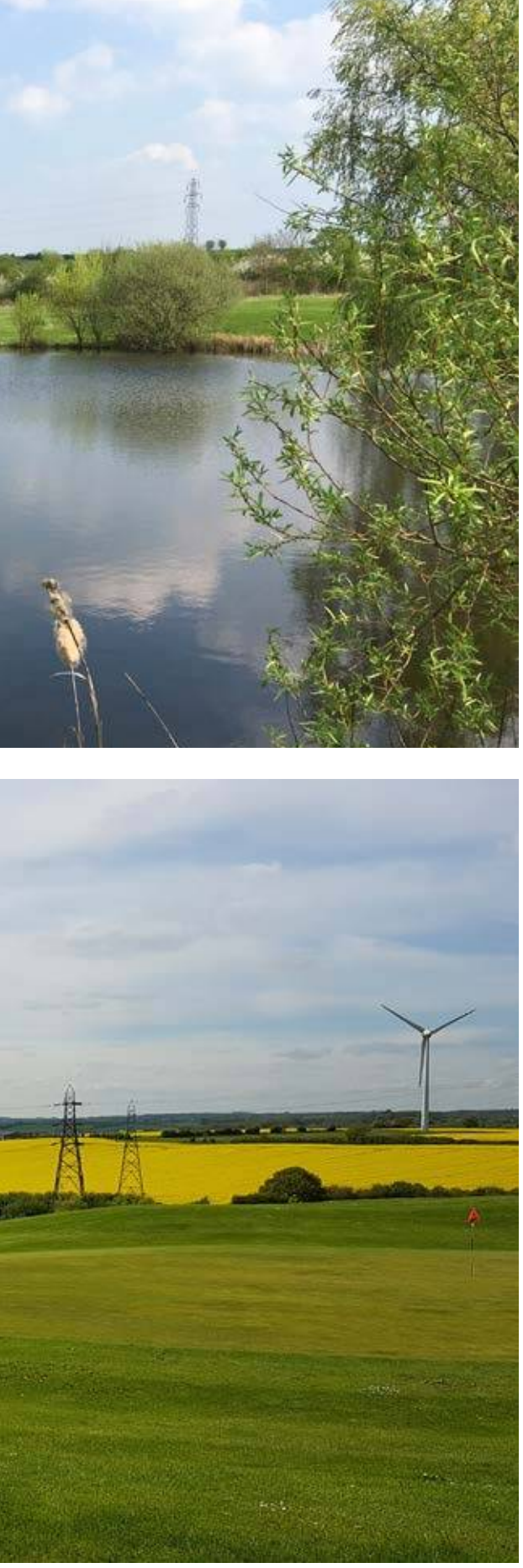
Sitewide landscape character plan









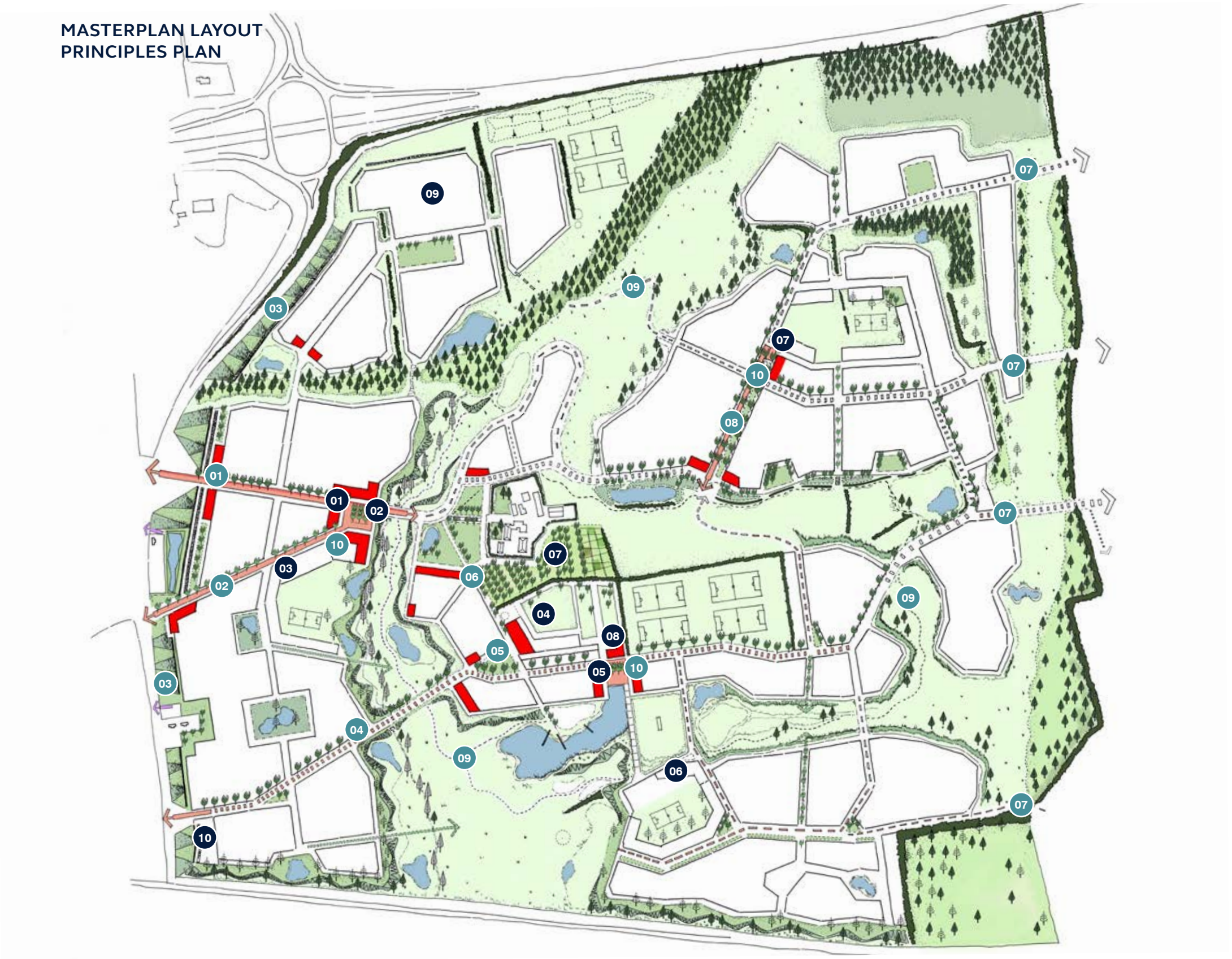



02
05

FRAMEWORK MASTERPLAN MANDATORY SPATIAL PRINCIPLES

A framework masterplan has been prepared for the Garden Village. This is supported by a series of Mandatory Spatial Design Principles covering: Layout and Spatial Organisation and Vistas and Access and Movement. These are illustrated below and set out on the opposite page.

MASTERPLAN LAYOUT PRINCIPLES PLAN



KEY

- Routes - mandatory alignment
- Routes - flexible alignment
- Routes - flexible landscape connections
- Indicative marker buildings

N

MANDATORY SPATIAL PRINCIPLES

Further detail covering the themes outlined here can also be found in chapter 5 of the document alongside other Mandatory Spatial Principles including landscape, heritage, play, density and building heights. The aim of these Mandatory Spatial Principles are to ensure that the vision and objectives of the Garden Village are delivered through further design work and planning applications. Chapters 6-9 of this document also provide further Mandatory Overarching Principles relating to: Mobility; Sustainability; Community/Stewardship/Legacy; and Phasing and Delivery. These are equally important as the Mandatory Spatial Principles, but do not relate to the masterplan layout.

MANDATORY SPATIAL PRINCIPLES

LAYOUT AND SPATIAL ORGANISATION

01 **Location and arrangement of the Market Square** - will be positioned at the heart of the Garden Village and on the eastern edge of Dunton Fanns, facing the proposed Village Green and the historic farmstead. The Market Square will be designed to a suitable size to support the quantum of non-residential uses intended and will be enclosed by taller buildings with employment, retail and community uses activating the public realm.

02 **Definition of the Village Green** - will providing a setting for the historic farmstead as well a key communal open space for residents in which to interact and relax. The Green will be visible from the Market Square, across the landscape associated with the Eastlands Spring. The existing driveway will be retained and will become an important pedestrian route to Dunton Waters.

03 **Location of Dunton Fanns Primary School** - will be a central component of the Fann's community and will have frontage onto the proposed Mobility Corridor to promote sustainable travel.

04 **Secondary School** - will be visible from the wetlands along an east-west route connecting Dunton Fanns with Dunton Waters. The school building will front onto a lane and frame an arrival 'Schoolyard Square', comprising a car free setting.

05 **Location and arrangement of Neighbourhood Hub for Dunton Waters** - will be focused around a south facing lakefront plaza with views of the proposed cricket pitch and Dunton Waters Primary school, framed by buildings and activated by non-residential ground floor uses. The community element of the Secondary School will frame the northern edge of the plaza.

06 **Location and arrangement of Dunton Waters Primary School** - will be focused on the threshold of the wetlands landscape, maximising opportunities for outdoor learning whilst being visible from the lake front plaza.

07 **Location and arrangement of the co-located Dunton Woods Neighbourhood Hub and Primary School** - will be the central component of Dunton Woods, centred around a plaza at the northern end of a linear park which will form a view corridor to Dunton Waters. The plaza will be framed by taller buildings with non-residential ground floor uses.

08 **Location and arrangement of sports pitches and sports hub**- will be provided within the Secondary School parcel allowing both students and residents to make use of the facilities. The pitches will support a range of sports, forming a hub for community activity for social and competitive recreation. Other sports facilities include the cricket pitch and football pitches.

09 **Location of employment land** - will be in close proximity to the employment site proposed to the west of the A128. Employment land uses will be supported by a nursery and will adjoin open spaces, accessible for both workers and residents. Buildings will be positioned in an east-west orientation to establish a noise barrier against the A127.

10 **Location of Gypsy and traveller site** - will be positioned to allow for direct access from the A128 and with an interface with the proposed landscape edge. The site will allow for 5 pitches in line with policy, with the final configuration to be determined upon consultation with potential occupants.

VISTAS, ACCESS AND MOVEMENT

01 **Farmstead Avenue and view corridor** - will preserve a direct visual relationship between the A128 and the Grade II listed farmhouse. This is one of many masterplanning approaches that ensures the historic farmstead becomes a focal point within the Garden Village.

02 **Mobility Corridor (Station Road extension)** - will be the main access point to the village, accommodating pedestrians, cyclists and public transport. The Mobility Corridor will extend into the village along the alignment of Station Road, with a direct pedestrian and cycle crossing over the A128. This will facilitate and promote sustainable travel to the Market Square at the Village Centre which will include the Mobility Hub.

03 **Mobility route along the western edge** - will be incorporated into the landscape, facilitating safe and sustainable travel (for cyclists and pedestrians) north-south along the A128, but respecting the setting of the retained dwellings.

04 **Secondary School approach and landmark** - a direct route and view corridor will be established from the Secondary School building to the wetlands, ensuring its prominence as a landmark within the wider Garden Village, as well as promoting wayfinding.

05 **Schoolyard Square** - will be established in front of the Secondary School building, at the end of the proposed School Lane. The square will form a car free and landscaped gathering space for children and parents before and after school, as well as allowing for the retention of existing historic trees.

06 **School Lane** - a key pedestrian and cycling priority route will be established, connecting the Village Green and Secondary School with the wetland. The lane will run past the community orchard one side and be fronted and activated by new homes on the other.

07 **Potential future connections east towards Basildon** - will be safeguarded into the layout of the masterplan to allow for future expansion and connectivity.

08 **Dunton Woods viewing corridor** - will establish a visual relationship between the Neighbourhood Hubs of Dunton Woods and Dunton Waters, promoting a sense of community cohesion within the overall Garden Village.

09 **Wellness trail** - a pedestrian and cycling only trail will be provided within the landscape, promoting a healthy lifestyle within the Garden Village. The trail will connect the facilities provided within the Market Square and Village Green within Dunton Fanns to the other Neighbourhood Hubs and Schools.

10 **Nodes at intersections** - the point at where two or more routes intersect will inform the location of Neighbourhood Hubs and associated non-residential uses.

11 **Marker buildings (throughout masterplan)** - will be used to define key routes, vistas and places, promote placemaking and wayfinidng within the neighbourhoods or landscape setting. Marker buildings shall be distinguished from other buildings through either architectural treatment, height or positioning within a prospective layout.

12 **Inter-neighbourhood connectivity (throughout masterplan)** - in conjunction with the wellness trail, pedestrian and cycle connections will be established to ensure a high degree of connectivity between the three neighbourhoods, further promoting safe and sustainable travel.





CHAPTER 1

INTRODUCTION

This section provides a brief overview of the project team, the document layout and its role in the creation of the exemplar sustainable new community of Dunton Hills Garden Village.

1.

DUNTON HILLS: A NEW ESSEX GARDEN VILLAGE

DUNTON HILLS GARDEN VILLAGE

Dunton Hills Garden Village was designated as one of fourteen Garden Villages by the Government in January 2017 and is identified in the emerging Brentwood Borough Local Plan as a strategic housing allocation to meet the majority of the Borough's housing need within the plan period and beyond.

The emerging Local Plan requires the site to deliver a mix of uses comprising at least 2,770 homes within the plan period and up to 4,000 homes in total, together with the necessary community, utility, transport and green and blue infrastructure to support a self-sustaining, thriving and healthy community.

THE DEVELOPMENT DESCRIPTION

This Framework Masterplan Document sets out the foundations for the Garden Village based upon the policies of the emerging Local Plan and will include the following:

- Up to **4,000 new homes**
- **A Village Centre** (to include local shops, services, cafés, healthcare provision, community facilities, employment and a Mobility Hub) and two further smaller **Neighbourhood Hubs**
- **Education facilities**, including a Secondary School, three Primary Schools and early years provision. The Secondary School could be co-located with a Primary School.
- Up to **5.5 hectares** of employment.
- **3 care homes**, the exact type of facility to be determined at later stages in conjunction with the relevant authority.
- **Green and blue infrastructure**, including parks, greens, natural and semi-natural green space, informal and formal recreation and water attenuation features.
- **Access and mobility routes** including routes for pedestrians, cyclists, public transport and vehicular traffic.
- Associated **infrastructure**.

HOW TO USE THIS DOCUMENT

This document has been structured around the chapters set out below. The Framework Masterplan (Chapter 5) contains the key information that will inform and control the spatial design of the Garden Village, with preceding chapters setting out the background and vision and subsequent chapters supporting the design.

Chapter 1: **Introduction** to Dunton Hills Garden Village.

Chapter 2: **Context Analysis** of the current planning policy position as well as an assessment of the site and its surrounding context.

Chapter 3: **Masterplan Drivers, Future Trends and Evolution** explores some of the 21st century influences that will shape future developments such as Dunton Hills, including transport innovations and how we may live and work in the future. In addition to this a range of design drivers are established, informed by the context analysis in Chapter 2. A summary of the masterplan evolution through the design review process is also set out.

Chapter 4: **Landscape: Green and Blue Infrastructure** are key components of the Garden Village and this section sets out the strategy within the Framework Masterplan, covering elements such as bio-diversity, play and drainage.



Chapter 5: **Framework Masterplan** sets out the key information that will control the spatial design of the Garden Village over a range of plans and topic areas including built form and landscape.

Chapter 6: **Mobility Strategy** sets out the approach to sustainable movement to, from and around the Garden Village.

Chapter 7: **Sustainability Strategy** sets out a wide ranging sustainability strategy covering community interaction. health and well-being, education, the economy, energy efficiency and renewable technologies.

Chapter 8: **Community Stewardship and Legacy** covers elements such as the community management of the Garden Village.

Chapter 9: **Phasing and Delivery** illustrates how the Garden Village could be phased showing what community facilities and infrastructure will be provided at different stages.

Appendix A1: **Supporting Context Analysis and Technical Work**

Appendix A2: **Supporting Design Information**

THIS DOCUMENT HAS BEEN PREPARED ON BEHALF OF COMMERCIAL ESTATES GROUP (CEG) AND THE LANDOWNERS AND IN PARTNERSHIP WITH BRENTWOOD BOROUGH COUNCIL. THE FULL CONSULTANT TEAM RESPONSIBLE FOR THE DOCUMENT ARE LISTED BELOW.

Broadway Malyan - Masterplanning

Lichfields - Planning and Socio-economics

Vectos - Transport

Brookbanks - Utilities, Noise and Air Quality

Tyler Grange - Landscape

Montegu Evans - Built Heritage

SES - Ecology

Orion - Archaeology

WSP – Drainage, sustainability, waste and lighting

Star Planning - Project Management

Gateley Hamer - Overhead Powerlines

EFM Education



MASTERPLAN PROCESS

This Framework Masterplan Document for Dunton Hills Garden Village has been developed through a through masterplan process which captures and safeguards the aspiration of multiple stakeholders.

MASTERPLAN EVOLUTION

Whilst a significant amount of design and feasibility work has been undertaken for Dunton Hills Garden Village in recent years, the masterplanning commenced in earnest in April 2019. The development of this Framework Masterplan has been led by Broadway Malyan on behalf of the landowners and in partnership with Brentwood Borough Council and in liaison with key stakeholders including Essex County Council. It has been the subject of a detailed design process involving a large number of interested parties at various workshops and events, co-ordinated by Brentwood Borough Council and an independent Design Review Panel – Design South East.

Between April and October 2019 a number of formal and informal reviews were undertaken as the Framework Masterplan evolved, incorporating the aspiration of multiple stakeholders as well as Brentwood Borough Council. A summary of the design evolution can be found in Chapter 3. The master planning process has, as far as reasonable at a Framework Masterplan stage, taken into account the content of other good practice design guidance and the published planning policy documents.

In preparing this document Broadway Malyan and CEG have sought to respond positively to the design advice of Design South East and the stakeholders.

FRAMEWORK MASTERPLAN

The masterplanning evolution culminated in the Framework Masterplan for the Garden Village that is the basis of this document. The Framework Masterplan seeks to capture and enshrine the vision, and sets out Mandatory Spatial and Overarching Principles to be adhered to.

DOCUMENT HIERARCHY

The starting point for the preparation of the Framework Masterplan is the emerging policy for Dunton Hills as well as other policies in the emerging Brentwood Local Plan.

The Framework Masterplan is the first in a series of documents which will control and guide the development of the Garden Village. Care has been taken to set out Mandatory Principles that go to the essence of the vision for the Garden Village, whilst also allowing for Brentwood Borough Council's Supplementary Planning Document (SPD) to focus on more detailed elements of design guidance.

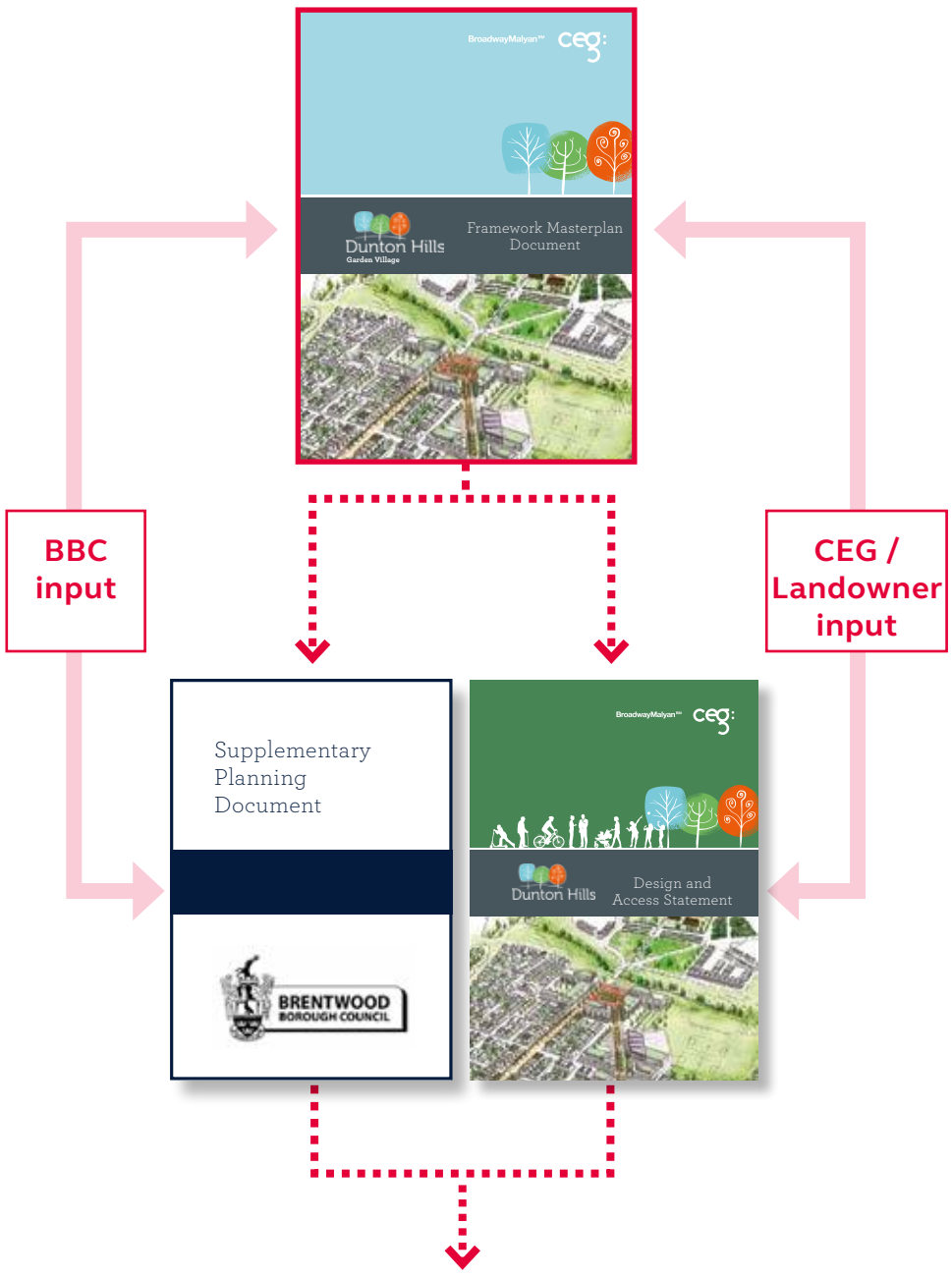
This Framework Masterplan will sit alongside Brentwood Borough Council's SPD, and both will inform the design of future outline and reserved matters applications. As set out on the following page, each document in the hierarchy, will inform by the document sitting underneath.

Given that the Framework Masterplan is the first document in the hierarchy, the vision it establishes and the means of safeguarding and realising the vision is particularly important. For this reason the Principles the Framework Masterplan establish are mandatory.

DUNTON HILLS GARDEN VILLAGE DOCUMENT HIERARCHY:

DOCUMENT/STAGE

LOCAL PLAN PREPARATION PERIOD



FRAMEWORK MASTERPLAN DOCUMENT (FMD)

Establishes the overall vision for the entire Garden Village allocation through Mandatory Principles, diagrams and narrative, relating to landscape and built form. The drivers behind the masterplan are identified and justify the design response. The FMD will inform further detailed design undertaken by Brentwood Borough Council's (BBC) Supplementary Planning Document (SPD) as well as the emerging outline applications.

SUPPLEMENTARY PLANNING DOCUMENT (SPD)

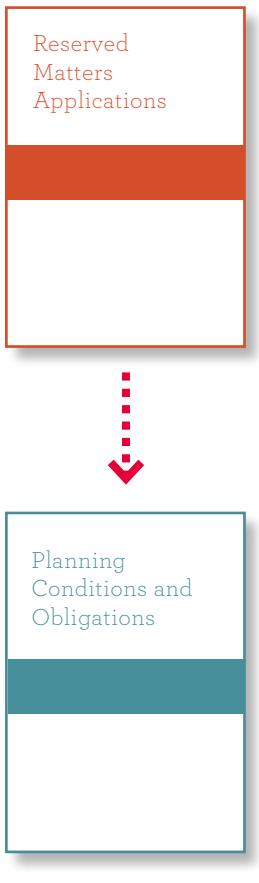
Builds upon the Mandatory Principles established within the FMD and establishes additional design guidance to inform prospective planning applications through a co-design process led by BBC. The SPD will apply to the entire Garden Village allocation.

OUTLINE APPLICATION: DAS

Each outline application will relate to different ownerships within the overall allocation and will be informed by the FMD. Each outline application will build on the principles and vision established within the FMD.

OUTLINE PLANNING CONSENT OBTAINED

ADOPTED LOCAL PLAN



RESERVED MATTERS

The reserved matters applications are the final documents to be approved in the process. They will reference and consider all of the material in the documents above them in the hierarchy, ensuring that the overall vision for the Garden Village is achieved. Reserved matters applications are likely to come forward by different developers in smaller parcels.

DISCHARGING OF CONDITIONS AND OBLIGATIONS

A series of planning conditions and obligations relating to detailed matters of design will be agreed upon with the local planning authority and must be discharged prior to the commencement of development and the occupation of the first house.

MANDATORY PRINCIPLES

A series of Mandatory Principles are set out in this document. These will ensure that the vision for the Garden Village is realised, whilst allowing for a future-proof Masterplan Framework and flexibility in the design response.

INTRODUCTION TO MANDATORY PRINCIPLES

This Framework Masterplan Document sets out the vision for Dunton Hills Garden Village which has been established by a range of stakeholders through a comprehensive design review process. In order to ensure the vision for the new Garden Village is realised, a series of Mandatory Principles are established in different chapters throughout the document. The Framework Masterplan in Chapter 05 sets out the Mandatory Spatial Principles, whilst other Mandatory Overarching Principles sit within subsequent chapters (06-09) as set out in the flow diagram (opposite).

MANDATORY SPATIAL PRINCIPLES

The Mandatory Spatial Principles relate to plans within the Framework Masterplan Chapter (05) and inform layout, built form and landscape proposed within the Garden Village. The principles are worded so as to be clear about what is required, but allowing this to be interpreted with as great a degree of flexibility as possible in terms of detailed design.

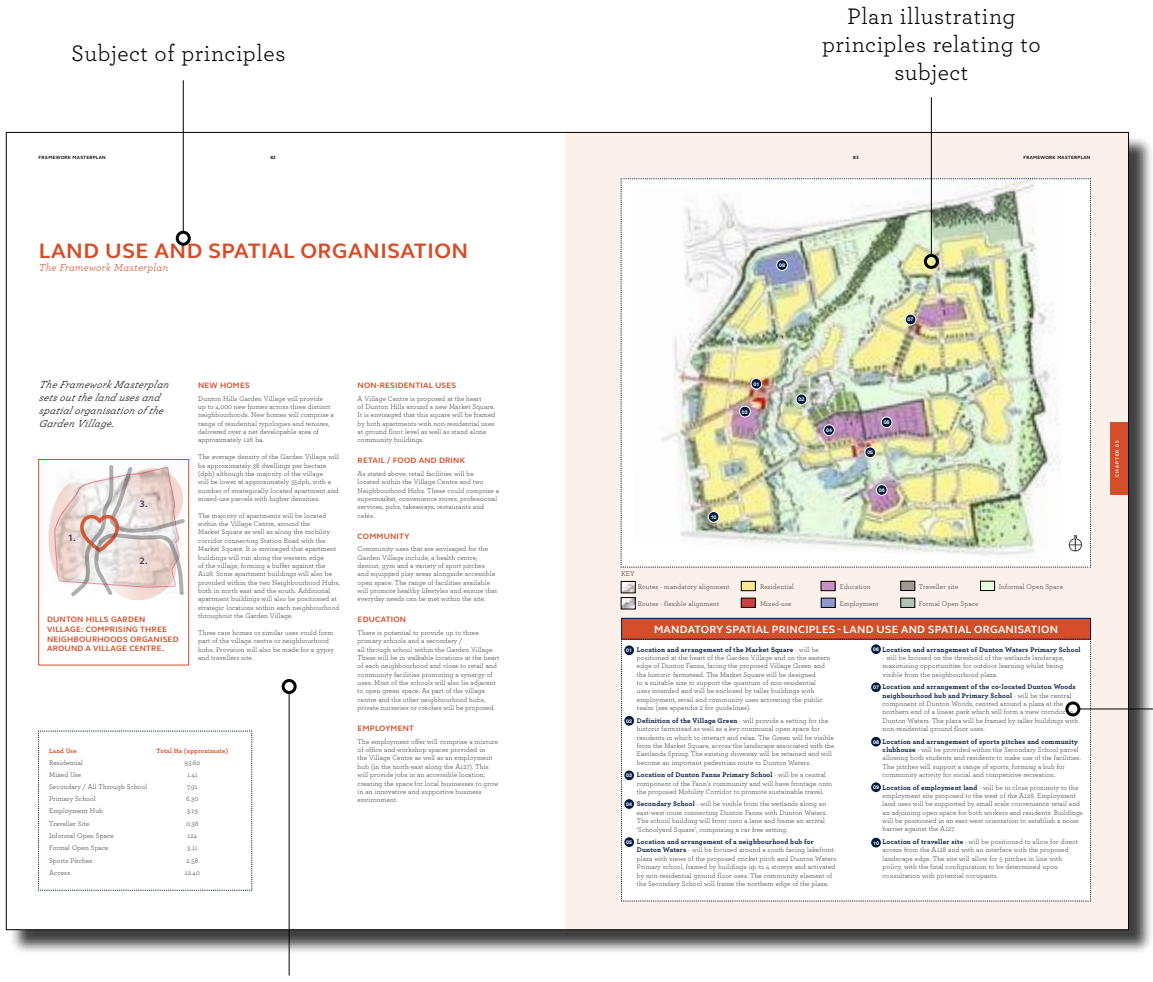
MANDATORY OVERARCHING PRINCIPLES

This Framework Masterplan Document also sets out Mandatory Overarching Principles which relate to the following chapters:

- Mobility Strategy
- Sustainability Strategy
- Community, Stewardship and Legacy
- Phasing and Delivery

These plans are equally as important as the Spatial Principles in delivering a 21st century Garden Village for at Dunton Hills but do not relate specifically to the masterplan layout.

An example page spread from the Framework Masterplan (Chapter 05) with the Mandatory Spatial Principles on the right hand side of the page and advisory narrative on the left.



MANDATORY PRINCIPLES ARE SET OUT WITHIN EACH OF THE FOLLOWING CHAPTERS IN THE FRAMEWORK MASTERPLAN DOCUMENT:

MANDATORY PRINCIPLES

05 FRAMEWORK MASTERPLAN

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09 PHASING AND DELIVERY

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SITE INTRODUCTION

The site comprises virtually the entire strategic allocation for the Garden Village and covers an area of 256.24ha. It is located in the south east of Borough of Brentwood, bounded to the north by the A127, the west by the A128 and the south by the C2C railway line. The eastern boundary comprises well defined field boundaries which also mark the administrative border between Brentwood Borough and the adjoining local authority of Basildon.

Today, the site primarily comprises undulating arable farmland, a family golf centre with its associated structures and a historic farmstead - Dunton Hills Farm, located at the heart of the site. Other land uses include a plant nursery and the curtilage of a dwelling. Vehicular access is principally taken from the A128 to the west with a dedicated access from the A127 to the nursery. There is also limited access from the west, north and east via public rights of way.

The entire strategic allocation is in a number of different land ownerships, but the majority is controlled by Commercial Estates Group (CEG). Other landowners or interests include Crest Nicholson, Bellway Homes, the Lowe family and Timmermans Nursery. The entire strategic allocation boundary is shown on the plan (opposite), but the site excludes the curtilages of the dwellings on the A128.



View from A128 looking east up driveway towards Dunton Hills Farm buildings



View looking east from Eastlands Spring towards Dunton Hills Farm buildings



View looking east across Eastlands Spring



View looking north towards the ancient woodland



View from the top of the ridge-line looking west across the golf course



View looking south from the top of the ridge-line across arable fields and the golf course




A127
A128
01
02
03
04
05
06
Dunton Hills Farm
Lower Dunton Road
Railway





CHAPTER 2

CONTEXT ANALYSIS

This section outlines the planning background and provides a synopsis of the comprehensive assessment and technical studies carried out to understand the existing site and how it fits within the wider south Essex area and its immediate surrounding. More detail is included in Appendix A 1.2.

2.

PLANNING POLICY

This section provides a review of the relevant statutory national and local planning policy in respect of the proposal.

NATIONAL POLICY

Relevant national planning policy is contained within the National Planning Policy Framework (NPPF, February 2019). Paragraph 124 states that the creation of high quality buildings and places is fundamental to what the planning and development process should achieve and outlines that good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.

The NPPF (para. 127) outlines that Local Authority decisions should ensure that developments:

a. will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b. are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c. are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d. establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

e. optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

f. create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.

The NPPF also encourages early discussion between applicants, the local planning authority and local community about the design and style of emerging schemes outlining that this is important for clarifying expectations and reconciling local and commercial interests.

In addition to the NPPF, the National Planning Practice Guidance (NPPG) will be a material consideration in the determination of any planning application. The NPPG, supplements the NPPF and includes a number of sections which deal specifically with design matters and has informed the continuing design of the scheme.

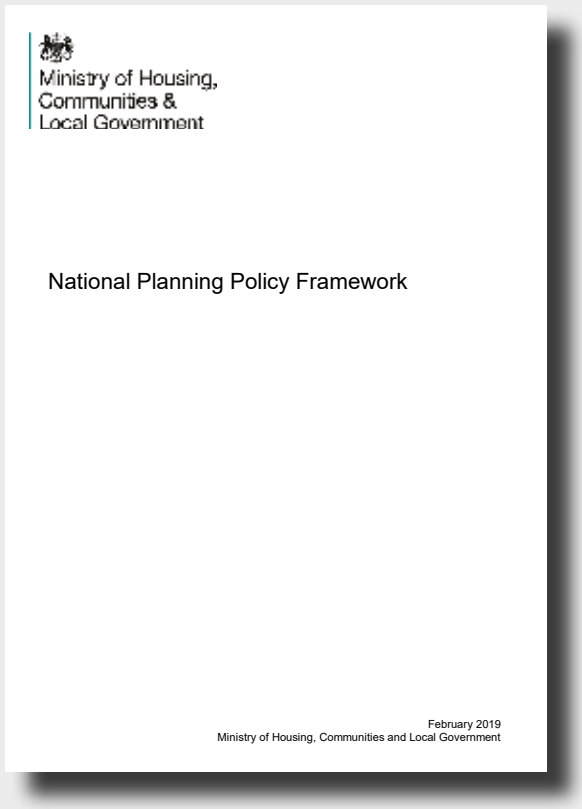
ADOPTED DEVELOPMENT PLAN

The statutory development plan relevant to the site comprises the Saved Policies of the Brentwood Replacement Plan (2005, saved 2008), the Essex Mineral Local Plan (2014), and the Essex and Southend-on-Sea Waste Local Plan (2017).

EMERGING LOCAL PLAN

The emerging Brentwood Local Plan: Pre-submission Document was published for consultation in February 2019. The Submission Local Plan is in the process of being prepared for submission to the Secretary of State for examination. The targeted date for submission is February 2020. The emerging Local Plan therefore carries weight in the decision-making process and will carry increasing weight as it nears adoption.

The design of Dunton Hills Garden Village has been developed in response to the relevant policies of the emerging Local Plan.





BRENTWOOD LOCAL PLAN SUBMISSION DOCUMENT

- **POLICY BE03:** Carbon Reduction, Renewable Energy and Water Efficiency
- **POLICY BE22:** Open Space in New Development
- **POLICY HP01:** Housing Mix
- **POLICY HP03:** Residential Density
- **POLICY HP06:** Standards for New Housing
- **POLICY HP12:** Planning for Inclusive Communities
- **POLICY HP13:** Creating Successful Places
- **POLICY HP14:** Responding to Context
- **POLICY HP15:** Permeable and Legible Layout
- **POLICY HP16:** Buildings Design
- **POLICY HP18:** Designing Landscape and the Public Realm
- **POLICY PC05:** Employment Development Criteria

SITE ALLOCATION

The site benefits from an emerging Strategic Allocation under Policy R01 Dunton Hills Garden Village which outlines that:

"The development will deliver a mix of uses to comprise around 2,700 homes in the plan period (as part of an overall indicative capacity of around 4,000 homes to be delivered beyond 2033) together with the necessary community, employment, utility, transport and green and blue infrastructure (GBI) to support a self-sustaining, thriving and healthy Garden Village."

Focussed consultation proposes to increase the number of homes to 2,770 within the plan period.

The policy also requires the masterplan to be underpinned by Garden Community principles and qualities; proposals to creatively address the key site constraints and sensitively respond to the unique qualities and opportunities afforded by the historic landscape and environmental setting; and a holistic and comprehensive locally-led masterplan and design guidance to be developed.

With respect to spatial design of the Garden Village, Part (II) of Policy R01 provides a range of guidance under a number of headings:

- Distinctive Character, Harmonic Design, Compact Density
- Ecological Networks, Biodiversity Net Gain, Green Infrastructure and Public Realm
- Sport, Recreational, Leisure and Public Open Space
- Views
- Embedding Heritage Assets
- Sustainable Travel
- Transport Impact Mitigations
- Clean Vehicle Alternatives
- Street Hierarchy
- Village Centre(s) – Retail, Community and Employment Opportunities
- Social Infrastructure

ESSEX DESIGN GUIDE (2018)

The updated Essex Design Guide (2018), in particular the new sections relating to Garden Communities, is relevant to the Garden Village.

The Active Design Principles are also considered later in the document.

OTHER DOCUMENTS:

Account has been taken of other national and local policies and guidelines including Essex County Council's Parking Policy Standards and the Essex County Council Developer's Guide to Infrastructure Contributions (Revised 2016).



STRATEGIC LOCATION AND CONNECTIONS

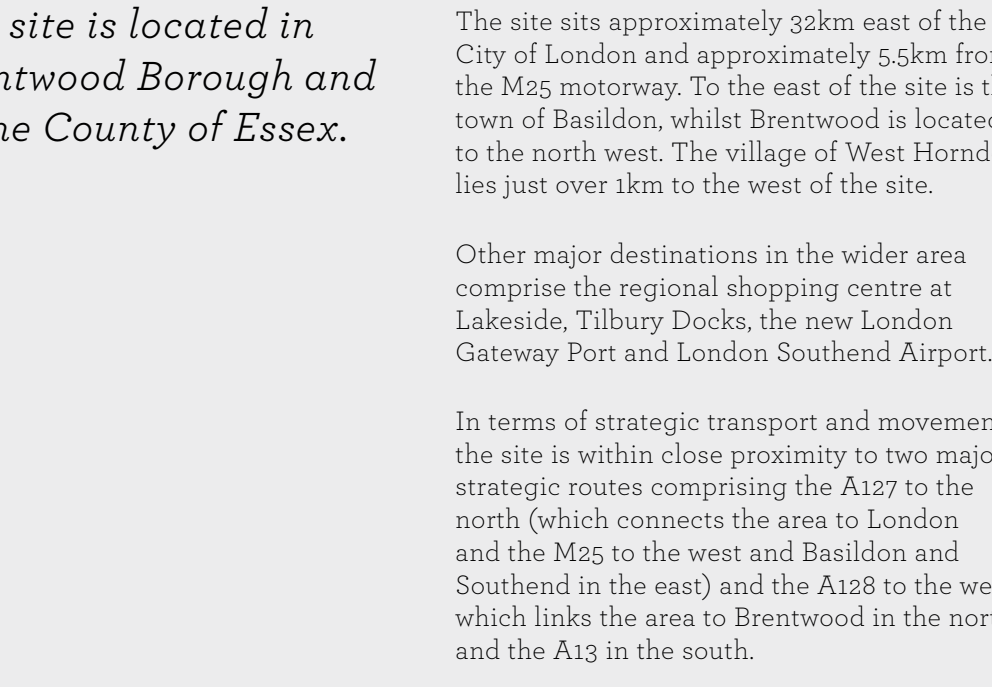
The site is located in Brentwood Borough and in the County of Essex.

The site sits approximately 32km east of the City of London and approximately 5.5km from the M25 motorway. To the east of the site is the town of Basildon, whilst Brentwood is located to the north west. The village of West Horndon lies just over 1km to the west of the site.

Other major destinations in the wider area comprise the regional shopping centre at Lakeside, Tilbury Docks, the new London Gateway Port and London Southend Airport.

In terms of strategic transport and movement, the site is within close proximity to two major strategic routes comprising the A127 to the north (which connects the area to London and the M25 to the west and Basildon and Southend in the east) and the A128 to the west which links the area to Brentwood in the north and the A13 in the south.

The site is within 15 minutes walking distance /10 minute cycle of West Horndon Railway Station to the west. From here, C2C train services are available to major destinations including London Fenchurch Street, Stratford, Barking, Basildon and Southend-on-Sea.





Wider regional context plan


KEY
Site Allocation
Brentwood Borough Boundary
Key Open Space
Settlement
Motorway
A Road
Railway Line
Railway Station
A128
Ingatestone
Billericay
M25
Brentwood
Shenfield
A12
Dunton Hills Garden Village
A127
London Southend Airport
Basildon
Pitsea
Upminster
West Horndon
Laindon
Benfleet
Chalkwell
Southend East
London Gateway Port
Southend Central
A128
Lakeside
A13
Tilbury Docks
Lower Thames Crossing
N

STRATEGIC SUSTAINABLE MOVEMENT















WALKING AND CYCLING

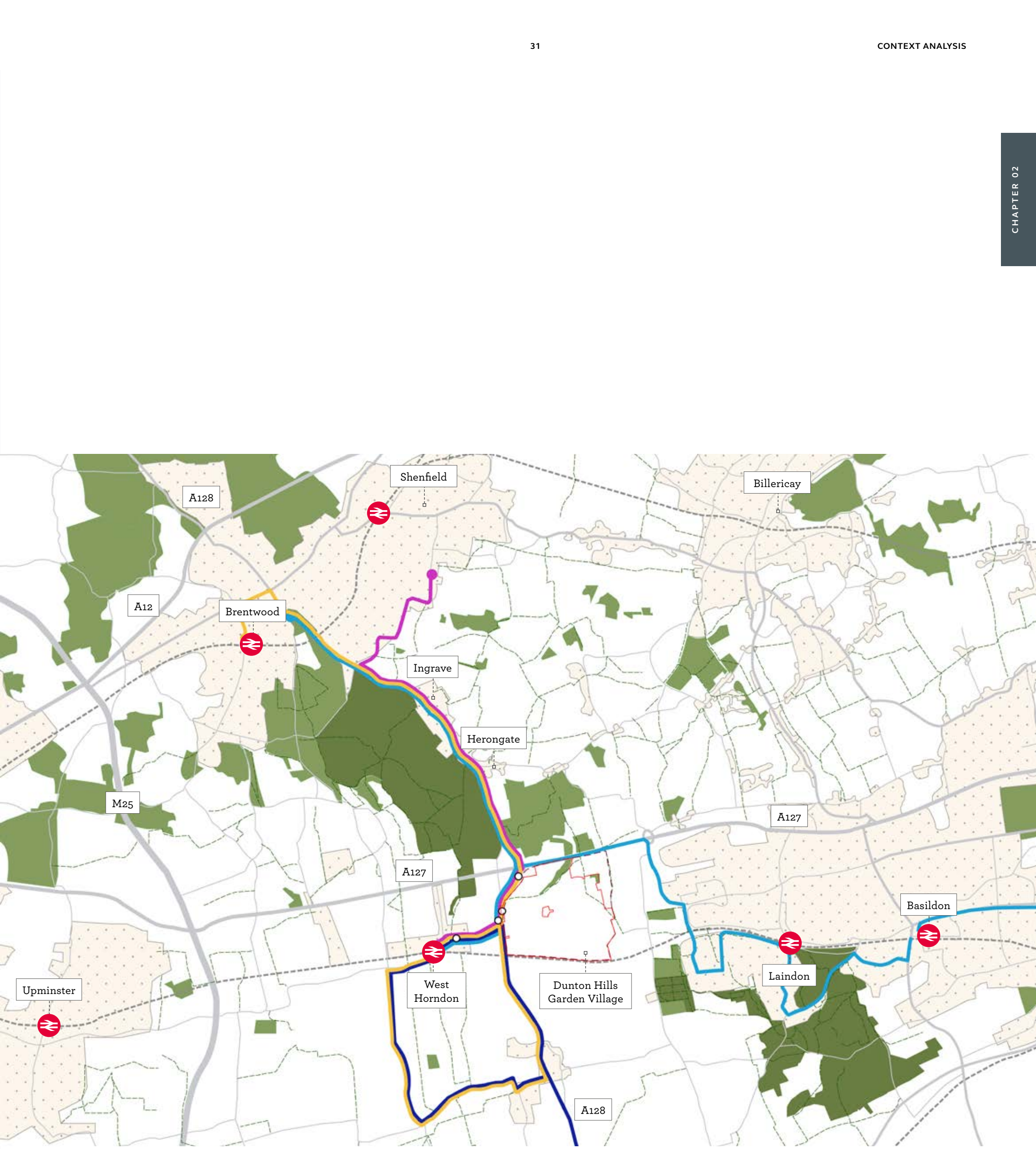
The surrounding area comprises a large network of pedestrian and cycle links, connecting into the surrounding towns and country parks such as Thorndon and Laindon Hills. Public Rights of Way connect into the site and these are explored later in this section

PUBLIC TRANSPORT

Bus stops are located directly adjacent to the west of the site along (A128) Tilbury Road. Bus route 565 links West Horndon with Brentwood, route 49 connects Basildon, West Horndon and Brentwood and route 265 runs from West Horndon to Grays.

The 481 school services also serves the site and runs from West Horndon to high schools within Brentwood.

As stated earlier, the site is bordered to the south by the C2C railway line, with two direct services an hour from West Horndon to London Fenchurch Street (link into the City of London in under 30 mins) and a service to Shoeburyness via Basildon which runs twice an hour and takes around 40 minutes.



Surrounding sustainable movement plan

SURROUNDING LAND USE AND FACILITIES



Thordon Country Park



West Horndon Shops



Horndon Industrial Park

EMPLOYMENT

A number of employment sites are located throughout the local area. The most notable of these include Horndon Industrial Park, comprising predominantly industrial uses, within a collection of low-rise warehouse units. However, this site is proposed to be substantially redeveloped for housing in the emerging Local Plan. The Ford Dunton Technical Centre is a major local employer and sits to the east of the site with further industrial uses found within the adjacent Southfields Business Park. Other employment destinations include central Basildon, central Brentwood and, of course, London. There are emerging employment proposals at East Horndon Hall and the Brentwood Enterprise Park (at the M25/A127 junction) and an expansion of the Childerditch employment site.

EDUCATION

The village of West Horndon contains a primary school (West Horndon Primary School) and a Pre-School (Bright Sparks) which are the closest educational facilities within walking distance of the site. Additional primary schools are situated close by in the Ingrave, Brentwood and Basildon. Six high schools are located a short bus ride from the site in Brentwood and Shenfield.

HEALTH

There is a GP surgery located close to the site in West Horndon. The closest hospitals are located in Brentwood (Nuffield Health, Brentwood Community Hospital and Spire Hartswood Hospital) and Basildon (Basildon University Hospital).

RETAIL/COMMUNITY FACILITIES

High order retail and community uses are found within Basildon and Brentwood town centres. Basildon town centre contains a number of major national retailers including Debenhams, H&M, Primark, and Asda. Brentwood is also home to a number of major retailers including M&S, Next and Halfords.

Further, smaller retail/community hubs are found in the western suburbs of Basildon, such as Laindon serving the surrounding residential communities. Uses here include a number of educational, medical and community facilities alongside retail facilities ranging from corner shops to larger supermarkets.

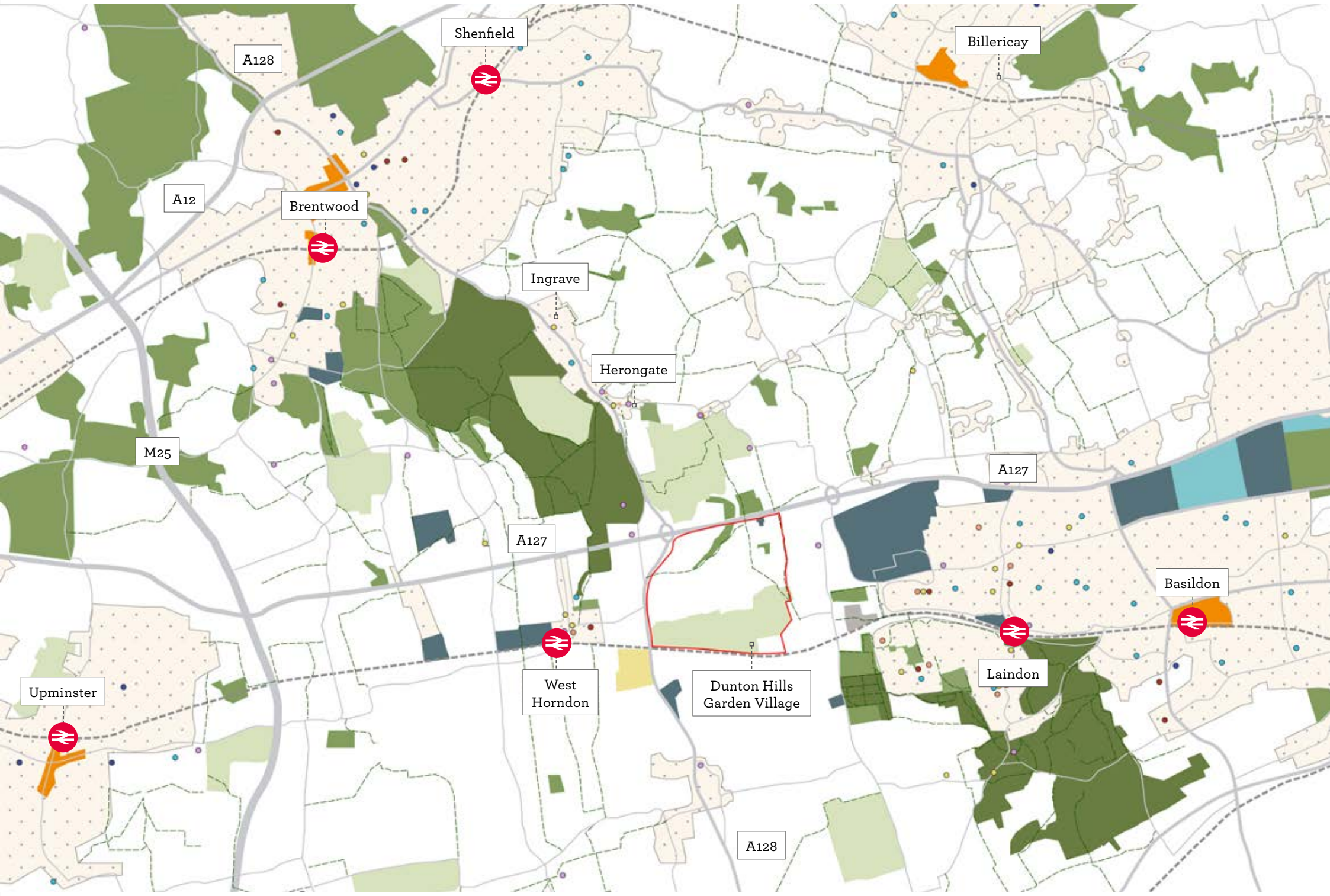
The village of West Horndon, located to the west of the site, is also home to a small number of local shops including convenience stores, a café and a butchers. Other uses within West Horndon include a church and a community centre.

OPEN SPACES

The site is surrounded by open farmland with areas of woodland and parkland found within the wider area. The most notable of these is Thorndon Country Park to the north west of the site and Langdon Hills to the south east. Both are important and popular recreational destinations.

A network of open spaces and parks are found within western Basildon which include a range of recreational facilities such as sports pitches and playgrounds.

There are a number of golf courses in the area. Thorndon Park Golf Club and the South Essex Golf Centre are located to the north of the site.



Surrounding land use and facilities plan

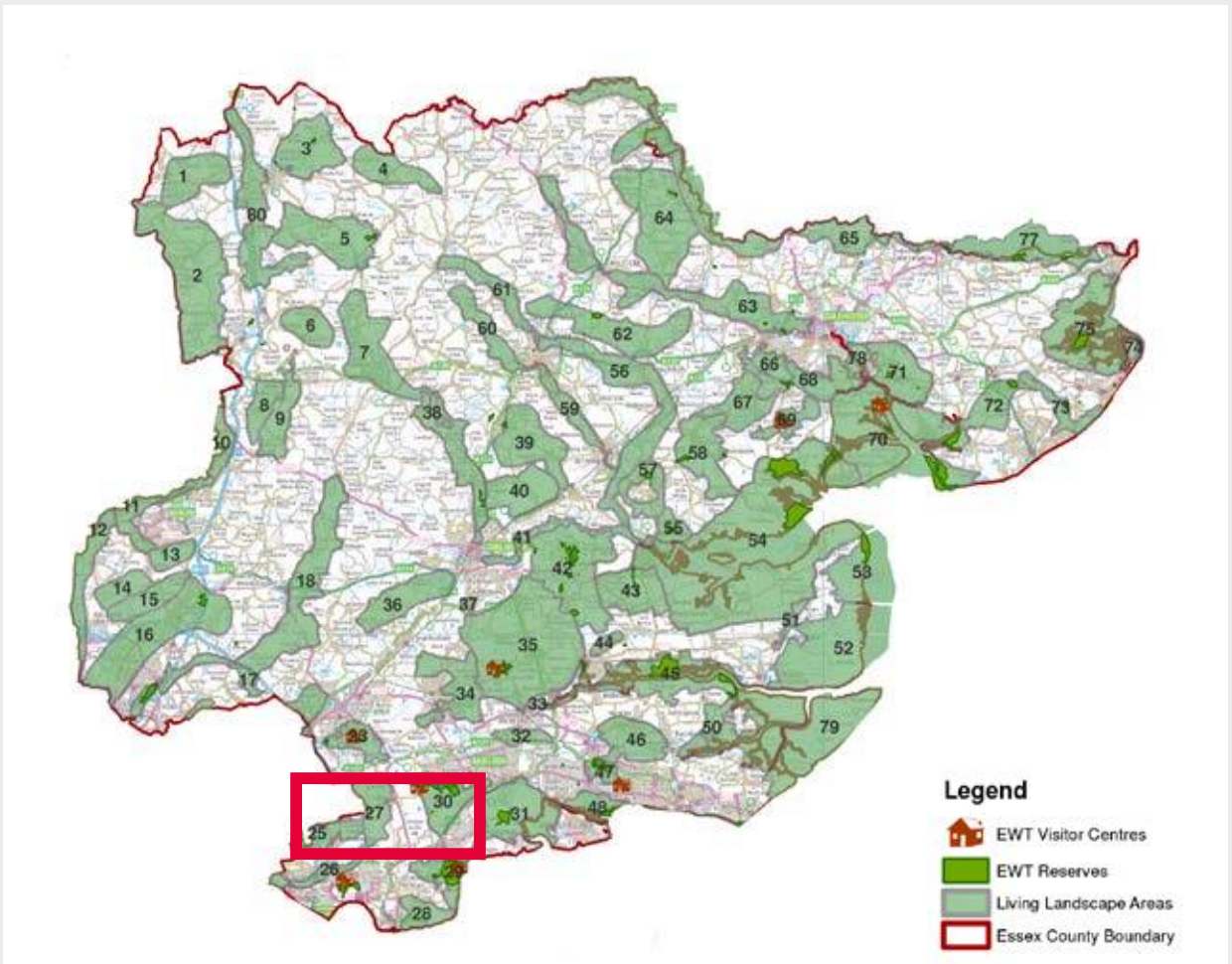
SURROUNDING GREEN INFRASTRUCTURE

There is a network of Country Parks within close proximity to the site. Thorndon and Langdon Hills Country Parks are located to the north-west and south-east respectively.

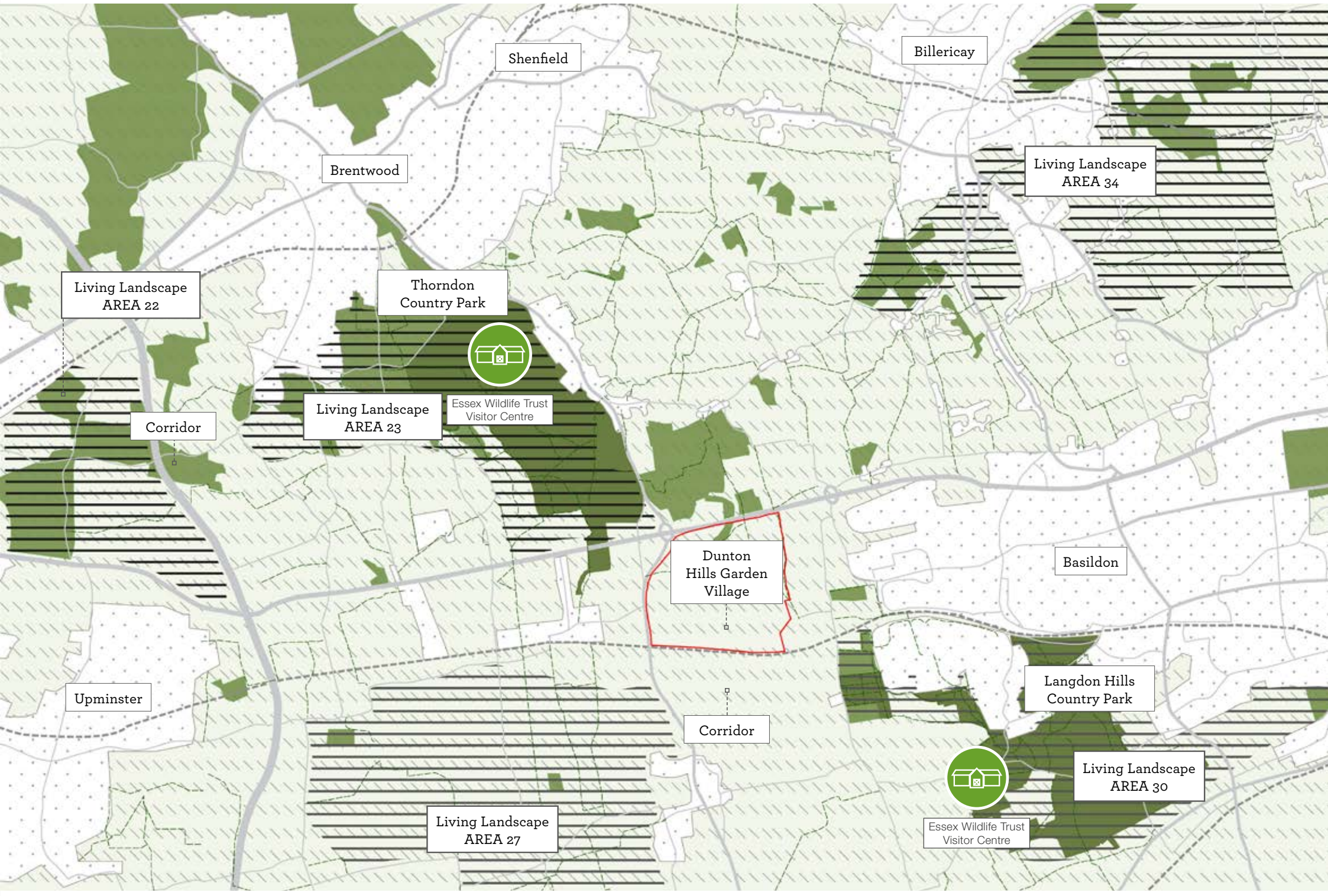
Thorndon Country Park provides 500 acres of walks through ancient woodland and an ancient deer park dating back to the 15th century (which has been designated a Site of Special Scientific Interest) alongside planted woodland and a landscape of small pastures, grassland and three small lakes.

Langdon Hills Country Park is a 400 acre park located on a hilly ridge, benefiting from panoramic views over the Thames Estuary and across to London. The park has ancient woodlands dating back to prehistoric times, with flower-rich grassland meadows and areas of dense scrubland. There are picnic areas and a good network of footpaths and horse and cycle tracks linking the surrounding countryside.

Both country parks are part of the Essex Living Landscapes network. The Living Landscapes vision aims to restore, recreate and reconnect local wildlife habitats so that the species living within them can move through the landscape more easily, and continue to survive and thrive long into the future. Living Landscapes is about wildlife, people and communities and the local economy. The existing Living Landscape areas are shown on the plan opposite which shows both country parks as well as a further Living Landscape area to the south west of the site.



Essex Living Landscapes Plan



Surrounding green infrastructure plan
Showing the key green infrastructure areas, such as Country Parks and Living Landscapes surrounding the site.

UNDERSTANDING THE LANDSCAPE CHARACTERS

A range of landscape characters are prevalent within the site and connect to the wider landscape context of the Fenland and the Hills. The landscape setting has had a fundamental influence on the vision and design of the masterplan for the Garden Village

The site lies at a transition between the low-lying, open landscape of the Fenlands that extends to the south and west, and the wooded Brentwood Hills at Thorndon to the north and Langdon Hills to the east. The transition between these two contextual landscape characters is encapsulated within the site and creates a diverse range of landscape typologies.

The low ridge-line that transverses the site in a roughly north west-south east alignment creates the topographical transition between the low-lying fenland and the hills. The transitional landscape is further reinforced by the Eastlands Spring, which also bisects the site in a north-south alignment near the eastern boundary.

These linear features are striking in the landscape and create a unique sense of place for the site itself. These landscape features, as well as the wooded hills, ancient woodland, water bodies and hedgerows create varied habitats and micro-climates for local flora and fauna.

Our vision for the Garden Village is landscape driven and the landscape character of the site and the adjacent areas have a key influence on the masterplan. The landscape strategy is outlined in full in Chapter 4 of this document. For a full analysis of the existing landscape context and character refer to the landscape analysis pages in Appendix 1.



LAND USE

1. Dunton Hills Family Golf Course

Dunton Hills Family Golf Course occupies the southern part of the site, extending from the western boundary with the A128 to the eastern boundary adjacent to Dunton Hall. To the west, the golf centre is divided by the access road off the A128 and separated from the remainder of the course by Eastlands Spring and associated line of trees. To the east of the watercourse, the club house, car park and driving range introduce built development on the lower-lying land that sits in a bowl below the ridge and slopes that rise to the north. To the east, the golf centre occupies the rising land and plateau on the higher ground.

2. Arable agricultural land

Aside from the golfing use, the remainder of the site is predominantly managed for agriculture, comprising medium-large rectilinear fields that span the low-lying land to the west of the site, as well as the slopes beyond Eastlands Spring and Nightingale Lane and the ridge and plateau. Beyond the eastern site boundary, the fields pattern comprises smaller rectilinear fields managed for both arable and pasture and including paddocks defined by post and wire fences bounding the site to the north of Dunton Hall.

3. Ridge-line

The slopes and low ridge-line that crosses the site are a distinctive features in the local landscape, forming a backdrop in localised views.

4. Eastlands Spring

Running north-south along the base of the ridge-line, Eastlands Spring divides the site and forms a distinctive feature, with the tree-lined watercourse providing a transition between the low-lying fenland and the base of the slopes that lead to the ridge.

5. Ancient woodland

Running along the line of the Eastlands Spring Watercourse and Nightingale Lane, a line of ancient woodland and tree belts form a strong linear feature that dissects the site at the base of the ridge-line to the east and sloping land to the north.

6. Dunton Hill Farm

Situated on the upper slopes to the centre of the site, Dunton Hill Farm and associated barns and agricultural buildings form a distinctive feature on the slopes of the ridge. To the west of the farmhouse, land either side of the driveway is managed as amenity grassland and provides a domestic, formal character and setting to the farmhouse and barns to the east of Eastlands Spring.

7. Woodland blocks

As is typical of the wider landscape character, there are blocks of woodland on the higher ground to the east of the site. This includes a field-corner copse and plantation woodland.

8. Waterbodies

There are a number of amenity waterbodies within the low-lying land to the south of the site. These include larger lakes with a formal character and smaller ponds including marginal vegetation and self-set trees within the golf centre.

9. Infrastructure

A wind turbine is situated on top of the ridge to the east of the farm buildings. The access track to the turbine crosses the fields east of the A128 and passes to the south of the farm buildings.

Two overhead 132 kW power lines cross the site. The westerly power line enters the site in the south west corner and runs towards the lower reaches of the ridge-line before diverting north and leaving the site across the A127. The easterly power line runs from the south east-corner and diverts (in close proximity to the other power line) towards the north east. The two lines do not cross/ meet.

The turbine and pylons form prominent features in the local landscape, detracting from the views and settings of churches on the high ground to the north - west and east of the site as historic local landmarks.



UNDERSTANDING LOCAL HERITAGE

Land within the Dunton Hills Garden Village site allocation is sensitive in heritage terms because it contains a grade II listed farmhouse and historic farmstead. There is also a setting relationship with All Saints Church, which is grade II listed, and the Church of St Mary, as well as other heritage assets in the surrounding area, including other listed buildings, a Registered Park, conservation areas and non-designated heritage assets. There are also historic landscape features.*

The site comprises lowland areas to the south and west, with a ridge running north-south and a high plateau to the east. The setting of the heritage assets is, extensive, with long views afforded within and across the landscape. This setting is further extended by historic functional relationships between the site and surrounding historic estates, including those formerly controlled by Lord Petre and King's College Cambridge.

Historic buildings and features of note within the site and surrounding areas include:

Within the site:

- The Dunton Hills farmstead, a cluster of vernacular, former agricultural buildings dating from the late-C17 to mid-C19, located near the ridge. This includes the Grade II listed farmhouse and two historic barns, the southern of which forms a prominent landmark.

Within the surrounding area:

- The Church of All Saints, an attractive red brick church of Tudor origin, which is located on high ground to the north-east of the allocated site. Listed Grade II*, the church is in the care of the Churches Conservation Trust.
- The Church of St Mary's, rebuilt in the late-Victorian period, and now converted to residential use. This is listed at Grade II. The spire of the former church can be seen across the site to the north-east.
- Dunton Hall, a C18 farmhouse re-fronted in the early-C19 and refurbished in the C20. This is located close to St Mary's Church to the north-east of the site.
- Thorndon Hall Registered Park and Garden (RPG) (Grade II*) and Thorndon Park CA, which comprise the surviving extent of a landscaped park laid out in the early-C18 and redeveloped by Lancelot 'Capability' Brown between 1766-72.

Additionally, a number of buildings of local and cultural significance located close to the site boundary, including the early-C20 Old Mill Cottages to the south-west, and the mid-C19 Old Rectory and Friern Manor to the east.

Other important features within the site include the medieval, east-west Nightingale Lane and its associated ancient woodland, the mid-C19 driveway to the Dunton Hills farmhouse, the underground remnants of Nightingale Hall which lie beneath the woodland block in the north east of the site and historic surviving hedgerows and field boundaries.

The presence of these historic buildings and features within and around the site mean that heritage considerations must be central to the design of the new Garden Village.



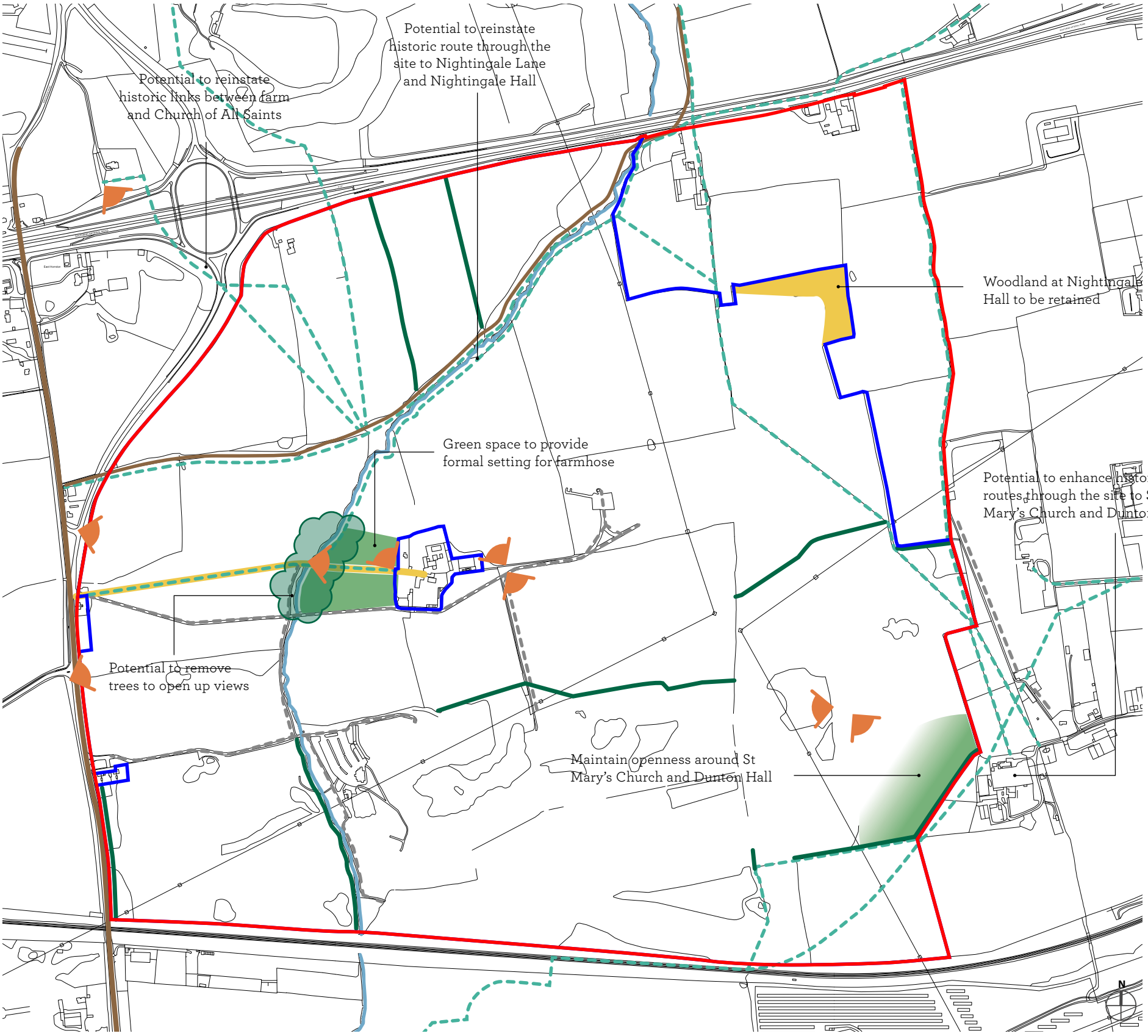
All Saints Church



Frien Manor



Principal south elevation fo the Dunton Hills farmhouse



Key

- Garden Village Allocation
- Dunton Hills Farmstead Boundary
- Eastlands Spring Watercourse
- Roads Dating from 1598 at least
- Farmhouse Drive laid out between 1838 and 1868
- Historic Footpaths
- Other Road or Track (no PROW)
- Historic and Existing PROW
- Historic Surviving Hedgerows
- Ancient woodland
- Location of Nightingale Hall (archaeology)
- OS Trig Point
- Viewpoint Location (views on following page)

Listed Buildings†

1. Church of All Saints, Grade II*
5. Church of St Mary, Grade II
6. Dunton Hills Farmhouse, Grade II
10. East Horndon Hall, Grade II
13. Dunton Hills Farm, Grade II
14. Dunton Hall, Grade II

Non-Designated Heritage Assets†

17. South barn at Dunton Hills Farm
18. North barn at Dunton Hills Farm
20. East Horndon Mills

UNDERSTANDING THE SETTING





B. View east from the A128 showing key ecological features that should be protected through design including veteran trees and the Eastlands Spring.



C. The view east along the existing driveway to Dunton Hills farm from Eastlands Spring.



A. The Church of All Saints (Grade II*) is situated to the north west of the site and long distance views from the farmhouse to the church should be preserved through the layout of the Framework Masterplan.



D. View southeast toward The Church of St Mary's. This important local landmark, short and long distance views to this should be celebrated within design proposals.

The selection of images shown below represent key historical features and elements (described in the previous pages) that have been pivotal in establishing the design and vision for Dunton Hills, one which is firmly embedded in its historical, environmental and cultural setting.



E. The distinctive spire of St Mary's church (Grade II) can be seen from higher points within the allocation site. View south-east from the ridgeline.



F. Long distance views west to Canary Wharf from the ridgeline



G. View east across the Fanns landscape toward Dunton Hills Farm from junction of Station Road/the A128

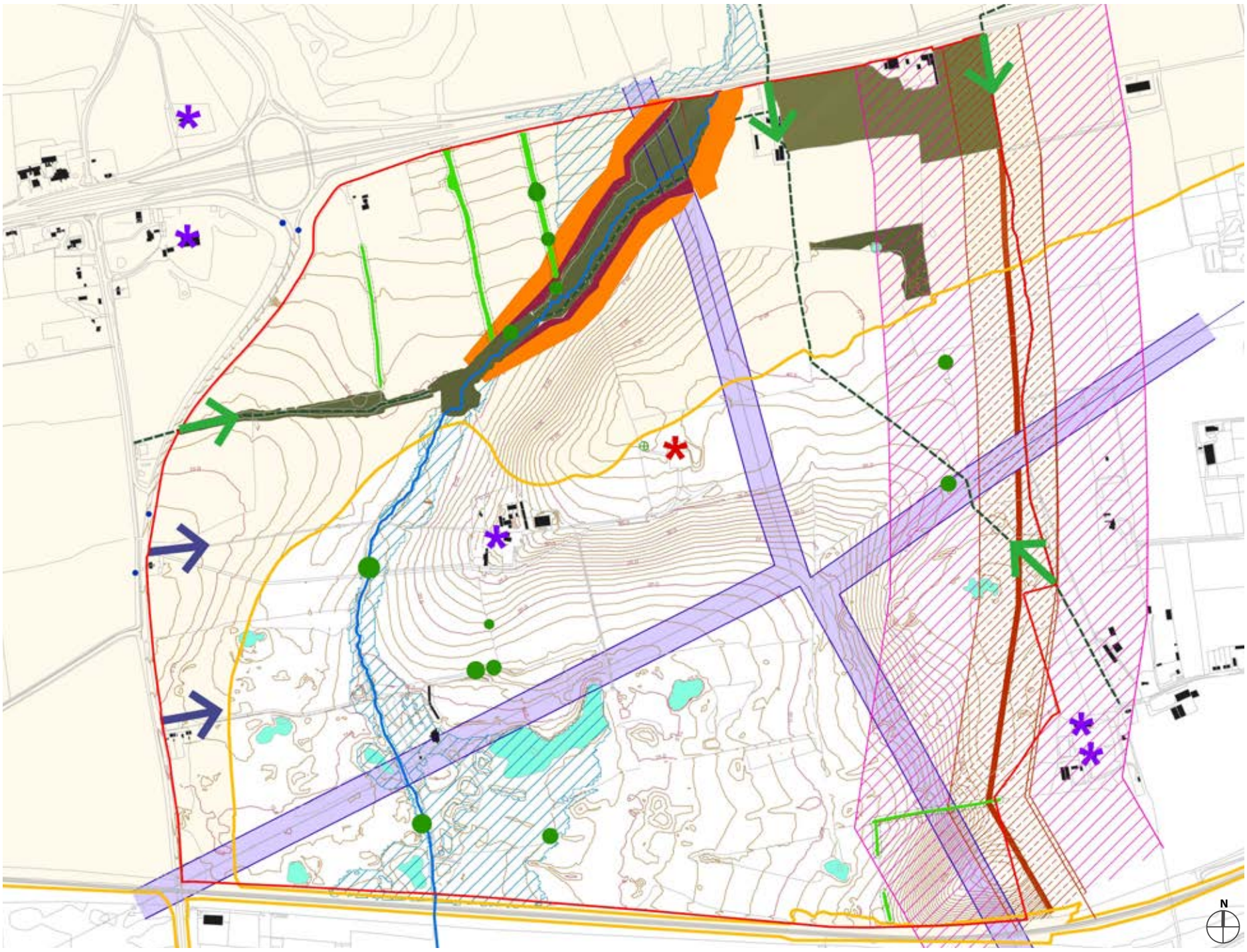


H. Looking south east towards from the Church of All Saints with the existing wind turbine (to be removed) visible to the rear.



I. The rising topography of the site is visible in the background. Looking north-west from Lower Dunton Road.

SUMMARY OF SITE CONSTRAINTS



The plan above provides an overview of the site constraints which are referred to and explained on the opposite page. There are a number of features around which the masterplan for the Garden Village will need to respond to.

A more extensive assessment can be found in Appendix 1.

KEY

- Site Allocation
- Eastlands Spring Watercourse
- Waterbody
- Flood Zone 3
- PROW
- Pedestrian Access Point
- Vehicular Access Point
- Bus Stop
- Overhead 132 kW Powerline/easement (30m)
- 500 kW Wind Turbine
- High Pressure Gas Main (no building easement 5m)
- HSE Inner Zone (78m)
- HSE Outer Zone (255m)
- > 55 db Noise Contour
- Trig point
- Listed building
- Existing built form
- Existing trees to be retained (Cat A/B)
- Important hedgerow to be retained
- Ancient/Semi Natural Woodland
- Ancient woodland 15m Buffer
- Ancient woodland 50m Buffer
- Contours

LANDSCAPE FEATURES

Topography

The site has a gently undulating topography with a north south ridge line forming a distinctive feature, creating a plateau on the eastern side of the site. The eastern edge of the site sits at 40m Above Ordnance Datum (AOD) falling to 15m AOD along the south western edge.

Flood and Drainage

The Eastlands Spring runs through the site in a north-south direction dividing the site. It enters the site under the A127 just to the west of Timmermans Nursery before running through an area of dense ancient woodland. It then heads south running to the west of the grounds of Dunton Hills Farm and the golf club house before leaving the site in a culvert under the C2C railway line.

The floodplain (flood zone 3) associated with Eastlands Spring covers a larger expanse of land as the topography changes into more open, flatter land around the golf course in the south.

Other water features on the site include a large lake and smaller ponds constructed as part of the golf course, some of which contain great crested newts.

Woodland

A strip of ancient semi-natural woodland and tree belts, running along the line of the Eastlands Spring Watercourse and Nightingale Lane, form a strong linear feature.

There are additional blocks of woodland on the higher ground to the east of the site. This includes a field-corner copse and plantation woodland.

A number of individual category A and Veteran trees and hedgerows located throughout the site have been identified for retention for their cultural, historical, nature conservation, landscape and ecological value.

HERITAGE FEATURES

A group of farm buildings, including Dunton Hills farmhouse (Grade II) sits at the centre of the site and are the most notable heritage features. In addition to this, former mill cottages sit along the western edge of the site and a historic OS trig point is also present to the north east of the Dunton Hills Farm buildings.

Additional Grade II listed buildings in the immediate vicinity of the site include Dunton Hall and Old Church to the south east of the site and All Saints Church and East Horndon Hall to the north west of the site. The retention and enhancement of views to these features should be considered within any development proposals.

ACCESS

Vehicular Entry Points

The site is currently accessed from the A128 to the west. Existing access points from here comprise:

- the driveway to Dunton Hills Farm
- a track to a dwelling in the north west of the site
- an access road to the golf club house in the south west of the site

There is a also vehicular access to the nursery from the A127. The C2C railway line restricts any access from the south.

Walking and Cycling

A Byway (Nightingale Lane) runs across the north western part of the site, through the ancient woodland and out towards the A127 in the north of the site. A further Public Right of Way runs from the Timmermans Nursery in the north across the site and down towards the small settlement of Dunton to the south east. There is a further footway paralleling the eastern boundary of the site which links the A127 to Dunton.

There are currently only a limited number of pedestrian crossing points across the A128 and these only consist of small central islands. A narrow public footpath exists on the western side of the A128, running between Station Road and Tilbury Road.

A cycle route runs along the south side of the A127.

Public Transport

A bus stop is located within the A128 public footpath serving the northbound route of the 565 bus. A further bus stop serving the south bound 565 bus route is located near the junction of the A128 and the driveway to Dunton Hills Farm. The 565 service runs 6 times a day with a journey time of around 20 minutes to Brentwood.

UTILITIES AND INFRASTRUCTURE

Power Lines

Two overhead 132 kW power lines cross the site. The westerly power line enters the site in the south west corner and runs towards the lower reaches of the ridge-line before diverting north and leaving the site across the A127. The easterly power line runs from the south east-corner and diverts (in close proximity to the other power line) towards the north east. The two lines do not cross/ meet.

If left in their current location these would comprise a major site constraint as shown by the no build buffer on the plan (left). These lines will be removed and placed underground to allow for development and should not be considered a constraint to development. The site will still need to host termination towers.

Gas Main

A high pressure gas main is located along the eastern edge of the site. This main (the Roxwell/Horndon High Pressure Gas Main) enters the site under the C2C railway line before diverting off in a northerly direction. The gas main has an immediate no build buffer extending 6m either side of the main and a further buffer 10m either side of the main where there are planting restrictions.

The HSE provide indicative advice with regards to further zones comprising an Inner and Middle Zone (78m) and an Outer Zone (255m). Within the inner and middle zones no built development can take place. However, roads, open space and parking areas are acceptable. Within the Outer Zone any development can take place, with the exception of vulnerable uses e.g. care homes.

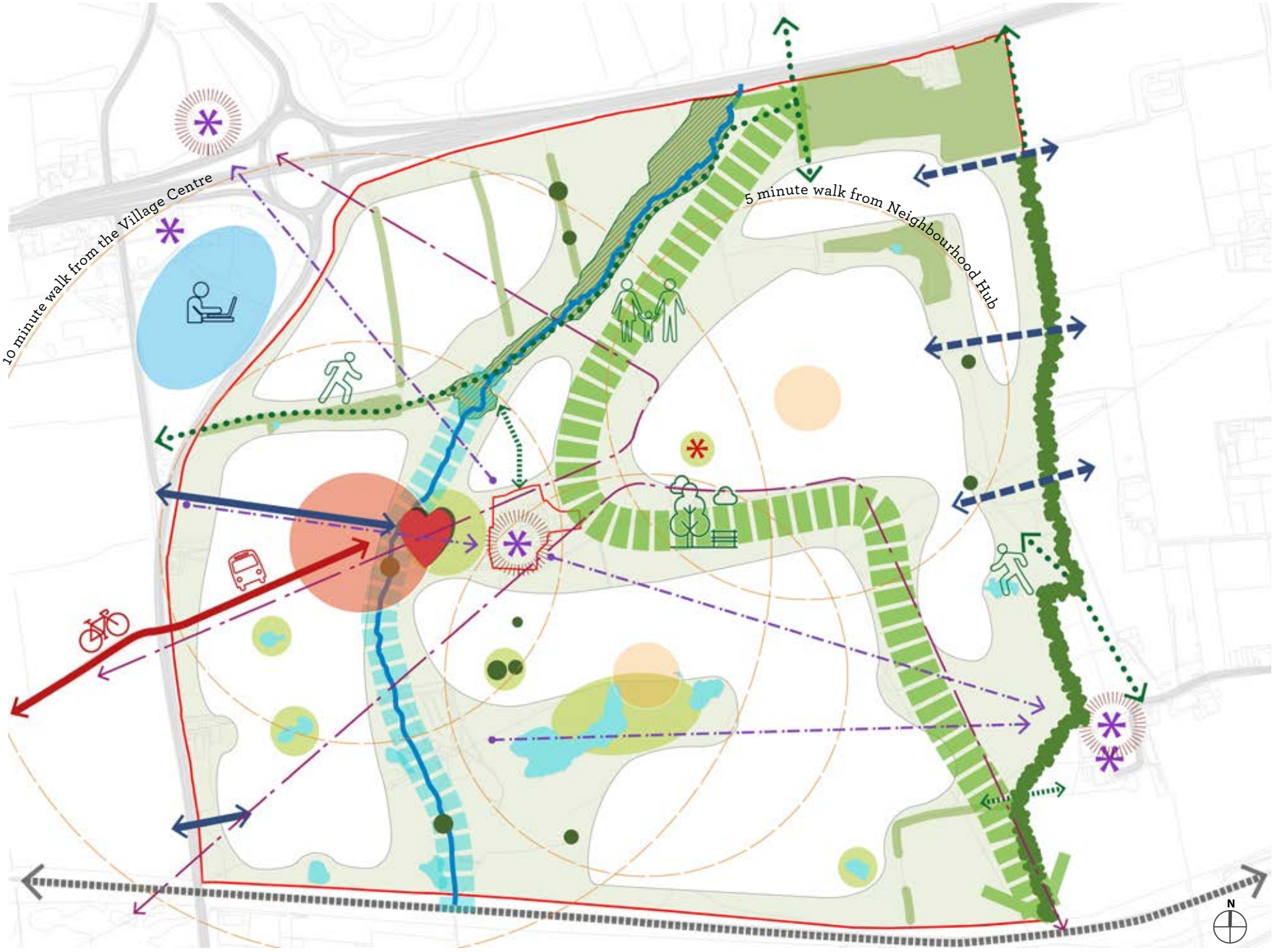
Turbine

A 500kW wind turbine also sits within the site and is located at the top of the plateau to the north east of the Dunton Hills Farm buildings. It is proposed that this would be dismantled in the future to allow for development and should not be considered a constraint to development.

NOISE

The site has been assessed against the criteria contained in BS8233:2014. The highest noise levels were recorded to the north of the site, adjacent to the A127, and also along the western side, abutting the A128. The noise levels exceed the 55dB external threshold identified by BS8233:2014 and would require a combination of fencing, bunding and buildings to create an acceptable external noise environment in this location. For the purposes of master planning the site, the noise and vibration from the C2C railway line is neither as intrusive nor as significant as the traffic noise.

OPPORTUNITIES



The site's features provide an excellent opportunity to deliver a new and distinctive Garden Village which integrates seamlessly into the existing surrounding character and makes maximum use of its unique features. The plan above highlights these key elements and indicates how it could inform our initial design response.

KEY

- Site Allocation
- Eastlands Spring Watercourse
- Blue/Green Corridor
- Waterbody
- Ridge-line
- Existing trees to be retained (Cat A/B)
- Important hedgerow to be retained
- Ancient woodland
- Woodland
- Potential key green space
- Potential enhanced structural planting
- Existing PROW
- Potential Pedestrian Access Point
- Potential Vehicular Access Point
- Potential Active Transport Corridor
- Potential Village Centre
- Potential Neighbourhood Hub
- Listed Building
- Key Listed Building
- Trig point
- Key local views
- Long distance views
- Potential extent of built form
- Potential adjacent employment
- Railway

ENHANCED GREEN AND BLUE NETWORK

The existing woodland, hedgerows, spring and ponds provide the basis for an extensive green and blue network. These features can be enhanced and integrated into key spaces which correspond to their setting, offering a variety of spaces for relaxation, active recreation and interaction with nature. These spaces could potentially include a central village green, small pocket parks and a ridge-line park to open up views to the south (North Downs) and west (London skyline).

SuDS could be situated in open spaces to ensure flood mitigation.

Structural planting will be focused along the eastern boundary of the site, creating a soft boundary between the proposed development and adjacent land while also screening views into the development from the east.

CELEBRATING HERITAGE

A focal open space could be located to the west of the farmstead to maintain the rural setting and views toward this historic building.

Local views to key listed buildings both within and adjacent to the site should be retained and enhanced and necessitate further consideration as development proposals progress.

A key historic route providing access between the farmstead and Nightingale Lane could be revealed through the masterplan proposals.

Where possible, historic field boundaries should be maintained through the retention of existing hedgerows ensuring that the masterplan responds to the rich rural and ecclesiastical legacy evident within the area.

BUILT FORM AND STRUCTURE

The topography divides the site into upper and lower portions with Eastlands Spring creating a further natural division. The character of these areas will respond to their immediate landscape context, the details of this will be set out later in this document.

There is opportunity for the Village Centre to be close to the historic farmstead and located at the junction of the primary vehicular and Mobility Corridor. This location could be a positive response to the physical constraints of the site and further celebrate the site's distinctive heritage features.

A WELL INTEGRATED DEVELOPMENT

Our proposals should seek to integrate into the existing Public Right of Way network and strengthen cycle and pedestrians connections into the wider area.

New and enhanced pedestrian access points could be provided along the eastern boundary of the site. In addition to this, new pedestrian/cycle crossing points should be created which ensure safe and convenient links with Station Road and West Horndon to the west of the site.

There is the opportunity to provide a new bus service to West Horndon Station through a bus/cycle only 'active transport corridor' which connects the potential Village Centre with Station Road to the west of the site.

Vehicular access could be provided from two points along the A128 with the potential for additional vehicular access points from the east at a later date.

CHAPTER 3

MASTERPLAN DRIVERS AND FUTURE TRENDS

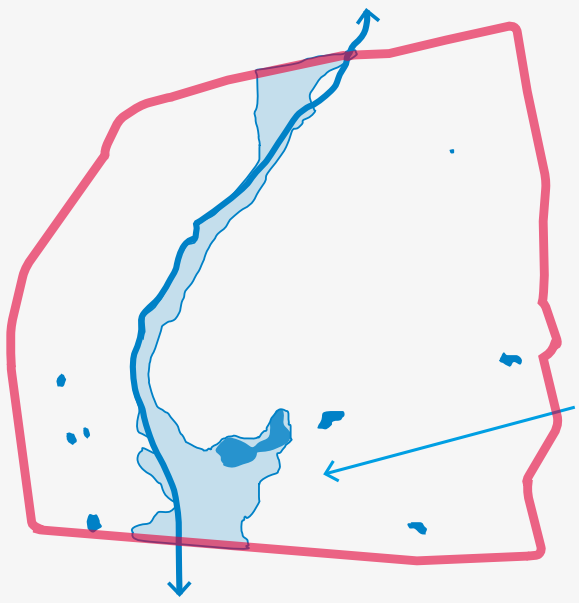
This chapter introduces the key spatial and site characteristics that will influence the masterplan along with broader societal and technological advances which will play an increasingly important role as the Garden Village continues to evolve. It also summarises the extensive design work undertaken by the CEG team in close consultation with a range of stakeholders and the subsequent evolution of the Garden Village proposals.

3.

MASTERPLAN DRIVERS

Following on from the site constraints and opportunities set out in the previous chapter, a number of spatial design drivers have been developed for the site. These drivers reflect the site analysis and discussions and workshops held with key stakeholders.

1.

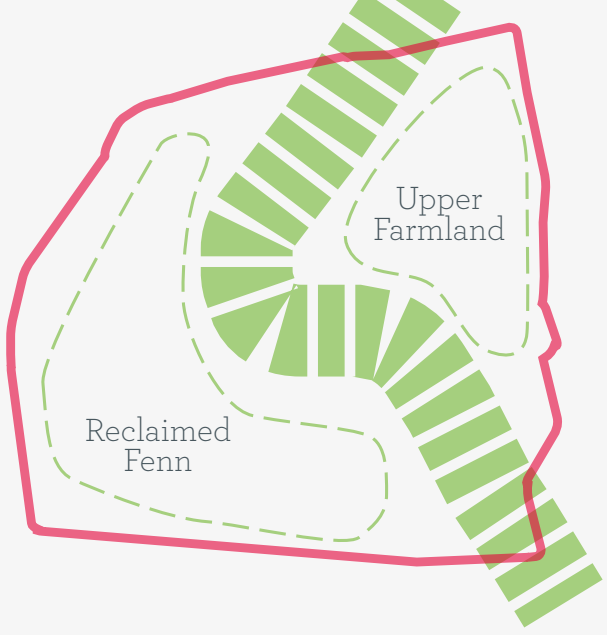


BLUE - WATER

Several water elements influence the site:

- Eastlands Spring, which runs north to south across the site
- The floodplain in the south of the site as well as the existing ponds. These together create a wetlands area

3.



LANDFORM AND CHARACTER

There is a distinctive landform which the masterplan needs to respond to, comprising:

- A key ridge-line that snakes its way north to south
- Higher land to the north-east forming a plateau
- Low lying, reclaimed Fenn land to the west and south of the site

2.

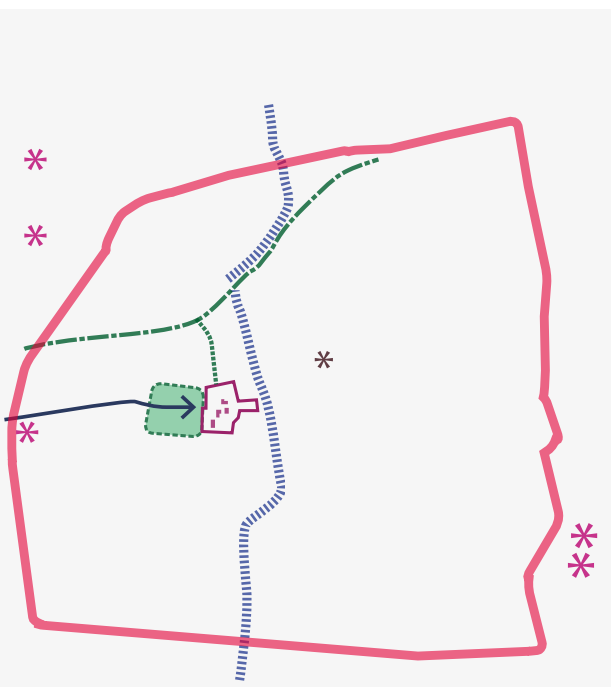


GREEN - TREES AND WOODLAND

There is an established green framework across the site. This will be incorporated into the open space and ecology network and comprise:

- Ancient woodland belt (in the north)
- Further woodland belts and blocks across the site
- Existing key (ecologically important) hedgerows and Cat A trees

4.

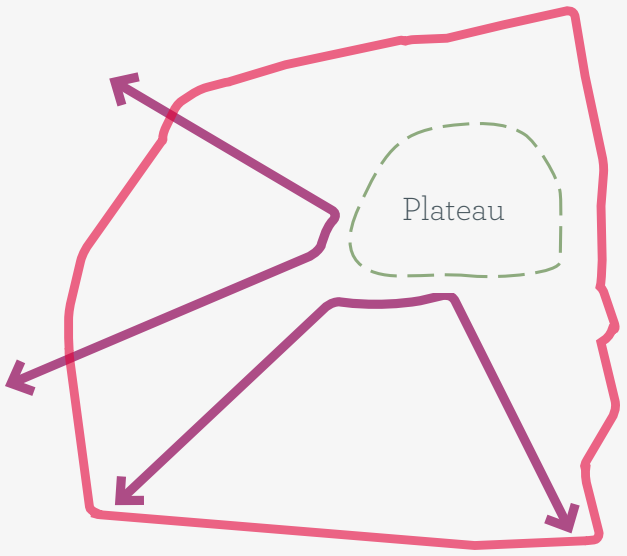


PAST AND HERITAGE

There are a number of historic features both within and outside of the site, the setting of which need to be preserved and respected. These comprise:

- Dunton Hills Farmstead which is a Grade II Listed Building and a prominent feature and orientation point within the agricultural and surrounding “Fanns” landscape
- Key historic features and routes through the site, including Nightingale Lane and the former Farmstead Driveway
- Key historic and gateway buildings surrounding the site

5.

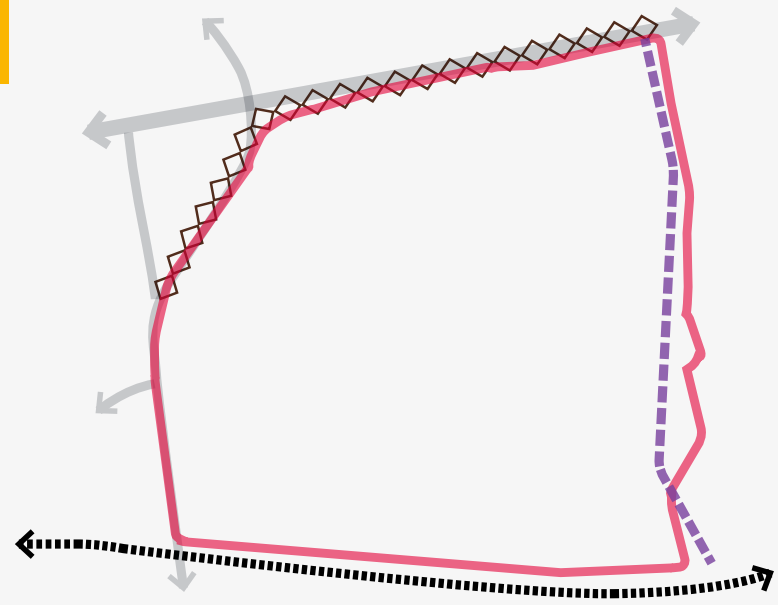


SCENIC VISTAS

The plateau in the north east of the site occupies an elevated position that:

- Affords distant views towards the central London skyline in the west
- Allows distant views across to the North Downs in Kent to the south

7.

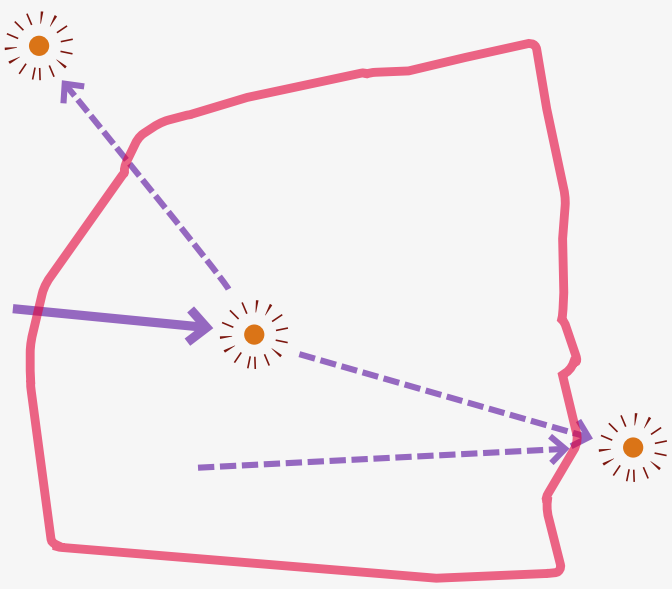


INFRASTRUCTURE

The site is bounded by transport infrastructure on three sides. These are major connectivity drivers but also barriers to movement/noise and pollution generators:

- A127 - busy, strategic road to the north
- A128 - busy, strategic road to the west
- A127/A128 interchange to the north west
- Main railway line to the south
- High pressure gas main line along eastern boundary

6.

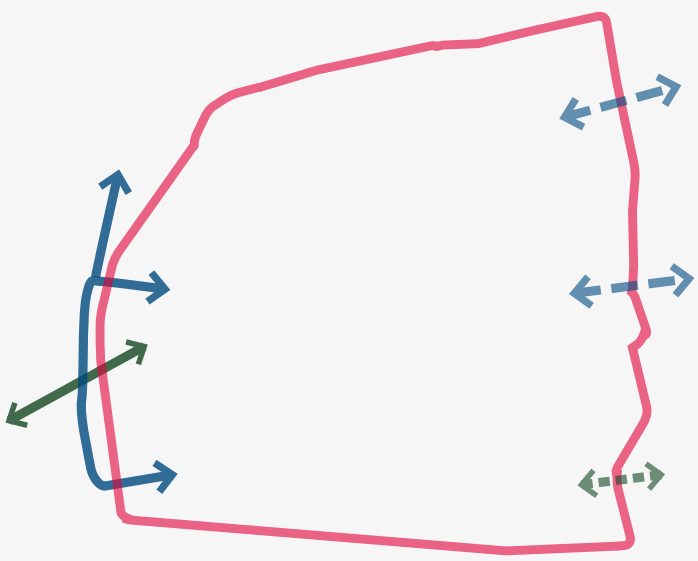


LOCAL VISTAS

The site, its internal features and its immediate surroundings create a number of local vistas, comprising:

- Potential avenue view to Dunton Hills Farm from the A128 to the west (Tilbury Road)
- Views out towards the neighbouring churches in the north west and south east

8.



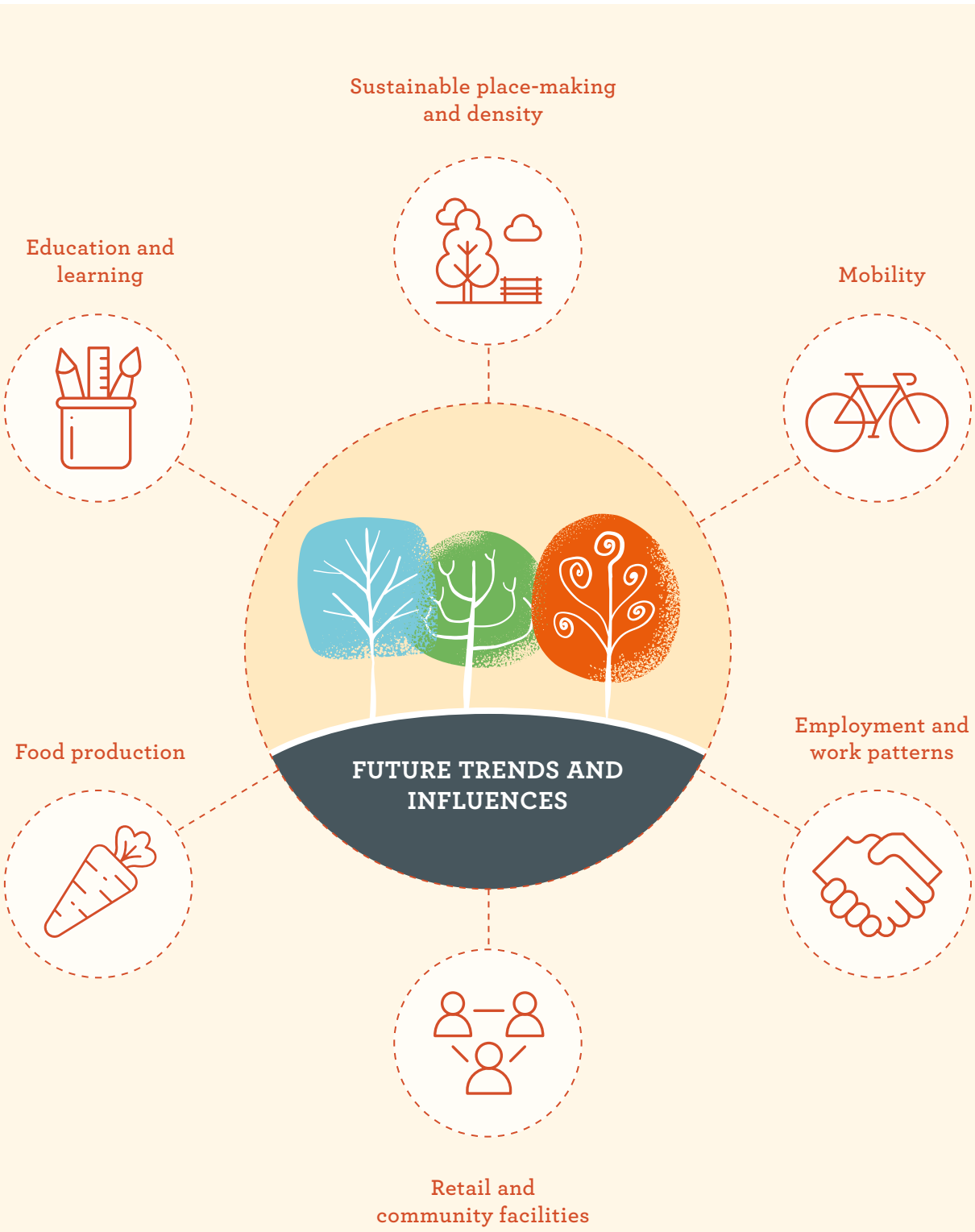
ACCESS AND ARRIVAL

The configuration of the adjacent road network means that:

- The main vehicular access points will be from the A128 to the west
- The Station Road link to West Horndon Station to the west of the site is of key importance for pedestrians and cyclists
- Connections east towards Basildon need to be future proofed

FUTURE TRENDS AND INFLUENCES

Dunton Hills Garden Village must be a place fit for the future. This section briefly outlines some of the key trends, influences and societal changes that we believe need to be understood and embedded into the design to create a futureproofed masterplan which is to be delivered over the next 10-20 years and meet the needs of the new community long into the future.



MOBILITY

We are living in a time of unprecedented change in transportation technology and what this means for mobility. While the car will continue to have its place in the short term future, the new Garden Village must allow flexibility to accommodate alternative modes of transport. The trends most relevant for further consideration, which should be considered during the design process include:

- The role of new technologies such as automation and vehicle electrification (by 2035).
- The sharing economy and the rise of on-demand mobility, hail and ride services.
- Behavioural shifts away from a car oriented existence. People are making fewer car trips, the car driving mileage per adult is reducing and car ownership amongst younger people is decreasing.
- An increasing reliance on public transport and shared mobility within younger generations (17-35).
- The impact that the above trends could have on design (e.g. fewer parked cars and less need for car storage on plot and on the street).

Walking and cycling

A sustainable development should ensure people of all ages have the environment and incentive to walk and cycle within the site (to/from the village/Neighourhood Hubs, the schools, employment locations or nearby mass transit hubs). This can be achieved through:

- The provision of high quality, safe and direct routes (known as Active Corridors) which should be off road where possible but overlooked. Such routes should be children centric in their design to allow younger people to move safely across the site.



Electric car charging points



Local food production and farmers markets



Work Hub- flexible working spaces for the community

- High quality pedestrian/cycle links to West Horndon Railway Station to ensure a seamless and safe connection.
- Cycle hire schemes (alongside electric bikes and scooters) could help encourage active movement within the site.

Mobility Hub and community concierge

Mobility Hubs and community concierge services are now being planned for in large scale schemes such as this. They offer a focal point for the administration of the Travel Plan within the scheme, a place to pick up deliveries, book transport, charge your bike and provides information and help for those who are mobility impaired. This should be at the heart of the scheme. The services which could be located here include:

- Car club.
- Cycle and electric cycle hire and maintenance.
- Public transport interchange.
- Community Concierge and micro consolidation. Going forward local deliveries within the site could be provided through ground drones – a concept that is being rolled out in Milton Keynes.

EMPLOYMENT AND WORK PATTERNS

The way we work is already changing and will continue to do so. Job agility is increasing and many roles are less tied to a physical location. The new wave of working includes more self-employed people, entrepreneurs and new business start-ups and this trend is likely to continue. Many workers may be home based whilst others will require/prefer affordable and flexible working environments with the possibility to interact with others and share knowledge. The necessary space/ buildings need to provided within the 21st century village to offer wealth of opportunities for the next generation of workers. The Garden Village should include:

- Local co-work spaces which provide the opportunity for people to live and work within the village and reduce the need to travel.
- Flexible and adaptable buildings and workshops with "grow on" floorspace for small start-ups to move to as they expand, helping to retain them within the village
- High speed digital connectivity.

RETAIL AND COMMUNITY FACILITIES

The 21st century village needs to respond to changes in the economy and consumer behaviour. The biggest changes influencing the retail market include:

- Growth of online shopping which is a major factor behind the decline in traditional bricks and mortar retail.
- A shift away from large store retail formats.
- Retail and community facilities traditionally associated with villages have suffered decline (e.g. post offices and public houses). However, community owned shops are a growing trend in rural locations (support local produce/a link to community control) and there is a nationwide boom in farm shops reflecting a societal shift toward eating sustainably, locally and organically.
- Co-location of community/retail facilities. The village High Street or centre of the future is likely to comprise multi-functional buildings with flexible space as these offer the opportunity for viable community and retail services and facilities to be provided
- The importance of "meanwhile" and temporary uses at the outset, in order to establish a sense of community and reduce unsustainable travel patterns from day one.

FOOD PRODUCTION

We are seeing a growing societal preference for organic, local and sustainable food production. A productive landscape strategy should be embedded in proposals for the new Garden Village. This could include provision of allotments, community gardens and vineyards. Provision of these facilities not only promotes healthier lifestyles, it also encourages community involvement, further physical activity, interaction with nature and provides opportunities for outdoor education. Local produce could be sold on site, increasing access to fresh fruit and vegetables.

EDUCATION AND LEARNING

The emerging Local Plan at Dunton Hills requires a secondary school, three primary schools and early years provision. The learning environments of the future are likely to change and learning across different environments is becoming more and more important.

- Active social learning is important. A key output from the stakeholder workshops was to ensure that the schools, should be located adjacent to green open spaces, creating opportunity for outdoor learning which will have significant health and well-being benefits related to this.
- Prioritising apprenticeships opportunities to pupils leaving the secondary school would also engender ownership.

The schools should be easily accessible to their surrounding neighbourhoods through sustainable means of transport ensuring that children and young people remain active and get regular exercise. A key aim of Dunton Hill Garden Village should be to create car free environments around schools as much as possible and little or no drop off parking provision, reflecting current national trends.

SUSTAINABLE PLACE-MAKING

Whilst the existing character of a local area should be understood, it does not necessarily mean that it should be duplicated in the new Garden Village. We need to plan and design for a village fit for purpose for current and future generations, not a pastiche of the past. The following elements will be critical in creating a Garden Village for the future.

Urban structure

An appropriate design approach needs to respond to the site's unique context and landscape setting alongside its future function as a highly sustainable place that maximizes the use of public transport.

Density

Density and form should not just seek to replicate our traditional impression of a rural village. The site will need to cater for a range of densities, to support a mixed community with housing catering for families, the young and the old. Densities, particularly in the west of the site (closest to the station) need to be maximized to reflect this. Furthermore, government policy has, over the last 20 years, encouraged an increase in density to support public transport and create more efficiency in the use of land. This will continue to be the case in the future.

Urban fabric

Whilst detailed guidance will come in the form of a Supplementary Planning Document (SPD), the design of buildings is important and must meet contemporary and future housing needs. It should be adaptable over time and support changing life needs, whilst also catering to the needs of those who choose to work from home. It is key that houses be located on active, well designed and attractive streets with access to public open space – not just private back gardens.



Communal spaces provide opportunities for outdoor learning and events



Cycle hire schemes will promote sustainable transport

SUMMARY

The above is not an exhaustive list of considerations for the future village, but some of the key known changes in society that are happening now and will help shape the masterplan. The masterplan must contain a degree of flexibility to respond to future changes. Indeed, innovations today are likely to be out of date in 20 years time.

DESIGN EVOLUTION TIMELINE

This section provides a brief synopsis of the stakeholder engagement process and how it has helped inform the design evolution. Whilst it should be noted that masterplanning and local stakeholder engagement (including CABE workshop reviews) for the site has been on-going since 2014, a collaborative process of work on the current masterplan began in early 2019 with a series of stakeholder workshops and Design South East review panels.

TECHNICAL STAKEHOLDER BRIEFING AND MASTERPLAN WORKSHOPS (FEBRUARY 2019)

This involved presentations from the Borough Council and CEG followed by group discussions and feedback at the end focussing on:

- Landscape, green infrastructure and biodiversity
- Heritage assets
- Social infrastructure (education, community, health and Village Centre)
- Sustainable infrastructure (energy, travel and other)

DESIGN SOUTH EAST WORKSHOPS (APRIL 2019)

Chaired by Design South East (D:SE) these workshops were broken into individual themed sessions covering:

- Vision, concept and narrative workshop
- Green and blue infrastructure workshop
- Heritage and design workshop
- Socio-economic workshop

At each workshop CEG presented the most recent design work before a wider Q+A session and table discussions took place. D:SE provided a summary note after the event.

DESIGN SOUTH EAST WORKSHOPS (MAY 2019)

Two further sessions following the previous format were held in early May covering:

- Smart and sustainable infrastructure workshop
- Sustainable transport workshop

DESIGN SOUTH EAST CHECKPOINT MEETING (MAY 2019)

CEG explored the site capacities and densities to provide the Borough Council and D:SE with the assurance that 3,500 – 4,000 homes could be accommodated on the site and the level of social and community infrastructure required.

1ST FORMAL DESIGN REVIEW PANEL (JUNE 2019)

This was a formal presentation to D:SE, Homes England, landowners and the Borough Council setting out:

- CEG's vision for the Garden Village;
- Key masterplan drivers and the evolution of three neighbourhoods;
- Initial plans on access and movement.

PUBLIC EXHIBITION IN WEST HORNDON (JUNE 2019)

Held at Francis Church Hall in West Horndon, this exhibition focused on the area of the site controlled by CEG. A number of boards with information about the scheme and the masterplan were presented to the public with members of the CEG team on hand to discuss the proposals and listen to concerns.



Stakeholder Consultation Workshop (February 2019)



Stakeholder Consultation Workshop (February 2019)

PRE-APP HERITAGE MEETING (JUNE 2019)

This was a meeting between CEG, Historic England and Borough Council Heritage to explore the key heritage features within the and surrounding area and their sympathetic integration in to the masterplan.

2ND FORMAL DESIGN REVIEW PANEL (JULY 2019)

This was to a similar audience as the previous Design Review Panel with the CEG team presenting:

- Key spatial drivers which had shaped the landscape led design proposals;
- Further detail on each of the three neighbourhoods;
- Changes to the masterplan since the previous session.

INNOVATION AND DESIGN GUIDELINES WORKSHOP (SEP 2019)

This was chaired by D:SE and included key stakeholders with discussions covering:

- Transport and community building;
- The level of detail required for the Framework Masterplan and the subsequent SPD.

EDUCATION WORKSHOPS (SEP 2019)

These were run by the University of Birmingham with the assistance of CEG and the Borough Council. The purpose of these workshops were to:

- Inform the SPD document;
- Actively engage local students with the masterplanning process;
- Educate students about future career opportunities in urban design, architecture and planning.

3RD FORMAL DESIGN REVIEW PANEL (SEP 2019)

This was the final Design Review Panel. D:SE supported the design rationale and updated masterplan presented by CEG and suggested minor amendments to the masterplan and Masterplan Framework document including:

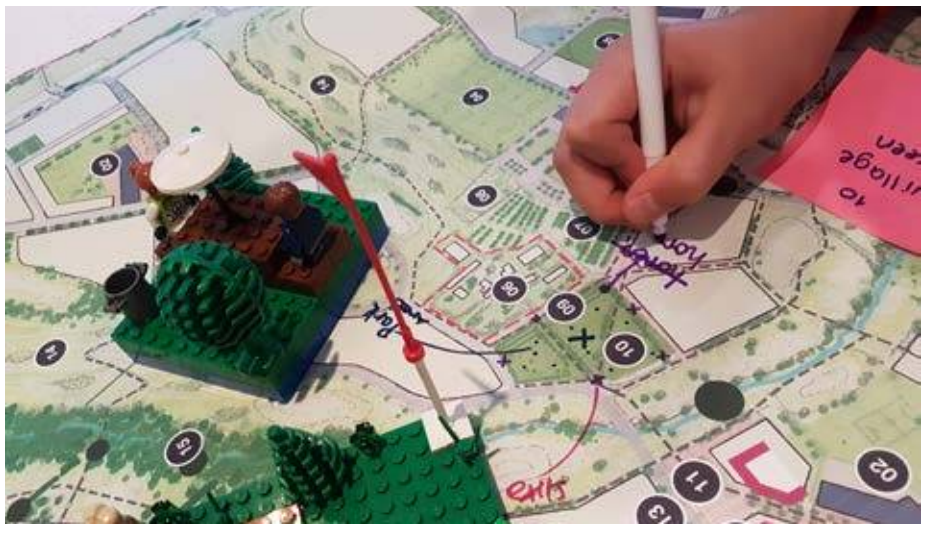
- The need for additional mandatory design principles to be outlined in the MFD to protect the design concept;
- Further exploration into the mobility and sustainability strategy.

MASTERPLAN STAKEHOLDER UPDATE AND DESIGN SOUTH EAST CHAIR REVIEW (JAN 2020)

A further draft of the Masterplan Framework Document was discussed at a meeting with the Chair of the D:SE Design Review Panel and officers from Brentwood Borough Council. The main purpose of this was to present and agree on the approach to the Mandatory Principles. The Chair provided final comments prior to the completion of the document.



Education Workshops Student Presentations (September 2019)



Education Workshops design activities (September 2019)

DESIGN EVOLUTION SUMMARY DIAGRAM

FRAMEWORK MASTERPLAN EVOLUTION

Stakeholder workshops (April 2019)

Through these workshops locations for the key community hubs within the site were identified. This was informed by:

- A need to provide facilities within walking distance of residents;
- The topography of the site;
- Emerging local plan policy requirements for the site.

The main Village Centre was located to the south with a Neighbourhood Hub in the west and a third Neighbourhood Hub was located in the north (on the upper plateau).



Preferred option 1 (May 2019)

Following the workshops this spatial option was drawn up. Further capacity testing took place ensuring that the proposals met local plan requirements and could support the range of social infrastructure set out in the emerging local plan. This detailed assessment informed discussions with D:SE and the Borough Council in mid May. These meetings covered the heritage and the need for the farmstead to be more at the heart of the Garden Village and for a stronger east-west street connection across the south eastern part of the site, as opposed to the longer loop shown.

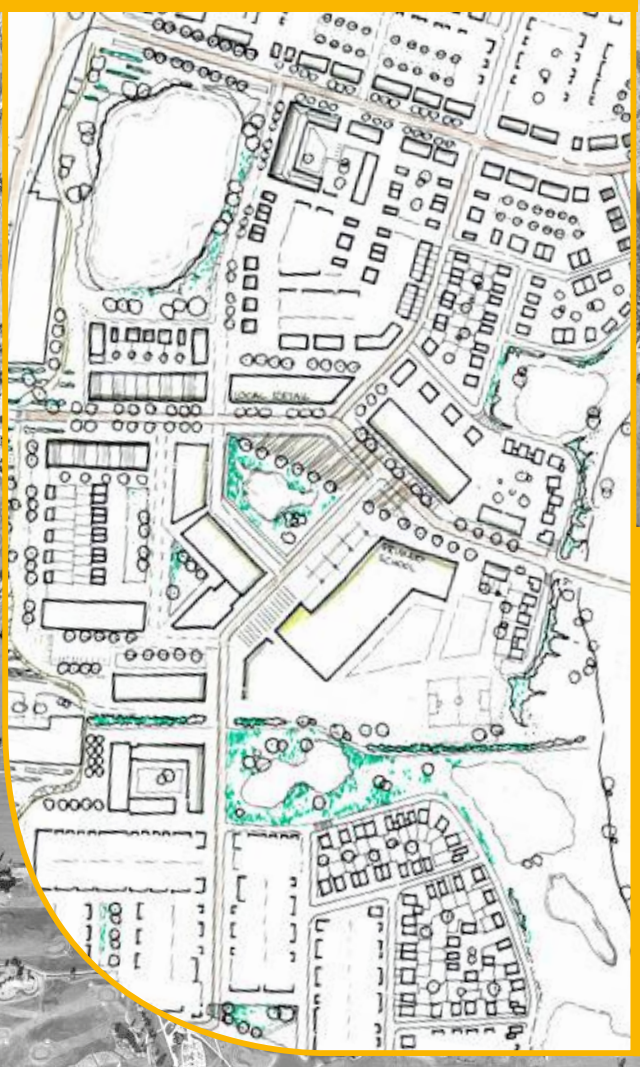


Design Charettes

Detailed design

Further exploration and internal design reviews

Internal interrogation of the design proposals ran in parallel to the external workshops and presentations. Key matters explored in further detail included the sensitive integration of existing site features with particular focus on the relationship between the Village Centre and the existing farmstead to ensure our proposals respected the setting of this feature and embedded this at the heart of the Garden Village. The need to establish direct (traffic free) connections between the site and West Horndon Station and providing convenient pedestrian and cycle links within the site were also explored.



Parcel testing

The illustrative masterplan proposals for Phase 1 were tested further through design optioneering and detailed sketch layouts for key spaces. This ensured that the design proposals are based on a robust and achievable design rationale. This analysis focussed on elements such as character, density, heights, parking, the location of non-residential land uses, open space provision and phasing.



More detail on the design evolution and review process is contained on the appendix.

Design Review Panel 1 (June 2019)

A refined masterplan was presented to D:SE. Key facilities were located close to the farmstead (to the south) and the site is divided into three distinctive neighbourhoods.

- Western Neighbourhood on the flat land between the A128 and Eastlands Spring
- South Eastern Neighbourhood on gently undulating land to the east of Eastlands Spring.
- North Eastern Neighbourhood - on the plateau at the top of the ridge-line.



Design Review panel 2 (July 2019)

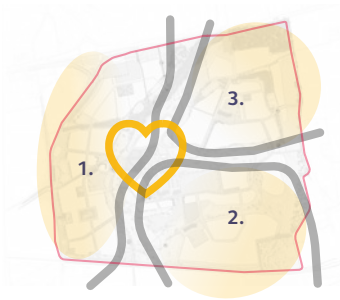
The feedback from the 1st Design Review Panel was positive, but there was still a clear desire for the centre of the village to be more closely linked to the historic farmstead and better linked to the Mobility Corridor connecting to West Horndon Station. The Village Centre was, therefore, relocated to the west of the farmstead and presented at the July Design Review Panel. This was received positively.



Design Review panel 3 (October 2019)

The Framework Masterplan plan below was presented to D:SE and was the culmination of the design moves agreed upon through the design review process and stakeholder discussions. It received support from the group. It addresses previous concerns raised and seeks to embed the Garden Village firmly within its historic and environmental context. These elements are covered in more detail later in the document.

THE SITE IS DIVIDED INTO THREE CHARACTER LED NEIGHBOURHOODS, DUNTON FANNS (1), DUNTON WATERS (2) AND DUNTON WOODS (3)





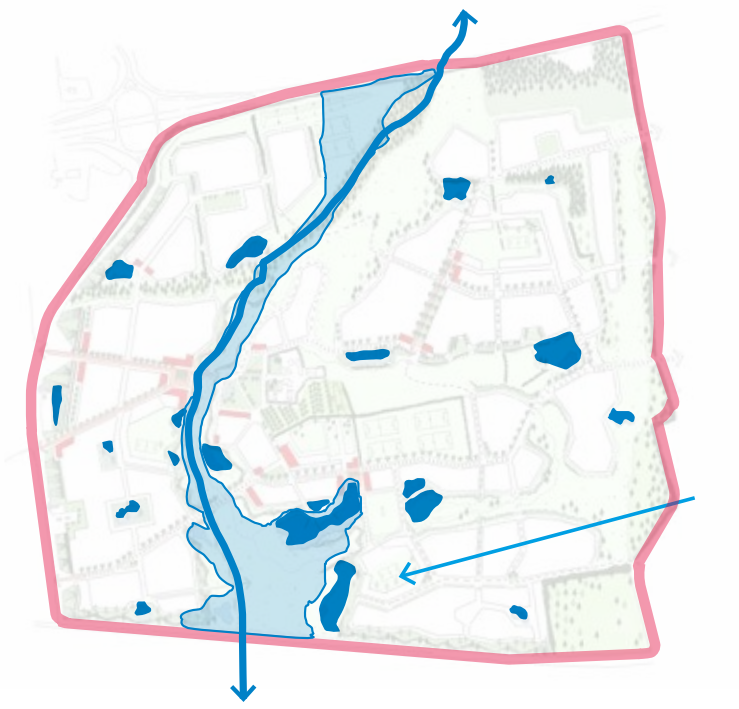
Illustrative vision

On defining the overall desi framework and appropriate location of facilities key area of the masterplan proposals were explored in 3-D bringing the Garden Village to life. These illustrations gave a clearer indication of the interplay between the proposed layout and existin landscape and heritage elements and helped to spatially define key element of the site such as the Market Square, village gree and all through school in further detail.



RESPONDING TO THE DRIVERS

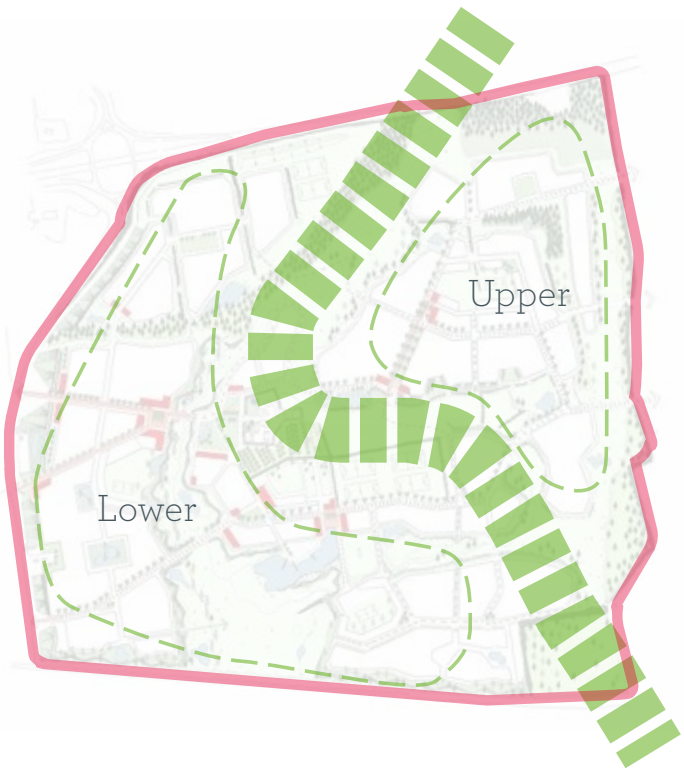
1.



BLUE - WATER

The Framework Masterplan establishes a positive frontage onto the Eastlands Spring which celebrates the wetland setting, respecting the floodplain and associated ecology. A number of existing ponds are retained and additional sustainable drainage areas added.

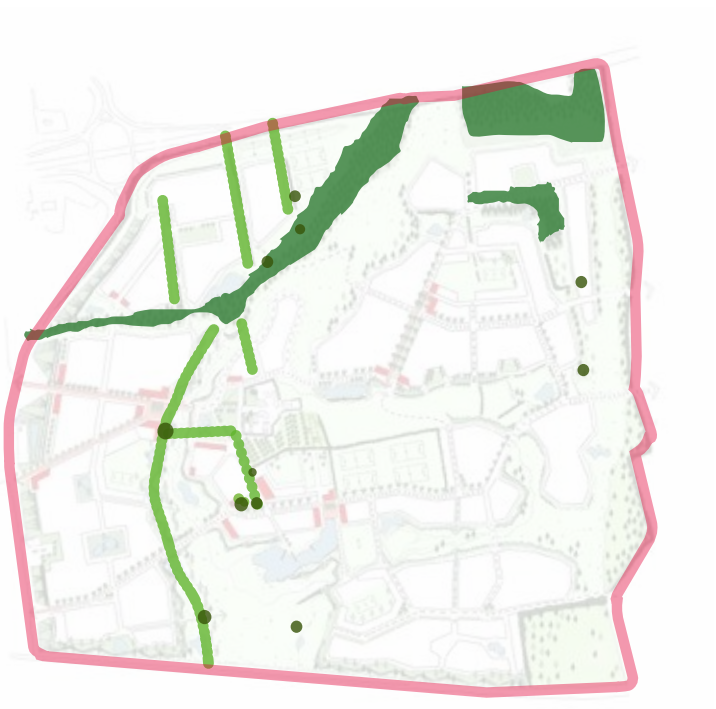
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LANDFORM AND CHARACTER

The ridge-line forms an integral part of the site's green infrastructure and open space network.

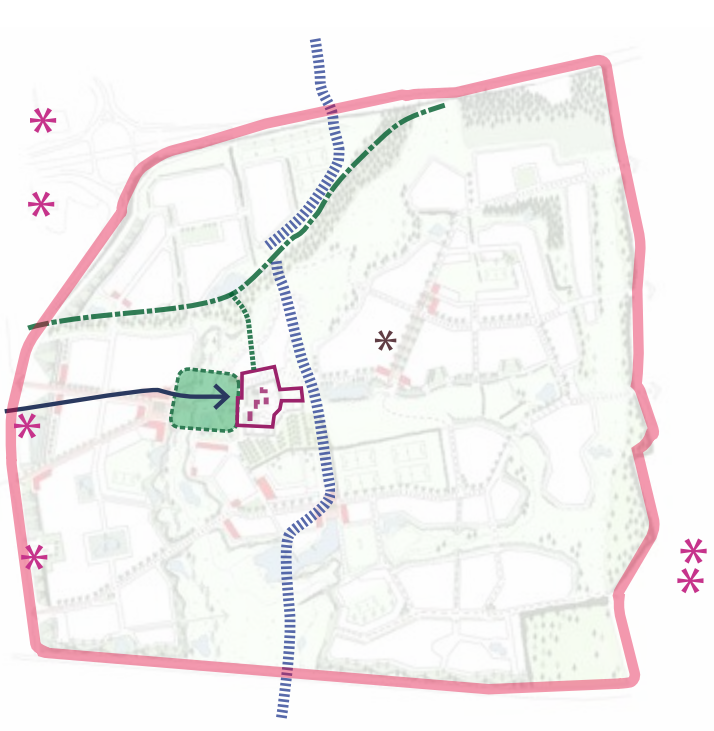
2.



GREEN - TREES AND WOODLAND

The key green element that informs the layout are the woodlands, some of which are ancient. These are strengthened to form a woodland setting for adjacent neighbourhoods. Historic hedgerows also inform the layout, protecting both their heritage and ecological benefits.

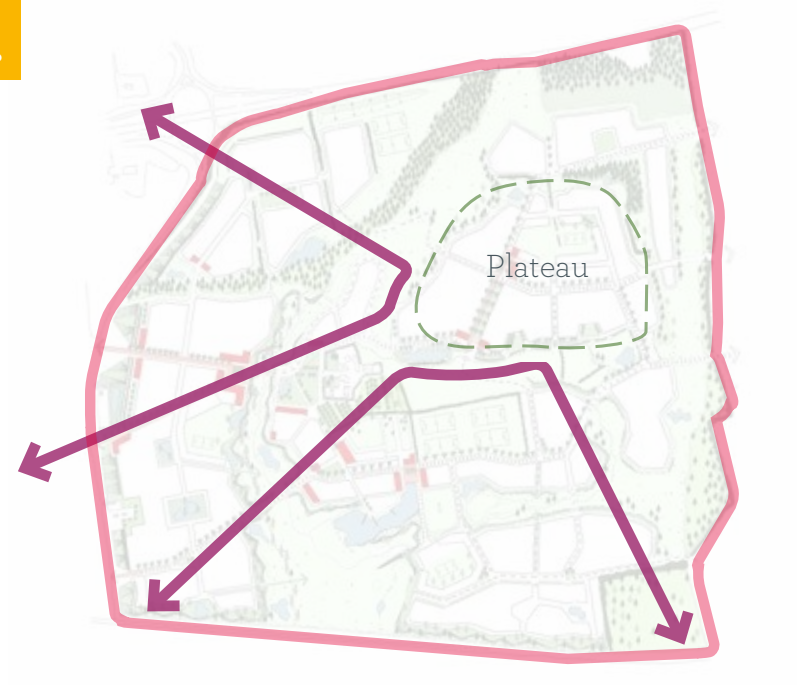
4.



PAST AND HERITAGE

The historic farmstead becomes a key node around which the masterplan is organised. The Village Green is located to the west of the farmstead, respecting its setting whilst ensuring its integration into the centre of the Village. Key views to the surrounding church spires are preserved.

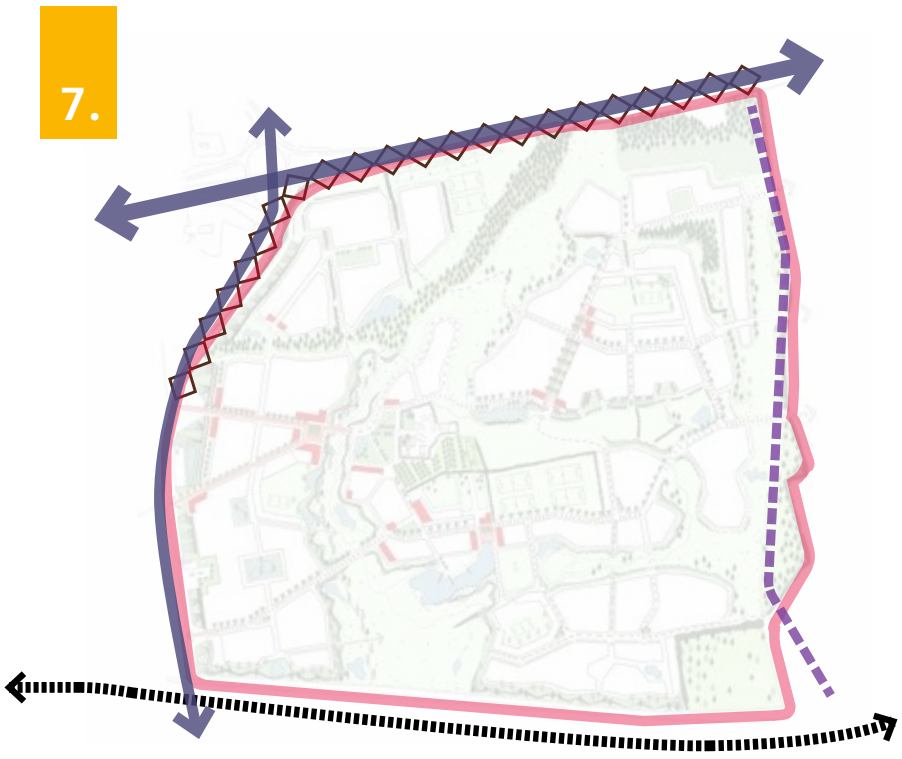
5.



SCENIC VISTAS

The layout responds directly to the elevated areas within the site at the top of the ridge-line, establishing views across to the North Downs to the south and towards the London skyline to the west.

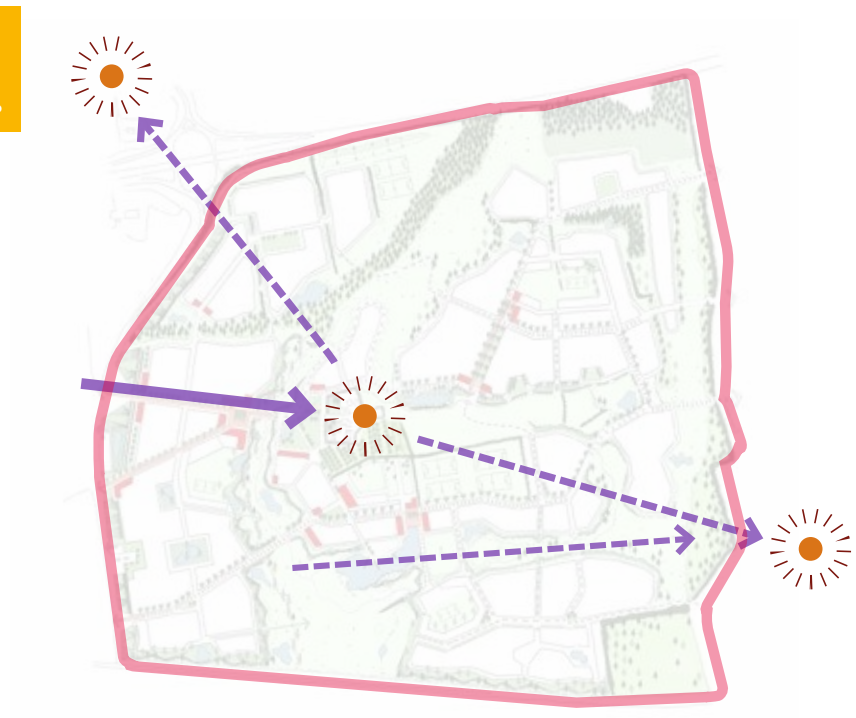
7.



INFRASTRUCTURE

The framework respects the surrounding transport infrastructure to the north, south and west and the gas pipeline to the east. Appropriate buffers are created to ensure set backs, but each buffer forms part of a network of usable green spaces.

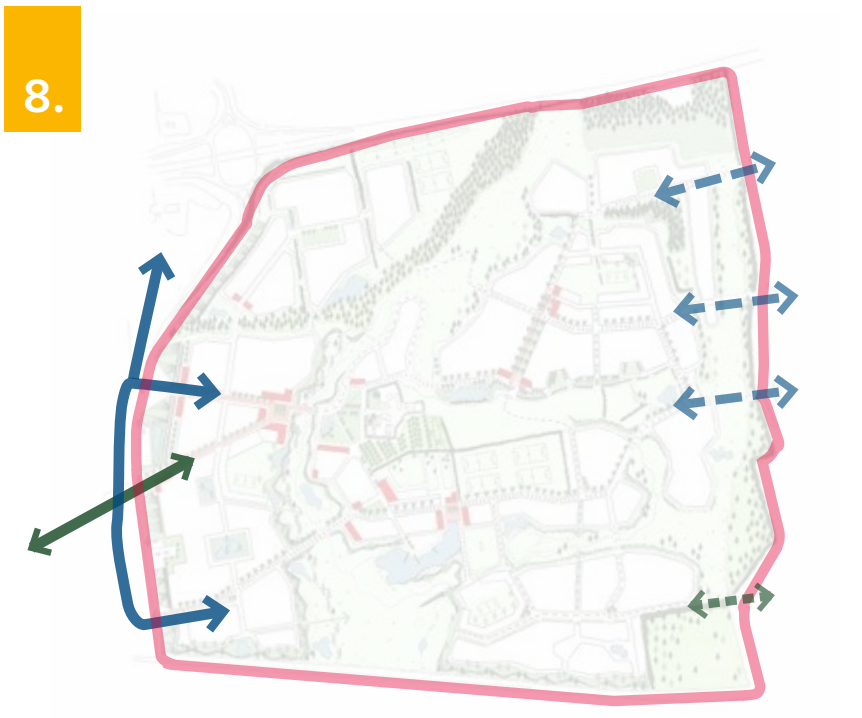
6.



LOCAL VISTAS

Important local vistas which are primarily linked to the heritage assets, are safeguarded and designed into the layout of the Garden Village. Most significantly a Boulevard from the A128 establishes a key view corridor to the Farmstead. The buildings heights and layout also preserve views to the spires of neighbouring churches.

8.



ACCESS AND ARRIVAL

Key vehicular access points are taken from the A128 to the west. A central pedestrian and cycle corridor aligns with Station Road leading to the heart of the Village around the Market Square. Further access opportunities are future proofed into land to the immediate east of the allocation. There is scope for a pedestrian, cycle and emergency access link to the south east of the site, but this is subject to planning permission from the adjoining local authority.

“THE SITE’S WONDERFUL AND PLENTIFUL LANDSCAPE ASSETS PROVIDE A UNIQUE SETTING WITHIN WHICH TO CREATE THE NEW GARDEN VILLAGE. THE ARRAY OF NATURAL PHYSICAL FEATURES INCLUDING THE SOUTH ESSEX FENLAND, THE WETLANDS, THE EASTLANDS SPRING, THE RIDGE AND THE WOODLAND HELP TO INFORM THE CHARACTER AND THE SENSE OF PLACE OF DUNTON HILLS AND CREATE THE OPPORTUNITY ON WHICH TO CREATE A MULTI-FUNCTIONAL AND VARIED GREEN AND BLUE INFRASTRUCTURE NETWORK.

THIS NETWORK WILL NOT ONLY ENCOURAGE HEALTHY WHOLE LIFE LIVING, ENHANCE ECOLOGICAL BIODIVERSITY, EMBED CLIMATE RESILIENCE AND FACILITATE ENVIRONMENTAL LEARNING, BUT WILL ALSO ACT AS THE THREAD WHICH BRINGS THE THREE NEIGHBOURHOODS TOGETHER AS ONE COMMUNITY. IT ALSO OFFERS THE SEEDS OF OPPORTUNITY IN WHICH TO SET NEW FORMS OF PLAY, SPORT AND RECREATION, POCKET PARKS, ACCESSIBLE VIEW-POINTS, HABITAT CREATION, WALKING AND CYCLING MOVEMENT FOR ALL AGES, COMMUNITY FOOD PRODUCTION AND SUSTAINABLE AND WELL-DESIGNED WATER MANAGEMENT.

DUNTON HILLS WILL BE, WELL AND TRULY, A LANDSCAPE LED GARDEN VILLAGE FOR THE FUTURE.”

LANDSCAPE VISION

CHAPTER 4

LANDSCAPE: GREEN AND BLUE INFRASTRUCTURE

Dunton Hills Garden Village is a landscape led masterplan. This section illustrates how the existing landscape features and character influence the development of the Framework Masterplan and sets out principles for the integration of an attractive and ecologically sensitive network of green and blue spaces into the Garden Village.

4.

LANDSCAPE ANALYSIS: GREEN AND BLUE INFRASTRUCTURE

OVERARCHING LANDSCAPE STRATEGY

Dunton Hills will be a 21st century Garden Village, embodying the characteristics of modern living in a rural setting. The landscape will seek to celebrate and enhance the existing natural assets of the site, whilst also forming new landscapes that people will enjoy living, working, and playing in.

The landscape will create a base layer for the development of new homes within neighbourhoods. A range of different landscapes will form the spaces between the buildings, and will create a setting for moments of enjoyment, recreation, exercise and learning.

The landscape strategy for Dunton Hills Garden Village will be developed with the following design principles in mind:

1. **Green Infrastructure -** respecting the existing distinctive landscape features and enhancing existing ecological habitats.
2. **Blue Infrastructure** - Welcoming blue infrastructure into every aspect of the landscape strategy to create a symbiotic green and blue platform for the development of landscape spaces.
3. **Site Wide Landscape Characters** - building on the inherent landscape character and natural assets of the site to develop the site wide landscape character areas.

These objectives will help to deliver a true landscape-led masterplan for Dunton Hills (explained over the following pages).

GREEN INFRASTRUCTURE

The natural landscape of Dunton Hills is varied and majestic, with a number of robust landscape features which will create a unique sense of place. The key physical elements of the landscape infrastructure which will contribute to this are as follows:

- Ancient woodland
- Eastlands Spring
- Wetland meadows
- Ridge
- Linear hedgerow elements

A description of these elements and how they could be incorporated into the masterplan are set out below:

Ancient woodland

The ancient woodland follows the line of the Eastlands Spring southwards, creating a strong linear feature in the landscape. The ancient woodland is protected by national planning policy and is conserved, protected and enhanced within the masterplan. A Public Right of Way provides access through the ancient woodland, allowing for future communities to learn about and enjoy the woodland.

Eastlands Spring

The Eastlands Spring marks the low point of the topography and provides a vital ecological function, it is an important natural asset to celebrate within the masterplan.

Wetland Meadows

A floodplain lies to the south-east of the Eastlands Spring, forming wetlands. The integration of existing blue infrastructure networks with Sustainable Drainage Systems (SuDS) will be critical to the success and future sustainability of the new Garden Village. A series of natural and man made water bodies exist within the site which create a mosaic of habitats and recreational environments. These can be incorporated into the landscape, enhancing biodiversity and creating an attractive setting for residents

Ridge

The sloping topography of the ridge forms a striking feature within the site and reinforces the transition from the fenland to the hills. This elevation affords long distance views to the east and south from the ridge which allows a celebration of the drama created by the expansive landscape. As the ridge snakes through the site it forms a series of slopes with different aspects, micro-climates, and view opportunities. The open character of the ridge should be preserved in the masterplan to retain views both out and in.

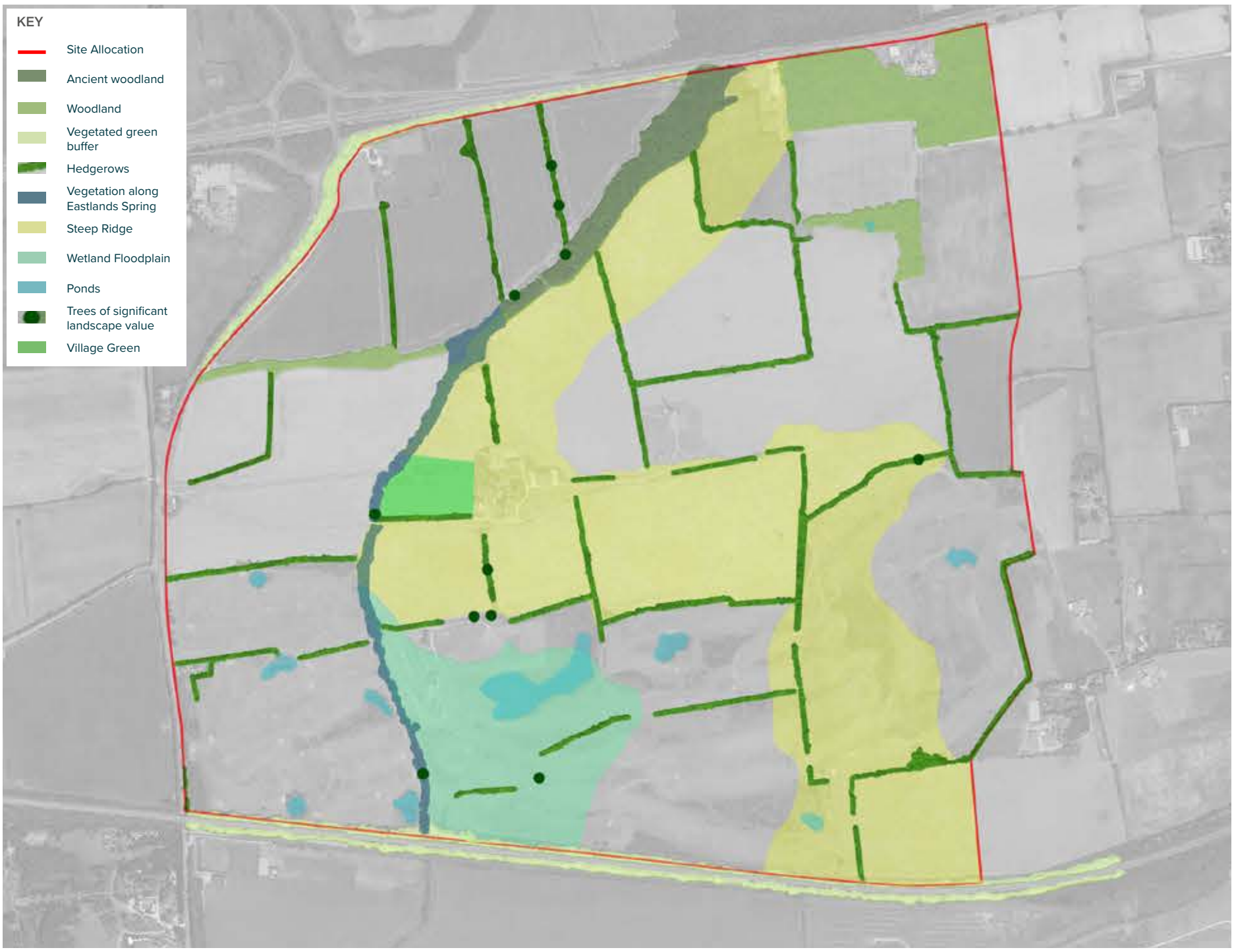
Linear hedgerow elements

The historic land use over the last few hundred years has been farmland and elements of the Dunton Hills Farmstead have been present in the landscape from the early 17th century. The patchwork of fields around the farmstead were demarcated with hedgerows, some of which still remain today. The masterplan should retain the historic hedgerows in the north-west part of the site and should seek to retain any other linear landscape features within the site. Any existing hedges that are retained can be enhanced by creating green infrastructure connections to and from them, as well as hedgerow infill.

A robust landscape framework

These landscape elements will make up a robust framework and will inform the development of a masterplan; which will sensitively integrate with the setting and celebrate the inherent nature found at Dunton Hills for generations to come.

The masterplan will provide a net gain in environmental and social benefits with increased access to open space, and promote habitat creation and biodiversity across the site. The principles of protecting, conserving and enhancing the landscape infrastructure of Dunton Hills are set out in in Section 5.



Existing green and blue infrastructure



BLUE INFRASTRUCTURE

Dunton Hills Garden Village should focus on celebrating water and sensitively integrate blue elements with green elements.

SuDS are required in order to ensure the development parcels are suitably managed in terms of surface run off and stormwater management. A series of interventions for SuDS will be implemented in the Garden Village including dry attenuation basins, new ponds and basins for attenuation, swales, rain gardens, culverts and traditional stormwater pipes to facilitate moving water along slopes.

In order to fully integrate the blue infrastructure network into the landscape and green infrastructure for the Garden Village, the following principles will be adopted:

- The water management will celebrate visibly 'on the surface' through the use of permeable paving, swales and rain gardens within the development parcels. Swales will be favoured over traditional culverts and pipes in order to manage the water at the surface, which can also include planting elements.
- Focal points for play and social interaction will be located adjacent to elements of blue infrastructure such as the existing ponds, detention basins and swales. These areas can provide a tangible connection to nature and also allow for learning and education of water management.
- The water management and catchment systems will be designed to sensitively integrate into the wider landscape. New basins will be aligned with existing green infrastructure elements such as existing hedgerows to create a green and blue infrastructure link for the promotion of biodiversity.
- The manicured golf course will be replaced by fenland meadow within the floodplain of the Eastlands Spring, with existing ponds being retained and enhanced through planting to promote biodiversity. Within this meadow a series of new ponds will allow for the translocation of Great Crested Newts and promote a wetland habitat for migrating birds.

CASE STUDY: WATERCOLOUR, REDHILL

This scheme for over 520 homes on a former sand washing plant has seen the restoration of existing water attenuation features, including; an industrial outwash lagoon and a settlement lagoon.

The Gatton Brook, which had been culverted under the plant, was re-established, which along with a Blue Spine is a key component of the site's multifunctional environmental infrastructure. 'Water at every turn' was the team's sloagan for the scheme.

The Blue Spine takes on 3 characters – a brook, a canal, and reed beds. It issues into the lagoons which are now linked together, and then to the Redhill Brook. Awareness of water is central to the vision – as an attractive setting for homes, filtering and attenuation of surface water, and as a wildlife resource. The restored lagoons buffer between town and countryside.



The Blue Spine runs through the centre of the scheme, the restored brook runs around the edge.





Integrated Blue Infrastructure

CASE STUDY: THE MISSING LINK - VAUXHALL WALK RAIN GARDENS, LONDON

The 'Missing Link' scheme completed in Vauxhall in 2015 is a series of pocket parks and promenades created to promote walking and cycling connections. Part of the design included a series of new rain gardens to help combat surface run off and excess stormwater. The scheme was the product of an RIBA design competition and included elements from winning gardens from the Chelsea Flower Show.

The rain gardens were planted by a not-for profit organisation who train unemployed young people back into full time employment. Free-draining urban meadows form the raingarden network which run alongside paths, streets and within the public realm. The planting uses the surface run-off water from the adjacent hard-standing areas as irrigation.



SITE WIDE LANDSCAPE CHARACTER AREAS

Whilst the whole of the green and blue infrastructure network provides the framework and setting for the Garden Village and should be seen as a whole, its varied character means it can be divided into five main landscape character areas, these are;

- Flat Fanns Edge
- Eastlands Spring
- The Wetlands
- The Woodlands
- The Ridge.

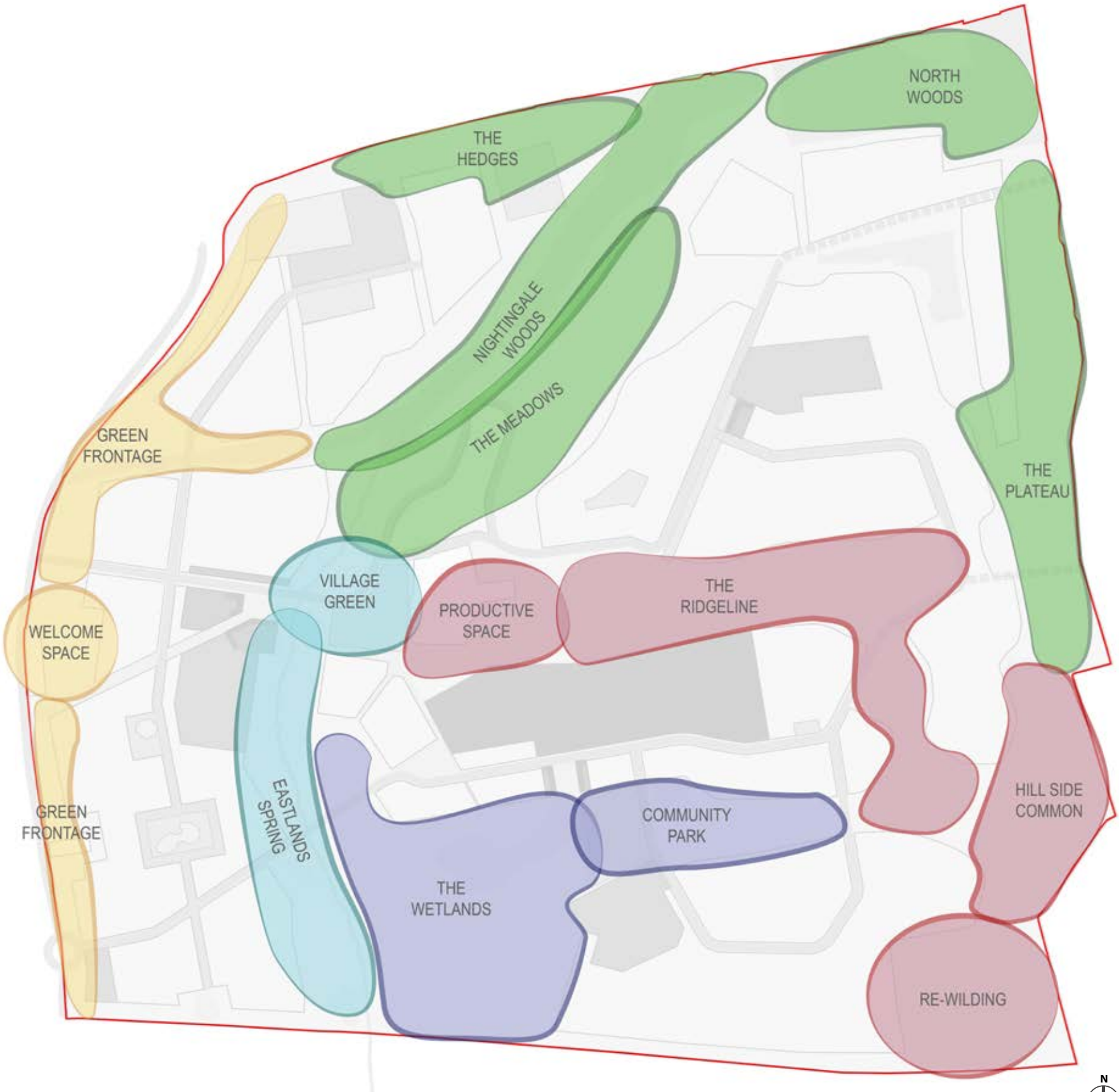
These character areas are particularly important in defining the character of different neighbourhoods within the Garden Village and are explained over the next few pages.



Site wide landscape character areas

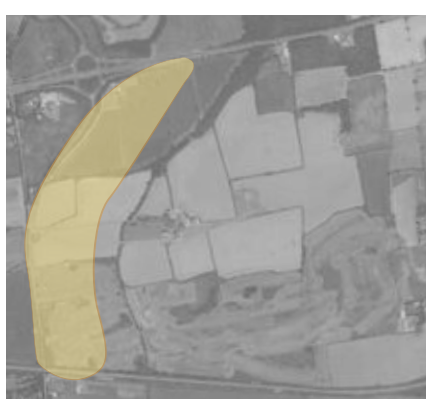
SITE WIDE LANDSCAPE TYPOLOGIES

The character areas are also explored in more detail and are further categorised into landscape typologies which celebrate the variety and uniqueness of the site's natural elements. These landscape typologies will help shape how detail design comes forward. Further definition is provided for each of the spaces and what they will bring to the Garden Village in terms of recreation, biodiversity and natural landscapes.



Site wide landscape typologies

FLAT FANNS EDGE



EXISTING CHARACTER

The western boundary of the site is characterised by the wider landscape character of the fenland to the west and south. The Flat Fanns Edge is characterised by wide, open, level landscapes and this typology sweeps up and into the site to meet the development edge. Key features of the Fanns include:

- Open views
- Large feature trees visible from long distances
- Strong rectilinear patterns in field boundaries and drainage elements

These characteristics and features will be embodied within the Flat Fanns Edge landscape both at the edges of development and within the neighbourhoods themselves.



View looking east across the Flat Fanns Edge

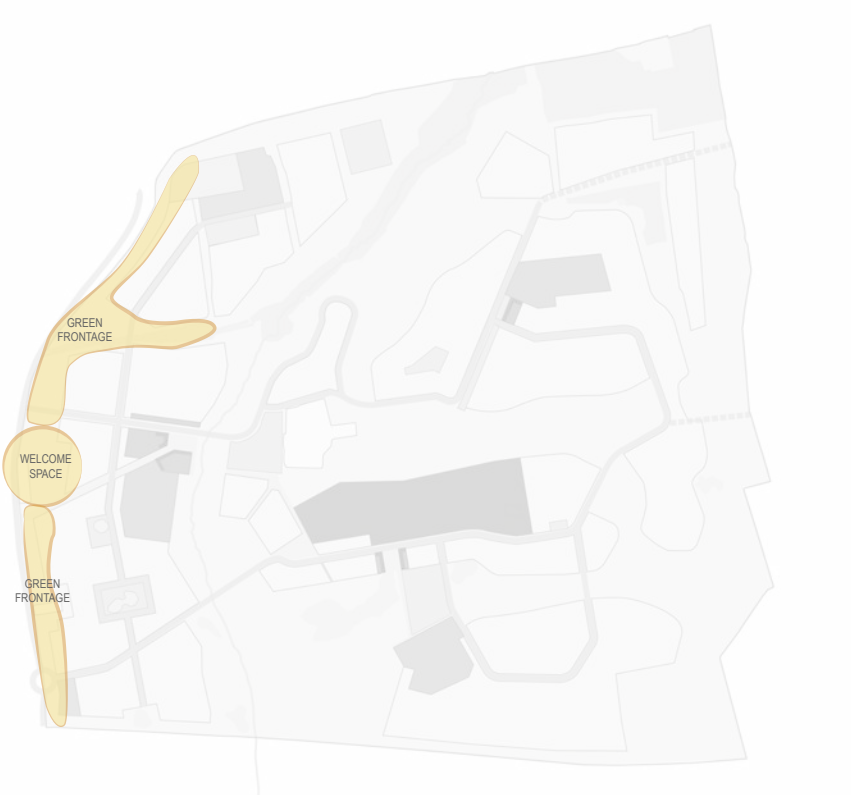
CASE STUDY: NEWHALL, ESSEX

Newhall is a new urban community based outside of Harlow in Essex. The founding principles of nature, colour, distinctiveness, flexibility and public realm are established within the many open spaces throughout the development.

Landscape ‘at the doorstep’ is a key feature of the base development at Newhall where you are never more than 60m away from a green space. A network of cycle paths open spaces to provide a convivial active landscape for the community. These green spaces form frontages to the development which celebrate the life and activities of the residents.

The green frontage at Newhall successfully created a vegetated buffer at the fringes of the development, which then opens out onto a recreational landscape for all residents to enjoy.





LANDSCAPE TYPOLOGIES - RESPONDING TO EXISTING CHARACTER

Green Frontage

The landscape that abuts the A128 forms the link between the Flat Fanns landscape to the west and the development within the site. These spaces have three vital functions:

- To sensitively integrate the development into the wider context,
- Providing a sense of arrival into the development from the A128; and,
- Providing an attractive frontage to the edge of the development.

The areas of Green Frontage should be landscaped to create a conscious link to the Fanns in the west, through tree a planting selection sensitive to the character of the reclaimed Fenland. These areas should provide space for recreational and leisure pursuits, as well as a landscaped doorstep for the development.

Welcome Space

The Welcome Space provides the masterplan with a formal arrival landscape from the A128, between the confluence of the existing road and proposed roads into the scheme. This space should also embody the characteristics of the reclaimed Fenland, with space for play, recreation, leisure and feature gateway trees.

The Welcome Space should create a sense of arrival from the A128, and provide a landscaped setting for new pedestrian and cycle crossings over the A128. This area can also incorporate SuDS features in a formal layout or arrangement to celebrate water management at the entrance to the development.

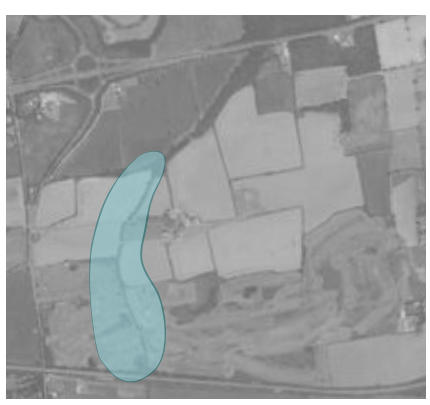
KEY LANDSCAPE OBJECTIVES

- To create a formal welcome space at the confluence of the A128 and main Mobility Corridor into the site.
- To retain the 'open' character of the Fanns within the development, with views from built form westwards towards the Fenland.
- Landscape layout and design should be rectilinear in arrangement to embody the Fanns character. This in turn should lead to a more formal urban structure within this part of the site.



An impression of the Flat Fanns landscape character area

EASTLANDS SPRING



EXISTING CHARACTER

The gentle Eastlands Spring provides a riparian corridor that runs north-south in the western part of the site. It forms the lowest levels of the site topography and links the wetlands to the woodlands character areas.

The spring forms the eastern edge to the Flat Fanns character area and provides biodiversity benefits and an aquatic environment on the doorstep of the neighbourhood.



Eastlands Spring

CASE STUDY: HAM VILLAGE GREEN

The Ham Village Green is nestled within the London Borough of Richmond and provides accessible green space under the 'Friendly Parks for All' initiative.

The green itself provides open space for recreation, play equipment, space for fitness classes, a wildflower meadow and waymarked trails for walking and exercise.

The Ham Village Green is supported by a community group who value the green and have adopted stewardship of the space, called the Friends of Ham. They have worked with the council to implement new tree planting, wildlife zones and improved play equipment. It is envisaged that this type of community ownership and dedication to their green space will provide longevity for the Village Green at Dunton Hills Garden Village.



LANDSCAPE TYPOLOGIES - RESPONDING TO EXISTING CHARACTER

Eastlands Spring Corridor

The riparian corridor of the Eastlands Spring will be conserved and enhanced for both biodiversity and public benefits. Where necessary, existing vegetation will be thinned back to allow local communities to interact with the spring. Access will be provided right up to the banks in places to allow a tangible connection with the water.

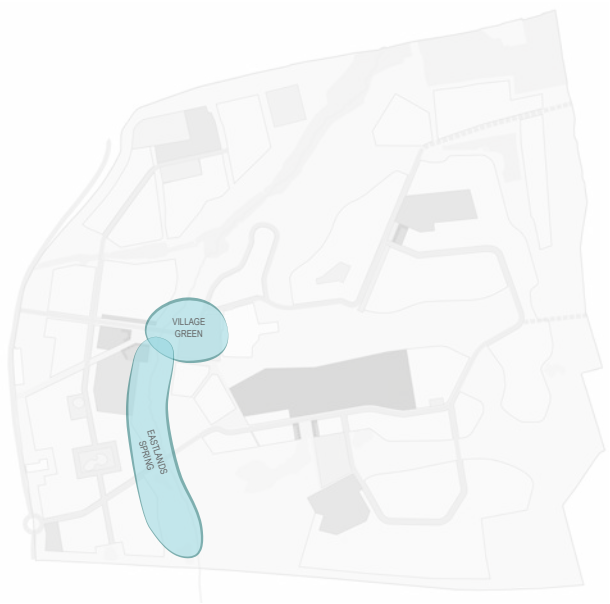
Village Green

The Village Green will form a social space for residents to enjoy and become a space for celebration, village fêtes, leisure, social activity and social congregation.

The Village Green will form a connective space between the Village Centre and the farmstead and will celebrate the retention of long vistas to the farmstead as well as the protection of veteran trees.

The landscaping will be formal to echo the traditional appearance of a village green, with a softer wetland edge to the west.

The riparian corridor of the Eastlands Spring will form the eastern boundary of the Village Green, forming a wetland habitat for both the promotion of biodiversity and education. SuDS elements such as dry basins will also form part of the Village Green, providing a mosaic of habitat types within the heart of the Garden Village.



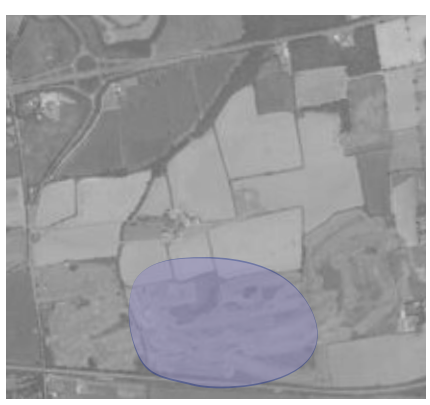
KEY LANDSCAPE OBJECTIVES

- Veteran trees and trees of landscape value along the spring corridor should be retained and protected.
- Some clearing of vegetation should occur along the spring corridor to allow access to the banks of the watercourse.
- Complementary habitats should be integrated adjacent to the Eastlands Spring to promote biodiversity.



An impression of the Eastland Spring character area

THE WETLANDS



EXISTING CHARACTER

The Wetlands character area is located within the central southern part of the site, on the lowest part of the land and adjacent to the Eastlands Spring. It currently comprises a manicured golf course.

The floodplain from the Eastlands Spring covers much of this area, lending the space naturally to be developed as biodiverse and recreational wetland habitat.

There are attractive views across the pond to the farmhouse to the north and the Church of St Mary's to the east which should be maintained where possible. The natural hydrology, drainage and existing bodies of water found in this area of the landscape form the aquatic assets from which this character area is derived and these features should be enhanced and celebrated through the landscape strategy and masterplanning process.

New ponds for SuDS and biodiversity enhancement will be created, with reed bed and wetland meadow habitat creation forming green infrastructure links for both flora and fauna between the bodies of water.



View looking east across the existing pond toward the ridge line

CASE STUDY: WOOD MILLS NATURE RESERVE

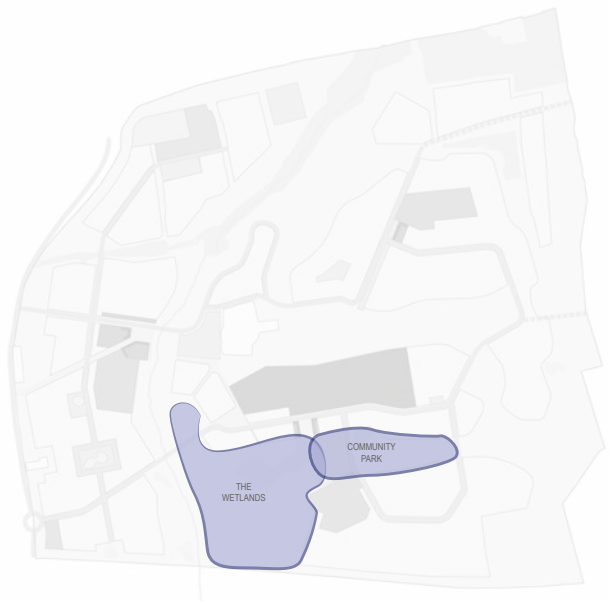
Wood Mills Nature Reserve is operated by the Sussex Wildlife Trust. It provides excellent opportunities for outdoor learning and interaction with nature alongside a variety of habitats including streams, ponds and unimproved meadows which attract a range of birds, mammals, insects and amphibians.

The Sussex Wildlife Trust work closely with local volunteers to maintain the reserve and run educational events throughout the year for all age groups.

Through the wetlands character area, a multi-functional green space and key habitat area that strengthens local biodiversity can be created.







The Wetlands

The Wetlands will celebrate water management and riparian habitats, and promote use and access to nature by adopting a 'doorstep' approach between residential uses and open green space. Enhancing the existing ponds and integrating new habitats within the Wetlands will ensure easy access to a range of ecological and conservation environments, promoting understanding, education and enjoyment within the community.

Within the wetlands a variety of SuDS features should be implemented including swales, dry basins and wet ponds. These features should be celebrated and integrated sensitively into the landscape.

New habitats can be formed by enhancing existing ponds and the creation of new ponds, reedbeds, ephemeral water ditches and fen meadows with wet grassland mixes to support the translocation of Great Crested Newts and migrating bird populations.

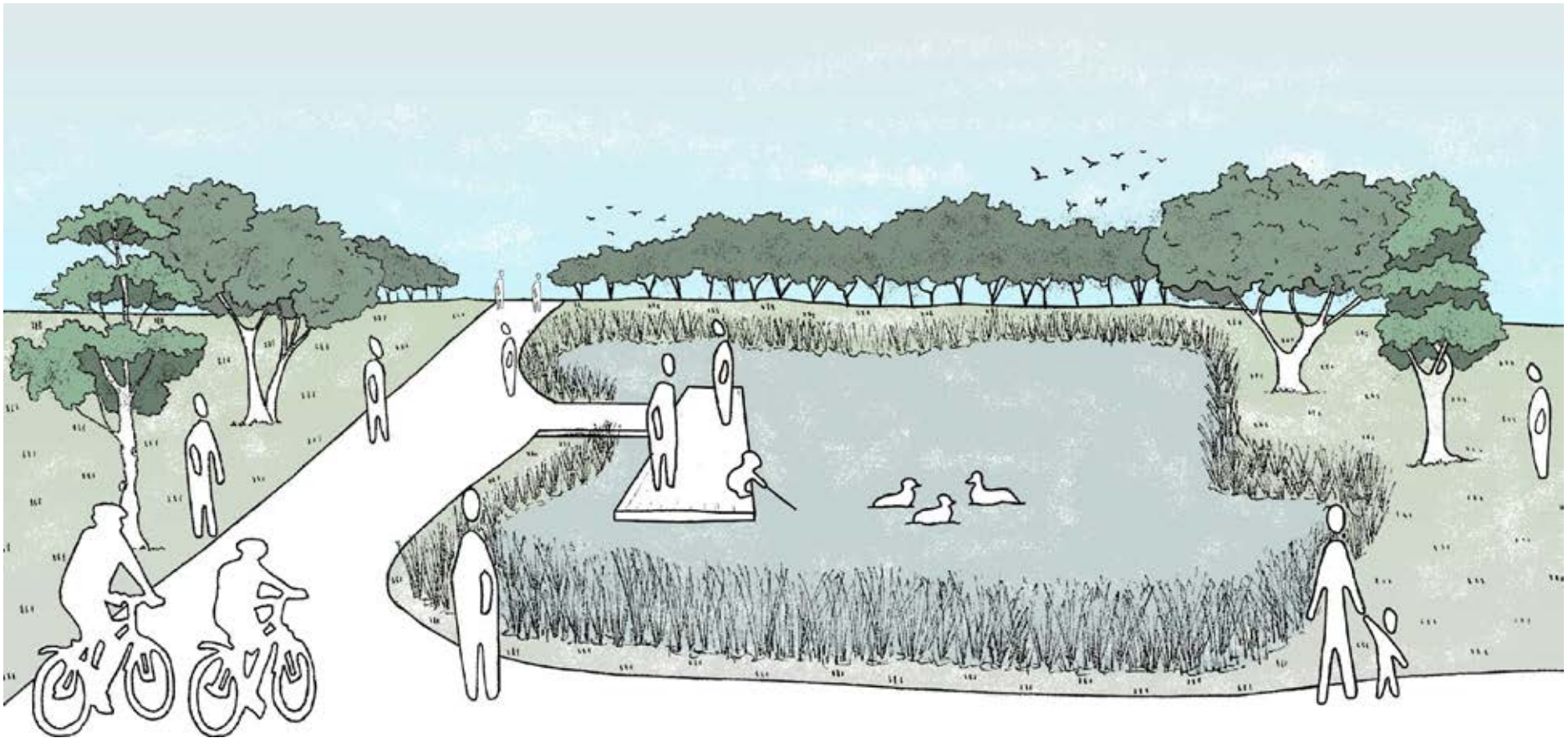
The Wetlands should be designed with equal regard to biodiversity protection and recreational access for the community, with boardwalks, play spaces, open walkable landscapes, new walking routes and recreation spaces located in suitable areas in order to protect the emerging habitat diversity.

Community Park

An improved and accessible green corridor that runs east-west through the wetlands links the Eastlands Spring corridor to the Ridgeline, and could form a new community park.
This space creates a transitional landscape between the low lying land and the higher topography of the ridge, and should incorporate sustainable water management at the surface to promote understanding and interaction with the local hydrology.

KEY LANDSCAPE OBJECTIVES

- Existing ponds should be retained and enhanced.
- Access to certain areas should be limited (through planting strategies) to ensure flora and fauna are protected.
- A variety of new, complimentary habitats should be integrated into the Wetland habitat to promote biodiversity.
- The wetlands should preserve views across the existing pond through to the ridgeline.



An impression of the Wetlands character area

RIDGE



EXISTING CHARACTER

The natural topography that runs through the site forms the Ridge character area. The sloped land forms the boundary between the Fanns Character Areas to the west and the Langdon Hills and Farmland to the east.

The Ridge is characterised by wide open sweeping views across the landscape, that extends westwards towards London in the distance.



The ridgeline

CASE STUDY: DUNSTABLE DOWNS, BEDFORDSHIRE

Dunstable Downs is within the Chilterns Area of Outstanding Natural Beauty and comprises several SSSI's, extensive chalk grasslands and several historic features including Scheduled Ancient Monuments. The walk along the top of the ridge is one of the most popular routes taken by visitors today. Expansive views over the landscape below are celebrated on the ridge walk.

The site is managed by the National Trust and a programme of activities has raised the level of exercise and well-being including a new Health Walk, a kite festival and a weekly fitness group.



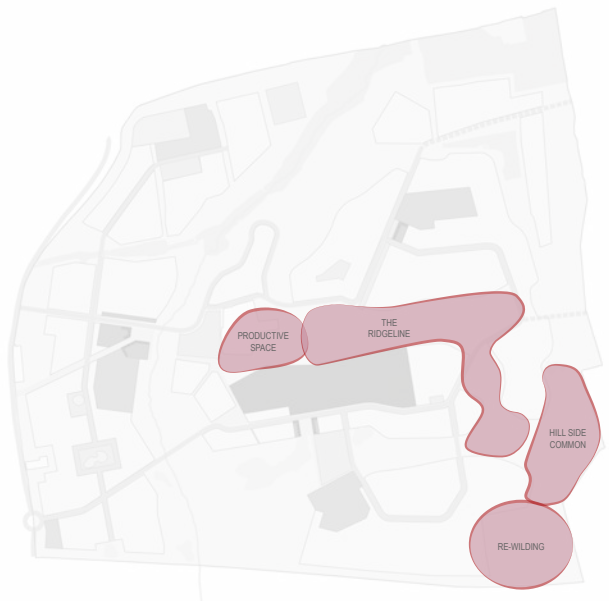
CASE STUDY: ORCHARDS EAST

Orchards East is an environmental initiative that takes place across six counties, including Essex. It is funded by the Heritage Lottery with the aim to understand the past, present and future of orchards.

The Leigh-on-Sea Allotments Orchard is a project based on conservation and celebration of Essex varieties of pears and apples. The orchard is surrounded by a native species hedge and as well as the fruit trees, the orchard contains a wildlife pond, composting areas, and allotment space. Today, thanks to the volunteers the orchard now contains all 35 Essex varieties of apple.

Initiatives such as Orchard East can be employed at Dunton Hills Garden Village to engender a sense of ownership for the productive space, and to keep the communities connected with nature of local provenance.





LANDSCAPE TYPOLOGIES - RESPONDING TO EXISTING CHARACTER

The Ridge-line

The Ridge-line will encapsulate the natural undulating topography between the higher Langdon Hills to the east and the lower Fenland to the west. The Ridge-line is an intrinsic part of the site's landscape and will be protected and celebrated.

Key views to the west over the historic farmstead, long vistas west towards London, and views south-east towards heritage features outside of the site boundary, will be maintained and used as resting points that encapsulate these views.

The slopes of the Ridge-line will be managed for biodiversity improvements including scrub and tussocky grassland for invertebrates.

Higher levels of the Ridge-line will form a linear walking route, with landscaped spaces that flow into the neighbourhoods.

Hillside Common

Forming part of the Ridge landscape character area will be a large open common space that links the Ridge-line walk to the eastern boundary. From here views open up to the west towards London, as well as south-east towards Dunton Hall and the Church of St Mary.

This area will be managed for both recreational benefits and habitat enhancement. This common space will be be accessible to all with walking routes, social spaces and play spaces all nestled within pockets of scrub grassland created for invertebrate promotion.

Productive Space

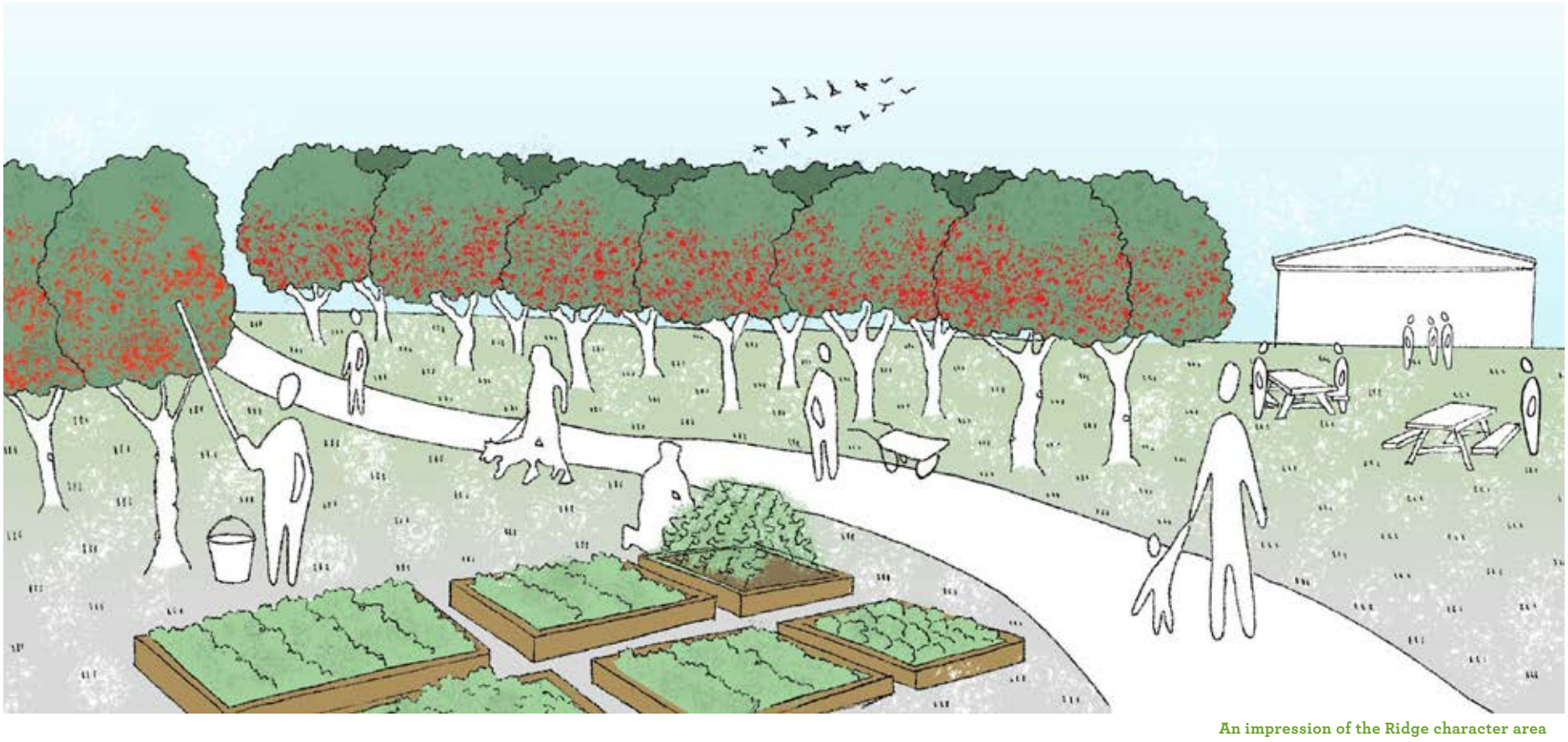
A productive landscape will sit at heart of the Garden Village, associated with the farmstead's history of arable farming. Orchards, beehives, self growing and community growing spaces will be provided, with a focus on species of local provenance such as the Essex Heritage variety apples. The Productive Space will also provide educational and learning benefits, with opportunities for school involvement and educational programmes for the residents to learn about food production.

Re-wilding

Other than a potential link to Church Lane to the east, the south-east corner of the site will provide an area of landscape specifically for habitat creation, only accessible by those charged with its management for biodiversity enhancement. Once established it will be used as an area for education and learning, with school groups having organised visits to the area. Woodlands with glades and rides should be created to form receptor sites for local reptiles.

KEY LANDSCAPE OBJECTIVES

- Landscaped spaces should be created along the Ridge-line walk to connect development parcels with the Ridge.
- The productive landscape should include orchards, bee hives, self-grow and community facilities.
- Open views to heritage features and long vistas should be retained and celebrated.
- The Ridge itself should be managed for both recreation and biodiversity benefits.



An impression of the Ridge character area

WOODLAND



EXISTING CHARACTER

The northern and north-eastern parts of the site are characterised by areas of broadleaved woodland. The ancient woodland follows the historic Nightingale Lane, which leads to the original farmstead, and also connects to Eastlands Spring, whilst an area of new plantation woodland to the east of the Ancient woodland creates a connection both north and south of the A127.



Nightingale Lane running through Ancient Woodland

CASE STUDY: HEARTWOOD FOREST, HERTFORDSHIRE

The Heartwood Forest is managed by the Woodland Trust and comprise 347 hectares of new native woodland and protected ancient woodland on formerly agricultural land.

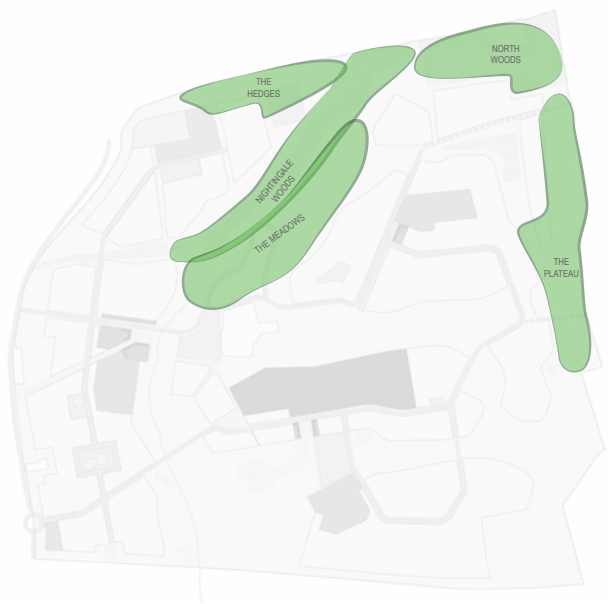
The Heartwood provides a network of recreational walking routes through the woods, meadows, adjacent to water bodies and grasslands which are clearly marked with artistic route markers.

Volunteering groups from the Woodland Trust and the Hertford Natural History Society are involved with monitoring plant and wildlife populations throughout the Heartwood.









LANDSCAPE TYPOLOGIES - RESPONDING TO EXISTING CHARACTER

Nightingale Woods

The Ancient woodland which runs along the historic Nightingale Lane will be protected by a minimum 15m offset from built development to allow for regeneration, and new planting of an eco-tone buffer on each side. The new broadleaved tree planting will be provided in a variety of stock sizes to create a varied canopy. Enhancements such as a demarcated path edge through the woodland will help prevent damage to the under-storey within the woods, and the installation of a gate at each end will prevent vehicular access.

The Hedges

In the north-western part of the site a number of heritage hedgerows form a pattern of historic field boundaries. These hedgerows will be retained and protected within the Garden Village. The hedges area will help towards prviding an open landscape between the development and the boundary of the A127.

The Meadows

The Meadows will be established on the sloping land between the Ancient woodland and the development edge, providing an area of open landscape for recreation, leisure, exercise and biodiversity enhancement.

The Meadows will be managed for habitat improvement, as a transitional green space between the existing mature woodland, through scrubby grassland and into meadows. This mosaic of habitats will echo the Langdon Ridge SSSI to the south east of the site.

North Woods and The Plateau

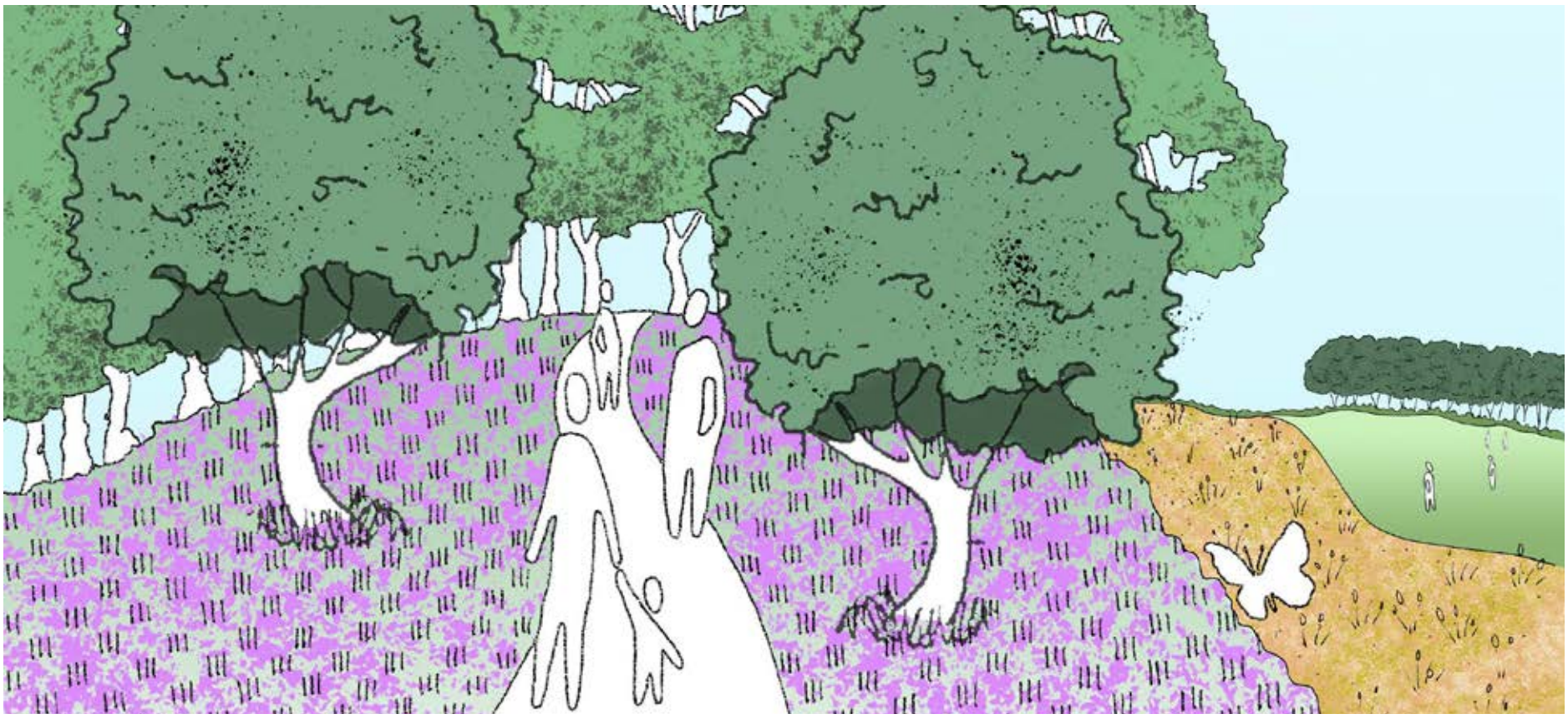
The woods will provides a strong green corner-piece for the Garden Village, connecting to Nightingale Woods. Increasing tree canopy coverage will strengthen the woodland character along the eastern boundary. North Woods will be managed for recreational purposes, such as enhanced walking routes, birdwatching, and social interaction whilst maintaining habitats for the inherent flora and fauna of the area. By focusing recreational activities within the North Woods and Plateau, the Ancient woodland will be further protected from these activities.

The Plateau landscape creates a buffer between the development edge and the greenbelt to the east. Reinforcing the green edge of the Green Belt is vital to establish a strong vegetated buffer of native trees and hedgerows along this edge.

Recreational activities, play, and exercise should be encouraged within the Plateau, through the provision of meandering walking routes, natural play spaces, exercise trails, landscaped social spaces and new pockets of woodland.

KEY LANDSCAPE OBJECTIVES

- Eco-tone buffer to be provided along the edges of the ancient woodland, 15m minimum.
- Recreational landscape to be provided throughout the Woodlands area to include walking and jogging routes, informal play space, landscape restful spaces, exercise routes and open space.
- New trees to be planted extensively to increase canopy cover and embody the woodland character.
- The Green Belt boundary should be clearly and robustly defined with new hedges, hedgerow trees and woodland.



An impression of the Woodland character area

BIODIVERSITY

BIODIVERSITY STRATEGY

Dunton Hills Garden Village is located to the west of the Langdon Ridge Site of Special Scientific Interest (SSSI) and to the south east of Thondon Park SSSI; their designated features provide the rationale for the development of habitats within Dunton Hills.

Proposed Habitats

The habitats within Dunton Hills Garden Village should either be restored or created and should seek to create a similar mosaic as that found at Langdon Ridge SSSI. It should comprise:

1. Ancient and long-established woodlands
2. Scrub/grasslands
3. Lowland meadows
4. Open water
5. Running water
6. Fen meadows
7. Traditional orchard

Ancient and long-established woodlands

Broadleaved woodlands within the site must be retained. Eastlands Spring Local Wildlife Site, which is an Ancient woodland, is a woodland of damp soils and dominated by mature ash, whilst smaller areas of woodland on higher ground are drier types and dominated by mature and veteran oaks.

Woodlands should be connected by retained and enhanced and new species-rich hedges, new woodlands and scrub. These should be improved over time by woodland management plans. Other improvements should include increasing the deadwood component within woodlands and the translocation of the rare Deptford pink flower to dry woodland and scrub margins. Deptford pink is a key feature of the nearby Langdon Ridge SSSI.

Scrub/grasslands

Retained and new mosaics of mixed species scrub and meadow grasslands will provide a range of habitats for barn owls, bats, reptiles and great crested newts. Transitional habitats should grade from scrub, to brambles, rose, and tall herbs to grassland meadow. Scrub should be managed to maintain a 'youthful' early successional structure and managed by rotational cutting (1-3 years).

The aim of management will be to produce a diverse habitat of varied age and structure to attract a rich variety of species.

Lowland meadows

The opportunity to create species rich neutral grasslands managed as hay meadows will attract key target species including notable species recorded at Langdon Ridge SSSI such as green-winged orchid. These areas include grassland along the southern boundary (rail bank) which is an open herb rich sward (including red clover, knapweed, red bartsia).

Wildflower rich grassland 'strips' with areas of bare ground, including scattered scrub will target the Grizzled Skipper butterfly. These areas should be located in sunny, sheltered conditions and contain an abundance of early spring nectar plants. These 'strips' should be cut in rotation.

Open water with reeds

The masterplan will retain many existing bodies of water. These retained ponds and their marginal vegetation must have all non-native species removed and the extent of marginal reed-beds maximised.

SuDS basins will be naturalistic and designed with irregular shapes and shelves that allow 'draw down' conditions.

Running water

The Eastlands Spring will be retained along with its boundary woodlands. The stream will be buffered with complementary habitats such as grasslands, ponds and scrub and some sections of trees will be pollarded to allow light to penetrate the stream.

Debris will be allowed to gather in the stream to create a variety of conditions such as slow moving, deepwater pools and faster moving 'runs' and riffles.

Fen meadows

The southern part of the masterplan establishes a fen meadow and rush pastures as part of the wetlands character area. Areas that are naturally drier will be oversown with a wildflower mix. This should include areas of scrub, longer grass, and shorter grass mosaics. Management of water levels and landform creation will be crucial to the wetness and thus the habitat composition.

Some cutting of rush pastures may be required and drier areas should be managed by rotational cutting. This habitat type will target invertebrates and reptiles such as grass snake. Ponds within the habitat mosaic will provide the environment for the translocation of great crested newts. Log piles and turfed log piles will enhance this habitat area for reptiles and amphibians.

Hedgerows

Species rich native species hedges should be retained and new ones created to provide linear green corridors across the site.

Some retained hedges should be maintained by regular hedge laying, with infill and new planting using a palette of native species. These hedgerows will be of particular attraction to farmland birds such as the Yellowhammer.

Essex orchard

Within the productive landscape there is an opportunity to establish a traditional orchard with species of local provenance to Essex; this will create a destination for recreation as well as a rich wildlife habitat.

For orchard biodiversity to flourish a variety of trees of varying age will be required. Some veteran trees should be encouraged through management with features such as hollow trunks, rot holes, split bark, tears, and sap runs relatively quickly. Because of the wide tree spacing in orchards compared to woodland, the dead and decaying wood should be located within open, sunny locations; these conditions create a good habitat for rare and notable insects and other invertebrate species which depend on deadwood. The orchard grasslands should also be flower rich and hence important for a different range of invertebrates.



Scrub grassland



Deptford Pink in the woodland



Fen meadows



Biodiversity Strategy

KEY BIODIVERSITY OBJECTIVES

- Application of the mitigation hierarchy to deliver landscape- ecological networks by creating, enhancing, complementing and interconnecting the site's habitats. The Village will provide an invaluable building block of integrated habitats which are both coherent and resilient.
- The Village's ecological network will provide a similar mosaic of habitats to that found at Thorndon Park and in particular Langdon Ridge SSSI. Designated features will provide an important rationale to the development of habitats within the Village along with targeted mitigation and enhancement for a number of protected and notable species.
- Aspirational target of 20% Biodiversity Net Gain (BNG) through the provision and recovery of Habitats of Principle Importance to UK Biodiversity (priority habitats). Creation of a BNG 'legacy' through provision of mechanisms to enable management and maintenance of habitats.
- Provision of ecosystem services through the creation of a wildlife-rich landscape both within the built realm and semi-natural landscape. The Village will provide different levels of interactions between the public and wildlife to enable biodiversity to flourish whilst also reconnecting people to the natural world.

PLAY

PLAY AND RECREATION

A range of sport and recreational opportunities will be provided for, including the provision of playing fields and sports pitches, play areas in the form of LEAPs (Locally Equipped Areas of Play) and NEAPS (Neighbourhood Equipped Areas of Play), and amenity grassland for non-prescriptive play.

The creation of a suite of complimentary play spaces will ensure there is close access for all residents living at Dunton Hills Garden Village, and that these create multifunctional spaces for a variety of ages and abilities.

Children's play spaces will incorporate a range of natural and imaginative provision, aligned with more traditional prescriptive play preparations. Provision of play and social spaces for youth should be aligned with both sports activities and community cultural facilities with the potential to create sporting events throughout the year, both indoor and outdoor activities, as well as connecting play space with community buildings and areas of public open space.

All areas of play will be sensitively integrated into the landscape using planting and vegetated buffers to create enclosures coordinated with the character areas in which they sit.

Locally Equipped Areas of Play (LEAP)

The function of a LEAP is to provide stimulating and challenging play experiences for children with a minimum of six individual play elements. The LEAPS should be sited within a five minute walking distance of dwellings and distributed across the masterplan to ensure the catchment area covers the development parcels.

Play features will include equipment and space should be provided for physical activity and informal games. The recommended space provision for a LEAP is 400m^2 with a 10m buffer between the play space and the nearest residence.

LEAPS will be themed to the landscape character areas that they sit within, for example the play spaces within the Fanns landscape character may retain a flat landscape, whilst the play spaces within the Ridge character area could include landscaped mounding to provide height.

Neighbourhood Equipped Areas of Play (NEAP) and Multi Use Games Area (MUGA)

The function of a NEAP is to provide play space primarily for older children with some provision for younger play too. NEAPs should be sited within a fifteen minute walking distance of dwellings; two spaces for the provision of NEAPs will be located within the masterplan.

Play opportunities within a NEAP should include sport and informal balls games, and an area of hard-standing will be provided. NEAPs can be located adjacent to MUGAs to provide a range of play and sports facilities. The recommended space provision for a NEAP is 1000m^2 with a hard-surfaced area of a 465m^2 minimum. A buffer zone of 30m from the nearest dwelling will be provided.

NEAPs will be themed to the character area they sit within. For example, aquatic play could be explored within the wetlands character area.

Sports

A range of sports facilities will be provided within the Garden Village. A sports hub with pitches, a sports hall and a multi-use games area is centrally located, and within the secondary school. Pitches should support both rugby and football and potentially accommodated by a summer athletics track.

In the north of the development a series of football pitches will provide further sports facilities, whilst in the south, a cricket pitch will be located close to the southern neighbourhood centre.

Healthy Living

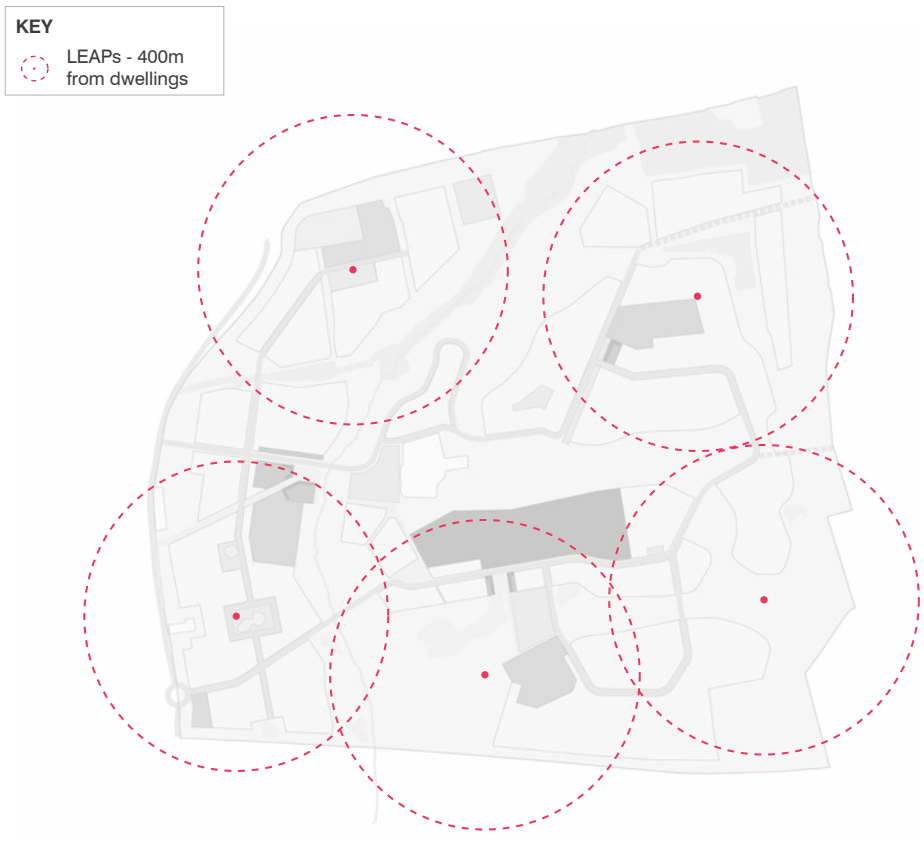
Supporting the formal play areas and sports facilities will be a variety of exercise elements and features to promote a healthy lifestyle. Parks and open spaces will house activity trails, trim trails and cycle routes which will flow through the landscape connecting the neighbourhoods. Informal kick about spaces should also be provided adjacent to play areas.

A proposed wellness trail is illustrated on page 112.

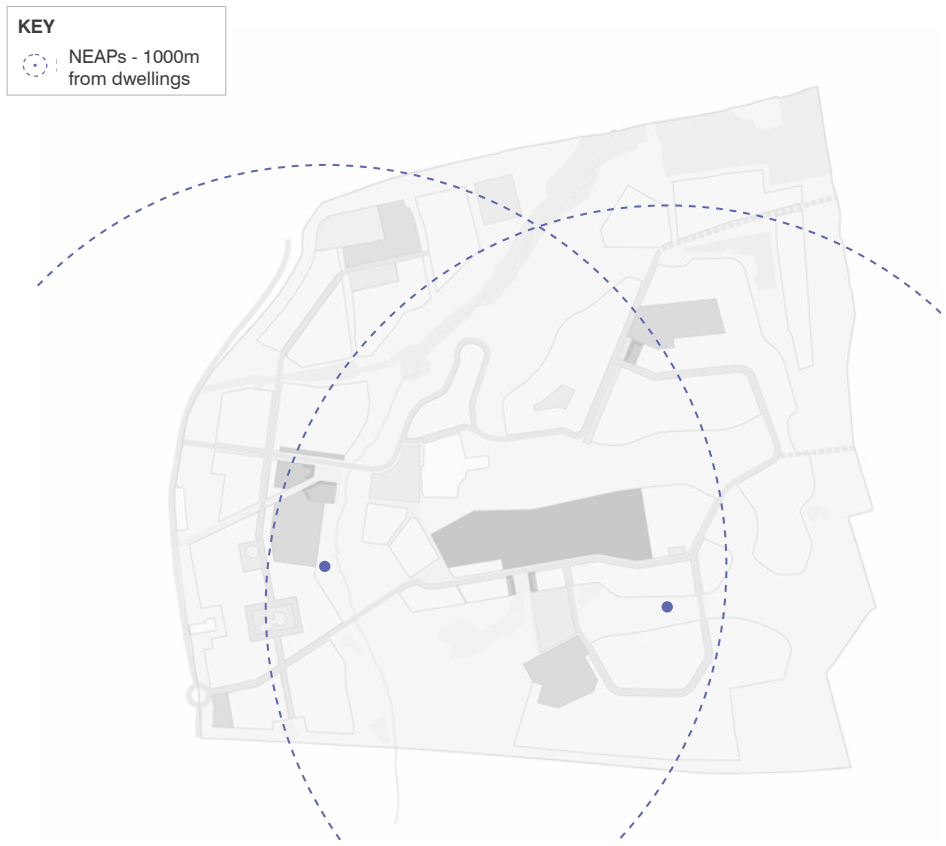
NEAP CASE STUDY: ONSLOW PLAY AREA, GUILDFORD

Designed to include nature, Onslow has more natural elements than most playgrounds, with boulders, soft surfaces, sand, tree stumps and hornbeam hedges. It reflects its location adjacent to the Onslow arboretum, with brown paths where the roots would be, and a grass maze where the canopy would be. The signage is made from hardwood timber and engraved with tree leaves from native trees. These natural features help children learn about the nature around them. Designed to enhance its setting, there is no fencing around the play area. Timber posts and sections of hornbeam hedges form entrances, but the majority of the play area is open to the playing fields and tree and hedgerows that surround it. By spreading into the surrounding areas, the play area provides further space for exploration and opportunities for imaginative play.

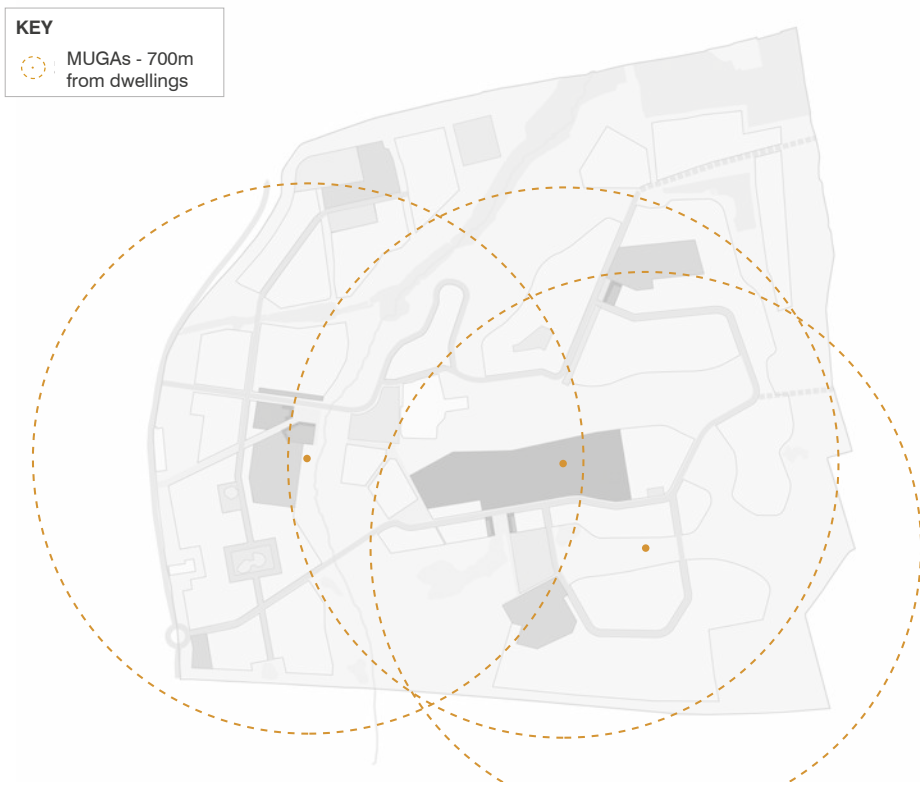




LEAPS



NEAPS



MUGAS



SPORTS

LEAP CASE STUDY: BRICKHILL, BEDFORD

Brickhill in Bedford, a large scale residential scheme, included the creation of a variety of play spaces ranging from doorstep play for toddlers to LEAPs and NEAPs.

Natural elements and undulating landscape levels were combined to create imaginative play spaces, and equipped areas of adventure play space were also provided.

All play spaces included seating areas for supervision and were located adjacent to pathways. The LEAP was sensitively designed to include timber play elements that were sympathetic to the local vernacular.





“

SET WITHIN THE WONDERFUL GREEN AND BLUE LANDSCAPE FRAMEWORK, THE GARDEN VILLAGE WILL BE A VIBRANT, SELF-SUSTAINING AND CHARACTERFUL PLACE WITH A STRONG SENSE OF IDENTITY.

THREE UNIQUE AND INTEGRATED LANDSCAPE LED NEIGHBOURHOODS WILL BE CREATED, EACH ANCHORED BY A PRIMARY SCHOOL, SMALL SCALE LOCAL FACILITIES AND EMPLOYMENT OPPORTUNITIES, ALL WITHIN A SHORT WALK. THE HEARTBEAT OF THE GARDEN VILLAGE WILL BE THE VILLAGE CENTRE, LOCATED TO MAXIMISE ITS: ACCESSIBILITY TO THE WHOLE VILLAGE; DIRECT CONNECTIONS VIA A MOBILITY CORRIDOR TO WEST HORNDON STATION; AND ITS RELATIONSHIP TO DUNTON HILLS FARMSTEAD, THUS CELEBRATING THE SITE’S PAST. THE VILLAGE CENTRE WILL BE FOCUSSED AROUND A MARKET SQUARE AND A VILLAGE GREEN, CREATING WONDERFUL SPACES FOR COMMUNITY EVENTS AND INTERACTION. AN EMPLOYMENT AREA IN THE NORTH OF THE VILLAGE WILL OFFER GROWTH OPPORTUNITIES FOR LOCAL BUSINESSES WITHIN THE VILLAGE AND BEYOND.

THE MASTERPLAN WILL BE DESIGNED AROUND KEY ROUTES, VISTAS AND SPACES, ENSURING A LEGIBLE STRUCTURE, STRONG IDENTITY AND THE PROTECTION OF IMPORTANT VIEWS. THE GARDEN VILLAGE WILL BE VARIED IN ITS BUILT FORM WITH DENSITIES AND HEIGHTS GRADUATING FROM A DENSER WESTERN EDGE AND VILLAGE CENTRE TO THE MORE RURAL EDGES IN THE EAST. THE THREE NEIGHBOURHOODS OFFER THE CHANCE TO CREATE VARYING ARCHITECTURAL CHARACTER WITHIN THE OVERALL LANDSCAPE CHARACTER THEMES ESTABLISHED.

”

MASTERPLAN VISION



CHAPTER 5

FRAMEWORK MASTERPLAN

This chapter shows the indicative masterplan proposals and provides Mandatory Spatial Principles for the development of the site and the key strategies that underpin this design approach. The key objective is to meets the needs of all its users by creating a vibrant community that celebrates in its unique heritage and landscape setting.

5.

MANDATORY SPATIAL PRINCIPLES AND ADVISORY GUIDELINES

This document establishes two levels of the masterplan: a Framework Masterplan that sets out mandatory spatial principles and an Illustrative Masterplan that provides further neighbourhood guidance.

UNDERSTANDING THE HIERARCHY

A clear vision has been established for Dunton Hills Garden Village by the design team and Brentwood Borough Council with support from stakeholders and Design South East through a formal review process.

To ensure this vision is realised a series of Mandatory Spatial Principles have been established, and is the focus of this chapter. A further set of Advisory Neighbourhood Guidelines can then set out in Appendix 2 of this document.

MANDATORY SPATIAL PRINCIPLES

The Mandatory Spatial Principles relate to landscape and heritage as well as spatial layout and built form. The Mandatory Spatial Principles reflect critical outcomes from the Design Review process undertaken with Design South East and establish a robust Framework Masterplan whilst allowing sufficient flexibility for future detailed designs to emerge. The Mandatory Spatial Principles will ensure that a series of unique and high quality new neighbourhoods are developed, which are reflective of their setting within the overall Garden Village.

ADVISORY SPATIAL GUIDELINES

The Advisory Guidelines are intended to give further understanding and validity to the Mandatory Spatial Principles and are located within Appendix A2 of this document. The Advisory Guidelines set out broad illustrative sub-character areas within each neighbourhood for future design teams to consider. The Advisory Guidelines consider urban form and landscape as well as focal spaces and some illustrative test fits. It is hoped that the Advisory Guidelines will assists in stimulating a well considered and appropriate design response.

A STARTING POINT FOR BRENTWOOD BOROUGH COUNCIL'S SUPPLEMENTARY PLANNING DOCUMENT

The intention of the principles is to provide a framework for the evolution of Brentwood Borough Council's Supplementary Planning Document (SPD) as well as detailed design as proposals emerge. The guidelines ensure that a coherent masterplan comes forward which is firmly grounded in the wide range of matters which have been explored in this document.

MANDATORY SPATIAL PRINCIPLES (CHAPTER 5)



ADVISORY SPATIAL GUIDELINES (APPENDIX A2)



STRUCTURE AND RELATIONSHIP BETWEEN THE OVERARCHING PRINCIPLES IN THIS CHAPTER AND THE MANDATORY GUIDELINES WITHIN THE APPENDIX:

FRAMEWORK MASTERPLAN CHAPTER 05

MANDATORY SPATIAL PRINCIPLES

LAND USE AND SPATIAL ORGANISATION

Plan and narrative setting out land uses and spatial principles. These land uses and spatial principles translate into the Framework Masterplan for the Garden Village.

VISTAS, ACCESS AND MOVEMENT

Plan and narrative setting out key access points, routes and movement around the Garden Village. Key vistas are also established to safeguard the setting of the Farmstead, as well as promoting placemaking.

LANDSCAPE

Plan and narrative setting out key elements of landscape to be protected, retained and enhanced within the Garden Village as well as areas of landscape interface and play.

HERITAGE

Plan and narrative setting out how the masterplan must protect and enhance the existing heritage within the site, in relation to the historic farmstead and its setting as well as views to heritage assets in the site's immediate surroundings.

DENSITY

Plan and narrative setting out density ranges.

BUILDING HEIGHTS

Plan and narrative setting out building height ranges.

MANDATORY

SUPPORTING DESIGN INFORMATION APPENDIX A2

ADVISORY SPATIAL GUIDELINES

The Advisory Spatial Guidelines focus on each of the three character areas within the Garden Village (Dunton Fanns, Dunton Waters and Dunton Hills). They establish advisory spatial guidelines that deal with the themes outlined below.

NEIGHBOURHOODS SUB-CHARACTER AREAS

Guidance on the emergence of potential sub-character areas within each of the three neighbourhoods and how they might be set out and influenced by their role and unique context.

URBAN FORM

Diagrams and narrative setting out the urban form as well as key spatial principles relating to urban grain and built form.

LANDSCAPE

Diagrams and narrative setting out the landscape vision for the neighbourhood along with key annotations and precedents for reference.

FOCAL SPACES

Diagrams and narrative setting out an approach for focal spaces that may be considered and explored in the development of the neighbourhood.

ILLUSTRATIVE TEST FITS (DUNTON FANNS ONLY)

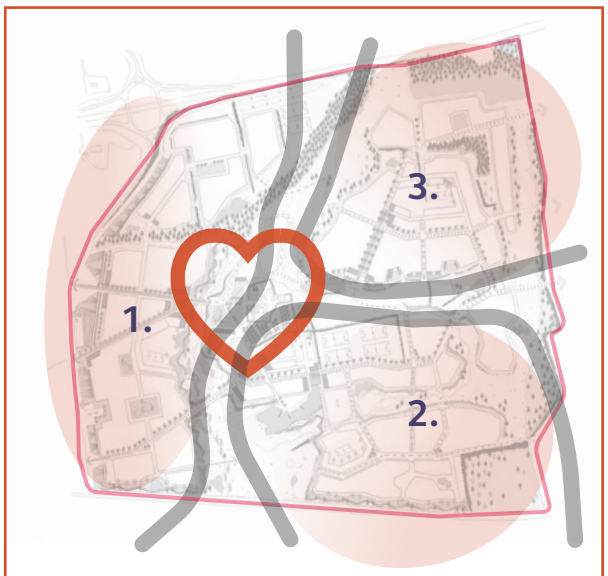
Diagrams and narrative illustrating how a number of parcels within the Dunton Fanns Neighbourhood may be delivered, following the principles and guidelines.

ADVISORY

LAND USE AND SPATIAL ORGANISATION

The Framework Masterplan

The Framework Masterplan sets out the land uses and spatial organisation of the Garden Village.



DUNTON HILLS GARDEN VILLAGE: COMPRISING THREE NEIGHBOURHOODS ORGANISED AROUND A VILLAGE CENTRE.

Land Use	Total Ha (approximate)
Residential	93.60
Mixed Use	1.41
Secondary/All Through School	7.91
Primary School	6.36
Employment Hub	3.19
Gypsy and traveller Site	0.38
Informal Open Space	124
Formal Open Space	3.11
Sports Pitches	2.58
Access	12.40

NEW HOMES

Dunton Hills Garden Village will provide up to 4,000 new homes across three neighbourhoods that will have their own character but will be integrated into a coherent village. New homes will comprise a range of residential typologies and tenures, delivered over a net developable area of approximately 126 ha.

The average density of the Garden Village will be approximately 40 dwellings per hectare (dph) although the majority of the village will be lower at approximately 37 dph, with a number of strategically located apartment and mixed-use parcels with higher densities.

The majority of apartments will be located within the Village Centre, around the Market Square as well as along the Mobility Corridor connecting Station Road with the Market Square. It is envisaged that some apartment buildings will be sited along the western edge of the village, forming a formal frontage to the A128. Some apartment buildings will also be provided within the two Neighbourhood Hubs, both in north east and the southern neighbourhoods. Additional apartment buildings will also be positioned at strategic locations within each neighbourhood throughout the Garden Village to assist legibility.

Three care homes or similar uses could form part of the Village Centre or Neighbourhood Hubs. Provision will also be made for a gypsy and travellers site.

NON-RESIDENTIAL USES

A Village Centre is proposed at the heart of Dunton Hills around a new Market Square. It is envisaged that this square will be framed by both apartments with non-residential uses (such as retail) at ground floor level as well as stand alone community buildings.

RETAIL/FOOD AND DRINK

As stated above, retail facilities will be located within the Village Centre. The two Neighbourhood Hubs will also contain retail. The retail offer could comprise a supermarket, convenience stores, professional services, pubs, takeaways, restaurants and cafés.

COMMUNITY

Community uses that are envisaged for the Garden Village include, a health centre, dentist, gym and a variety of sport pitches and equipped play areas for children alongside accessible open space. The range of facilities available will promote healthy lifestyles and ensure that everyday needs can be met within the site.

EDUCATION

There is potential to provide up to three primary schools and a secondary/all through school within the Garden Village. These will be in walkable locations at the heart of each neighbourhood and close to retail and community facilities promoting a synergy of uses. Most of the schools will also lie adjacent to open green space. As part of the Village Centre and the other Neighbourhood Hubs, private nurseries or crèches will be proposed.

EMPLOYMENT

The employment offer will comprise a mixture of office and workshop spaces provided in the Village Centre as well as an Employment Hub (in the north-east along the A127). This will provide jobs in an accessible location, creating the space for local businesses to grow in an innovative and supportive business environment. The Neighbourhood Hubs should also support employment.

MOBILITY

A Mobility Corridor links the Village Centre to Station Road creating a high quality pedestrian, cycling and public transport corridor toward West Horndon Station. A further key route is established between the A128 and the Villager Centre. At the heart of the Village Centre is the Mobility Hub (see later in this report). The neighbourhoods are also connected by a strong network of walking and cycle routes.

LAND USE AND SPATIAL ORGANISATION



KEY

- Routes - mandatory alignment
- Routes - flexible alignment
- Residential
- Mixed-use
- Education
- Employment
- Gypsy and traveller site
- Formal Open Space
- Informal Open Space

MANDATORY SPATIAL PRINCIPLES - LAND USE AND SPATIAL ORGANISATION

01 Location and arrangement of the Market Square - will be positioned at the heart of the Garden Village and on the eastern edge of Dunton Fanns, facing the proposed Village Green and the historic farmstead. The Market Square will be designed to a suitable size to support the quantum of non-residential uses intended and will be enclosed by taller buildings with employment, retail and community uses activating the public realm.

02 Definition of the Village Green - will provide a setting for the historic farmstead as well as a key communal open space for residents in which to interact and relax. The Village Green will be visible from the Market Square, across the landscape associated with the Eastlands Spring. The existing farmstead driveway will be retained and will become an important pedestrian route to Dunton Waters.

03 Location of Dunton Fanns Primary School - will be a central component of the Dunton Fann's community and will have frontage onto the proposed Mobility Corridor to promote sustainable travel.

04 Secondary School - will be visible from the wetlands along an east-west route connecting Dunton Fanns with Dunton Waters. The school building will front onto a lane and frame an arrival 'Schoolyard Square', comprising a car free setting.

05 Location and arrangement of a Neighbourhood Hub for Dunton Waters - will be focused around a south facing lakefront plaza with views of the proposed cricket pitch and Dunton Waters Primary School, framed by buildings and activated by non-residential ground floor uses. The community element of the Secondary School will frame the northern edge of the plaza.

06 Location and arrangement of Dunton Waters Primary School - will be focused on the threshold of the wetlands landscape, maximising opportunities for outdoor learning whilst being visible from the lakefront plaza.

07 Location and arrangement of the co-located Dunton Woods Neighbourhood Hub and Primary School - will be the central component of Dunton Woods, centred around a plaza at the northern end of a linear park which will form a view corridor to Dunton Waters. The plaza will be framed by taller buildings with non-residential ground floor uses.

08 Location and arrangement of sports pitches and community Sports Hub- will be provided within the Secondary School parcel allowing both students and residents to make use of the facilities. The pitches will support a range of sports, forming a hub for community activity and for social and competitive recreation. Other sports facilities include the cricket pitch and football pitches.

09 Location of employment land - will be in close proximity to the employment site proposed to the west of the A128. Employment land uses will be supported by a nursery and will adjoin open space, accessible for both workers and residents .Buildings will be positioned in an east-west orientation to establish a noise barrier against the A127.

10 Location of Gypsy traveller site - will be positioned to allow for direct access from the A128 and with an interface with the proposed landscape edge. The site will allow for 5 pitches in line with policy, with the final configuration to be determined upon consultation with potential occupants.

VISTAS, ACCESS AND MOVEMENT

Sustainable travel is prioritised throughout the Garden Village with dedicated pedestrian and cycle routes as well as a Mobility Corridor providing an efficient link to West Horndon.



OVERALL MOBILITY STRATEGY

A further explanation of the Mobility Strategy is set out in Chapter 6. Their chapter(s) cover the spatial implications of the movement strategy within the Garden Village.

ACCESS

A new Mobility Corridor will be provided linking the Village Centre to the A128 and onwards to Station Road. This will accommodate pedestrian, cyclists and buses only.

In the early phases, all mode connections will be provided from the A128 to the north and south of the Mobility Corridor. It is envisaged that additional eastern connections towards Basildon will be provided in later phases, albeit subject to approval of others.

MOVEMENT

Internal movement is aligned to a clear hierarchy of streets, providing efficient links within the Garden Village and ensuring permeability. Pedestrian and cycle movement will be prioritised to encourage active transport, with new routes linking with the existing PROW network and providing connections into the surrounding countryside.

BUS ROUTE

The proposed bus route will connect key community facilities within the Garden Village and provide connections between the site, West Horndon Railway Station and places such as Brentwood. Bus stops will be situated to provide maximum accessibility to residents. In addition to the 'loop' bus route, a second route could potentially connect into the north east portion of the Garden Village and through into Basildon.

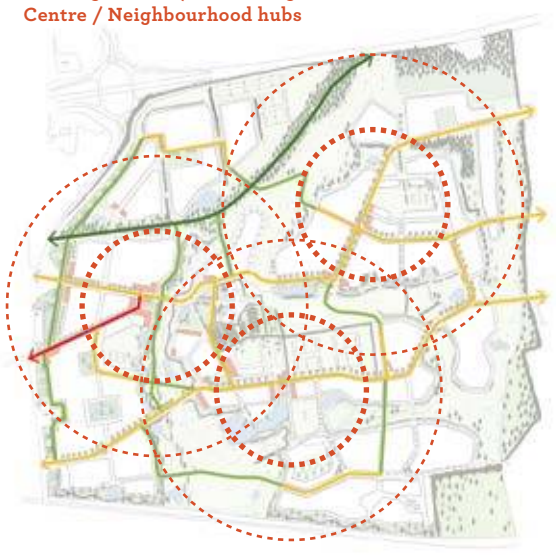
PROMOTING HEALTH AND RELAXATION

The wellness trail will link a number of key destinations within the Garden Village along direct and safe, pedestrian and cycle friendly routes designed for all residents including children. Key nodes along this route include the Village Centre, the northern Employment Hub, the two Neighbourhood Hubs and the schools.

Large parts of this route will be through the landscape including the ancient woodland, the ridge-line, and the linear corridor along the Eastlands Spring.

As well as providing sustainable and high quality connections, this route will include trim trails for outdoor exercise and interpretation boards.

Walking times to/from Village Centre / Neighbourhood hubs



KEY

- 500m or 6 minute walking catchment
- 1,000m or 12 minute walking catchment

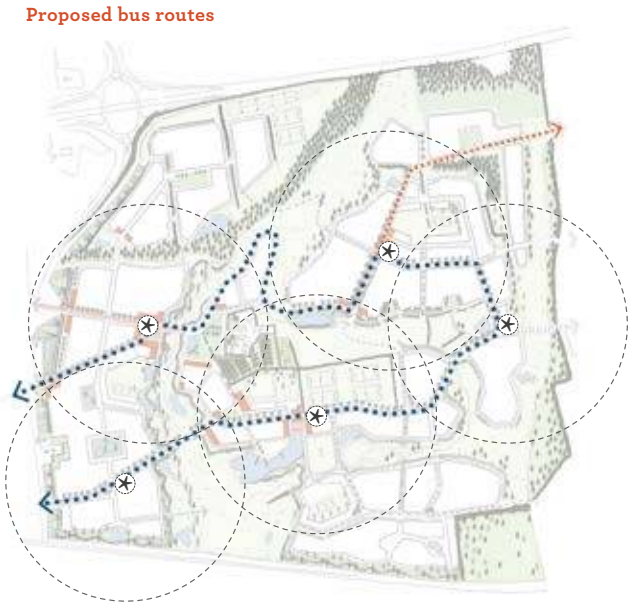
Sustainable transport routes



KEY

- Pedestrian and cycle car free route
- Pedestrian and cycle route along street
- Bus, pedestrian and cycle route (dedicated)
- Existing PROW

Proposed bus routes



KEY

- Bus route
- Potential future bus route
- Bus stop and 400m catchment

VISTAS, ACCESS AND MOVEMENT



KEY

- Routes - mandatory alignment
- Routes - flexible alignment
- Routes - flexible landscape connections
- Indicative marker buildings

MANDATORY SPATIAL PRINCIPLES - VISTAS, ACCESS AND MOVEMENT

01 **Farmstead Avenue and View Corridor** - will preserve a direct visual relationship between the A128 and the Grade II listed farmhouse. This is one of many masterplanning approaches that ensures the historic farmstead becomes a focal point within the Garden Village.

02 **Mobility Corridor (Station Road extension)** - will be the main access point to the village, accommodating pedestrians, cyclists and public transport. The Mobility Corridor will extend into the village along the alignment of Station Road, with a direct pedestrian and cycle crossing over the A128. This will facilitate and promote sustainable travel to the Market Square at the Village Centre which will include the Mobility Hub.

03 **Mobility route along the western edge** - will be incorporated into the landscape, facilitating safe and sustainable travel (for cyclists and pedestrians) north-south along the A128, but respecting the setting of the retained dwellings.

04 **Secondary School approach and landmark** - a direct route and view corridor will be established from the Secondary School building to the wetlands, ensuring its prominence as a landmark within the wider Garden Village, as well as promoting wayfinding.

05 **Schoolyard Square** - will be established in front of the Secondary School building, at the end of the proposed School Lane. The square will form a car free and landscaped gathering space for children and parents before and after school, as well as allowing for the retention of existing historic trees.

06 **School Lane** - a key pedestrian and cycling priority route will be established, connecting the Village Green and Secondary School with the wetland. The lane will run past the community orchard on one side and be fronted and activated by new homes on the other.

07 **Potential future connections east towards Basildon** - will be safeguarded into the layout of the masterplan to allow for future expansion and connectivity.

08 **Dunton Woods viewing corridor** - will establish a visual relationship between the Neighbourhood Hubs of Dunton Woods and Dunton Waters, promoting a sense of community cohesion within the overall Garden Village.

09 **Wellness trail** - a pedestrian and cycling only trail will be provided within the landscape, promoting a healthy lifestyle within the Garden Village. The trail will connect the facilities provided within the Market Square and Village Green within Dunton Fanns to the other Neighbourhood Hubs and Schools.

10 **Nodes at intersections** - the point at where two or more routes intersect will inform the location of Neighbourhood Hubs and associated non-residential uses.

11 **Marker buildings (throughout masterplan)** - will be used to define key routes, vistas and places, promote placemaking and wayfinding within the neighbourhoods or landscape setting. Marker buildings shall be distinguished from other buildings through either architectural treatment, height or positioning within a prospective layout.

12 **Inter-neighbourhood connectivity (throughout masterplan)** - in conjunction with the wellness trail, pedestrian and cycle connections will be established to ensure a high degree of connectivity between the three neighbourhoods, further promoting safe and sustainable travel.

LANDSCAPE

The green and blue infrastructure creates a robust platform for the creation of habitats, social interaction, exercise and recreation, and biodiversity gain.

GREEN AND BLUE FRAMEWORK

The core vision for Dunton Hills Garden Village is to have three neighbourhoods all with community facilities at their heart, within a short walking/cycling distance of their residents.

These neighbourhoods will be connected through the multi-functional green and blue infrastructure which weaves its way through the site and maximises the site's wonderful assets including the ridge, Eastlands Spring and the woodland watercourse corridor. The site has a varied and dynamic existing green and blue infrastructure network, and the landscape vision seeks to enhance and celebrate these assets.

The Mandatory Spatial Principles in this section are broken down into landscape areas and landscape interfaces.



Eco-tone tree planting to protect the Ancient woodland edge



Recreation routes through wetlands

MANDATORY SPATIAL PRINCIPLES - LANDSCAPE AREAS

01 **Productive landscape** - will be located south of the farmstead in the site of a former orchard. The productive landscape has the potential to include orchard tree species and varieties of local provenance and will become a focal point of the community.

02 **Ancient woodland** - will be protected and conserved with a 15m eco-tone buffer of native woodland along its boundary to provide a structured edge and enhance the wooded character.

03 **Eastlands Spring** - will be preserved as a distinctive feature, defining the transition from the Fanns neighbourhood to the wetlands. Accessible in parts for play and learning whilst also providing for biodiversity.

04 **The Ridge** - will remain open in character and retained as a key feature of the site as set out by the masterplan drivers, separating Dunton Woods from Dunton Waters. The ridge will be managed to provide for both biodiversity as well as recreation.

05 **Ridge-line route** - will be provided along the top of the ridge, with restful landscaped spaces where views across to the North Downs and towards London can be enjoyed. Tree planting will ensure a wooded skyline balances new homes along the ridge-line.

06 **Dunton Waters water management** - rain gardens and swales will be used within Dunton Waters to celebrate water management within the public realm, managing the transition of surface water from higher ground to the east, to the lower wetlands areas in the west.

07 **Existing landscape features to be retained** - historic hedges, trees and waterbodies will be retained where possible, ensuring that the Garden Village responds to its setting and is delivered within the landscape and not imposed on it.

08 **Woodland** - will be retained for recreational benefits as well as enhancing the woodland character existing in this part of the site, wrapping around the homes within Dunton Woods.

09 **Wetland landscape** - will provide for biodiversity gain and recreation. Wetland area to provide habitat for aquatic and migratory birds and great crested newts translocation. Recreational routes through wetland to be defined to allow access without disturbing wildlife.

10 **Play spaces (throughout masterplan)** - will be sensitively incorporated and distributed within the wider landscape as well as within the neighbourhoods. Play spaces will be safe and both formal and informal, and provide for a range of ages and abilities.

11 **Noise barrier** - will be established against the A127 and A128 within the north east corner of the site. This barrier will be sensitively integrated into the landscape with tree and shrub planting.

12 **SuDS (throughout masterplan)** - will be sensitively integrated into the landscape, working with existing hydrology and topography.

13 **Habitat creation and management** - for the promotion of biodiversity should be explored at every opportunity. Refer to pages 76-77 for the biodiversity strategy for Dunton Hills Garden Village.

LANDSCAPE AREAS AND INTERFACE

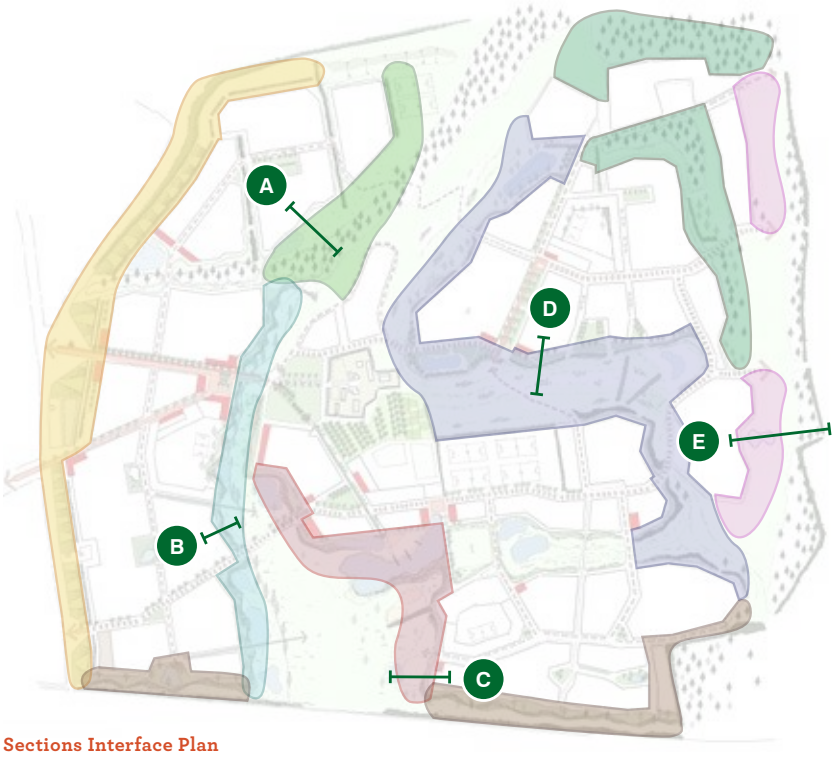


KEY

- A Dunton Fanns interface
- B Ancient woodland interface
- C Eastlands Spring interface
- D Wetlands interface
- E Ridge interface
- F Woodlands interface
- G Eastern boundary/green belt interface
- H Wildlife corridor interface

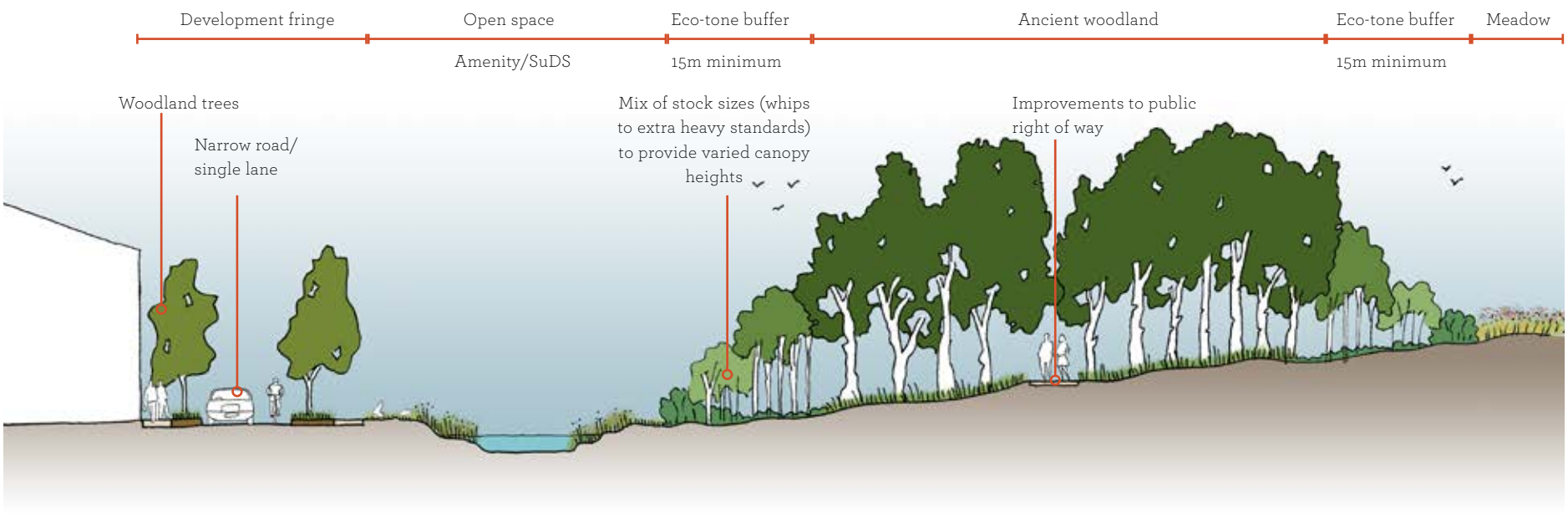
MANDATORY SPATIAL PRINCIPLES - LANDSCAPE INTERFACES

- A **Dunton Fanns interface** - will be formal in character, and with the proposed built form, will announce the address of the Garden Village along the Tilbury Road (A128). The landscape will incorporate recreational open space embodying the Fanns character within an approximate 30m set back from the A128.
- B **Ancient woodland interface** - will have a wooded character with native deciduous street trees. New homes will be offset approximately 50m from ancient woodland. Within this offset, an eco-tone buffer of native woodland will be implemented, providing a structured edge enhancing the woodland character. The development fringes will consider sensitive lighting designs to preserve dark corridors.
- C **Eastlands Spring interface**- the edge of the neighbourhood will be lined with trees native to the Fanns landscape, alongside a narrow lane. Formal areas of recreational space will be provided along the western edge of the spring, amongst retained and enhanced vegetation, providing both a visual and physical transition to spring edge. The eastern side of the spring will have an informal wetland character.
- D **Wetlands interface** - will be characterised by a robust and substantive vegetated boundary along development fringe with a narrow lane lined by rain gardens and hydrophilic trees. SuDS basins and surrounds will include recreational space.
- E **Ridge interface** - will be characterised by a tree lined avenue running along the ridge-line, embodying the woodland character and including informal play opportunities for all residents within the neighbourhood. Woodland trees will be grouped informally within the landscaped amenity spaces to frame views out of the development edge, and views to the development
- F **Woodlands interface -** will ensure short distances from building façade to woodland edges to achieve 'woodland on doorstep' character, with recreational routes leading directly from the neighbourhoods to existing woodland pockets.
- G **Eastern boundary interface** - will be established through robust vegetation of native hedges, hedgerow trees and woodland, reinforcing and defining the Green Belt edge. A rural frontage character will be achieved through narrow lanes fronting the meadow.
- H **Wildlife corridor and re-wilding area** - will become a target habitat for reptiles, managed as a wildlife corridor. Recreational route through the wildlife corridor to be provided which defines publicly accessible space. A wide vegetated bank to railway edge will include native trees and form a wildlife corridor.

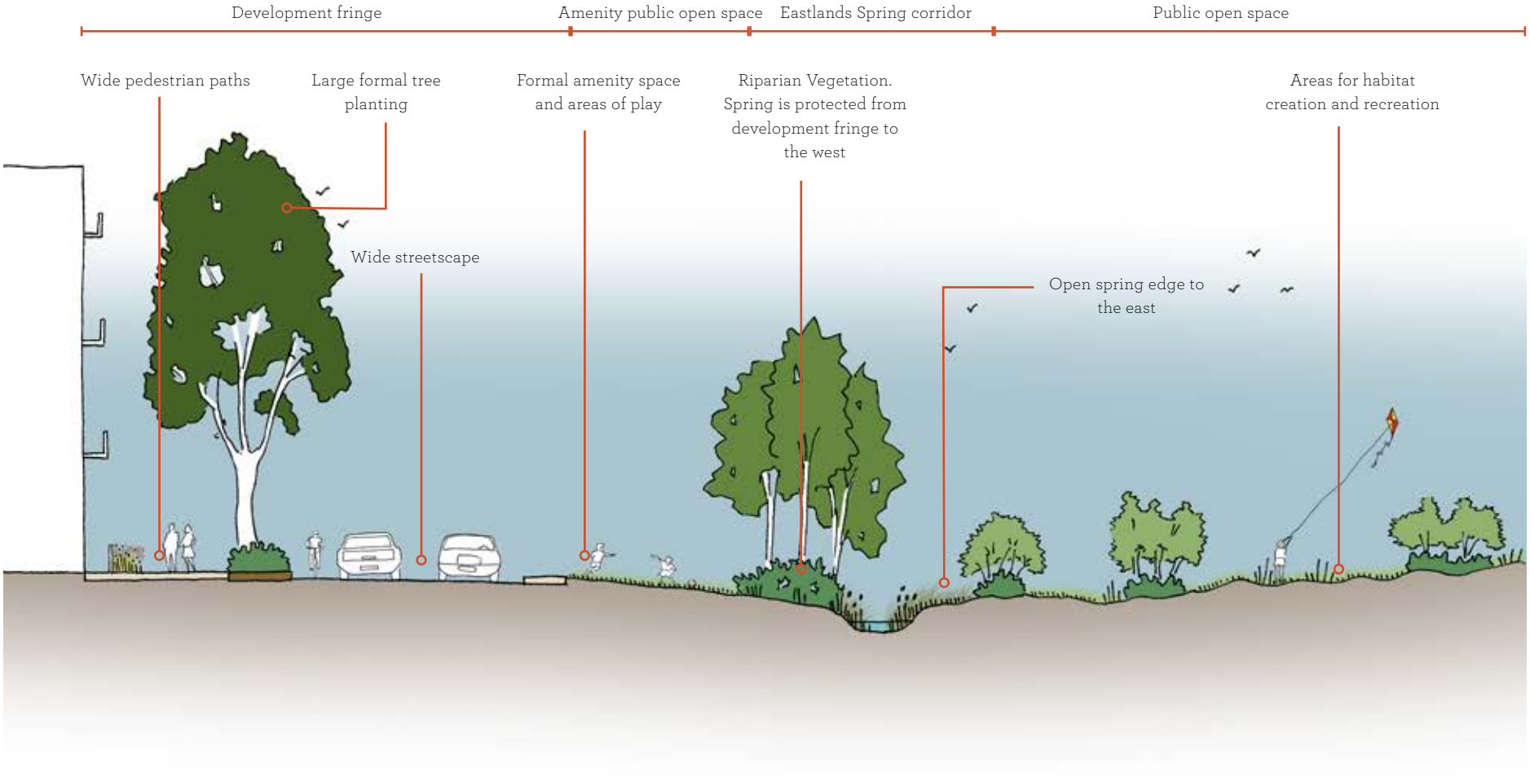


Sections Interface Plan

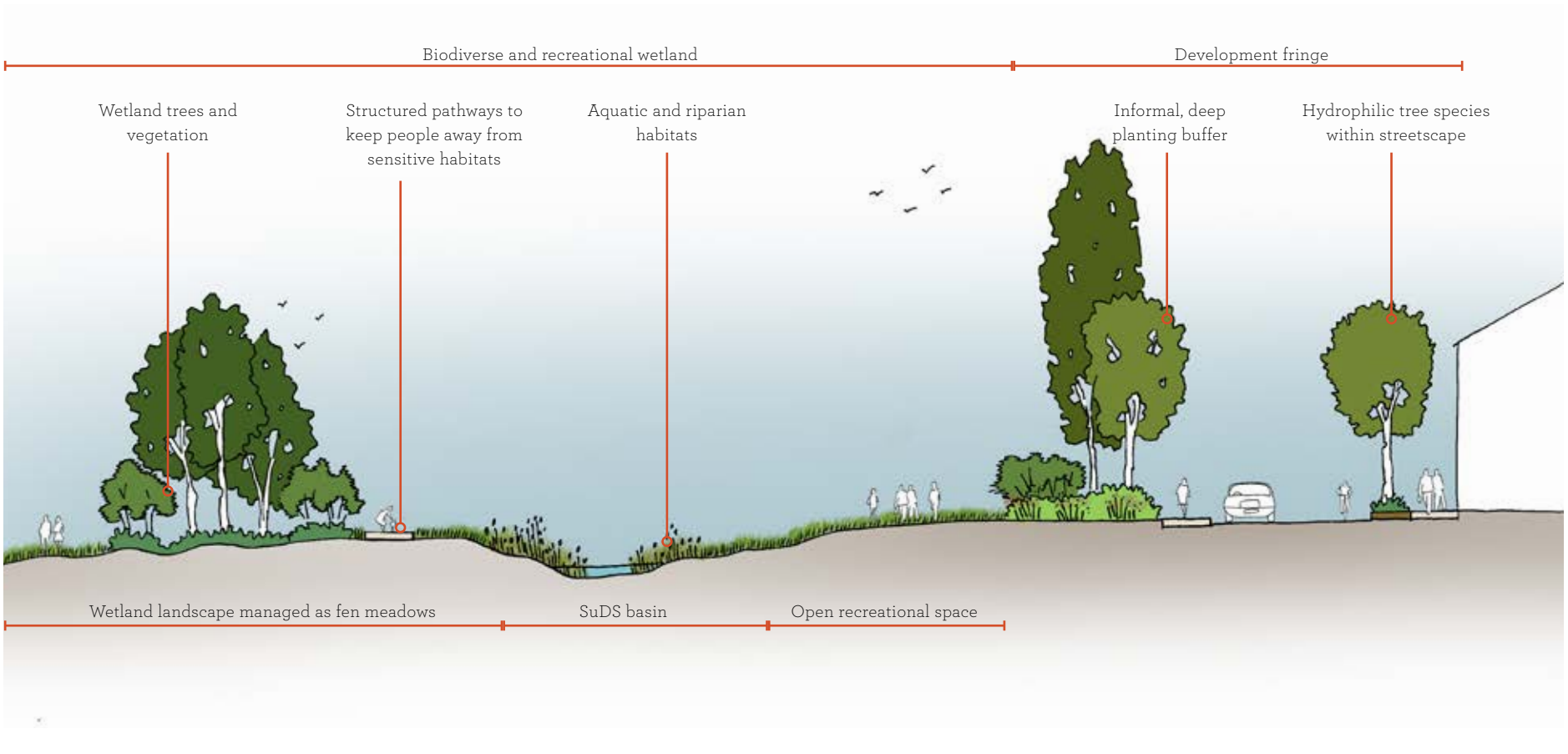
SECTION A: INTERFACE WITH Ancient woodland



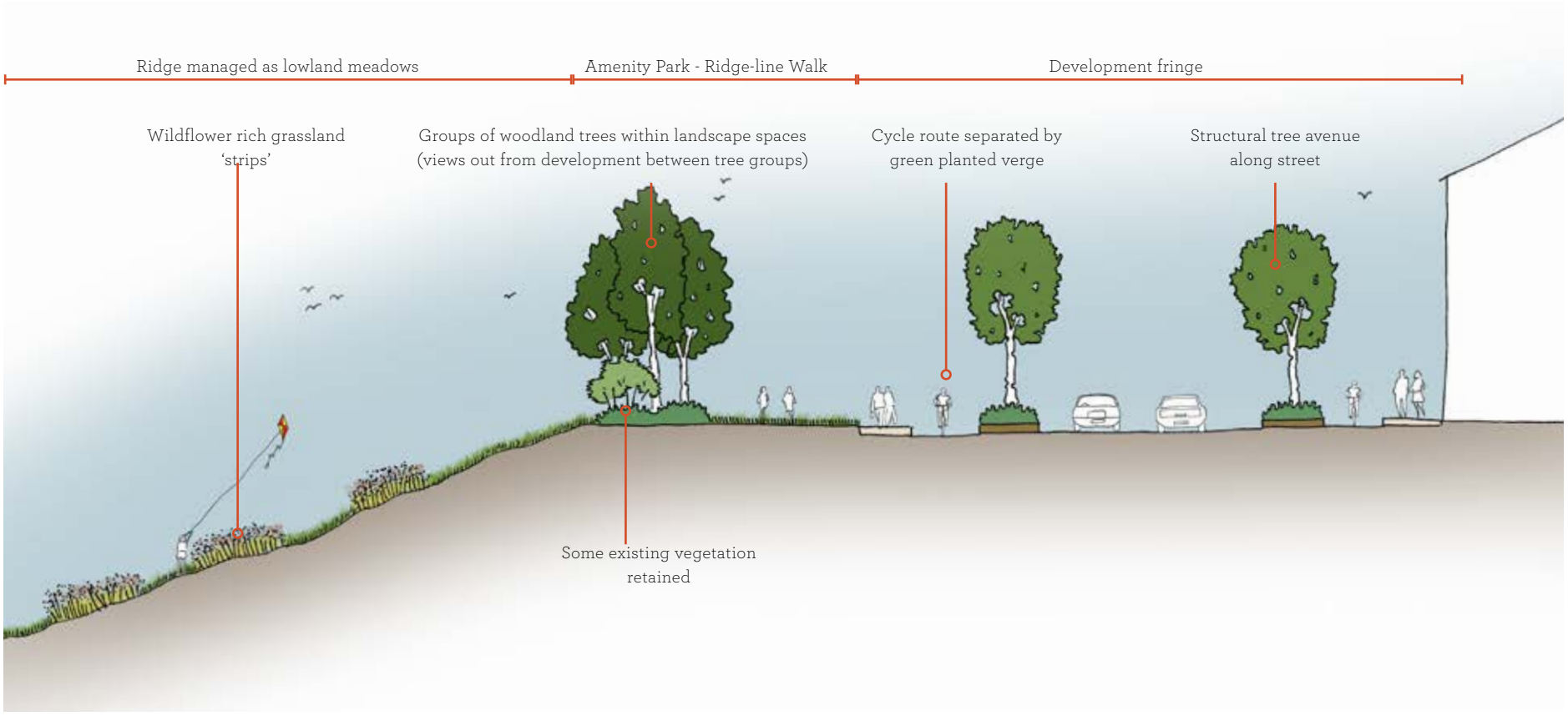
SECTION B: INTERFACE WITH EASTLANDS SPRING



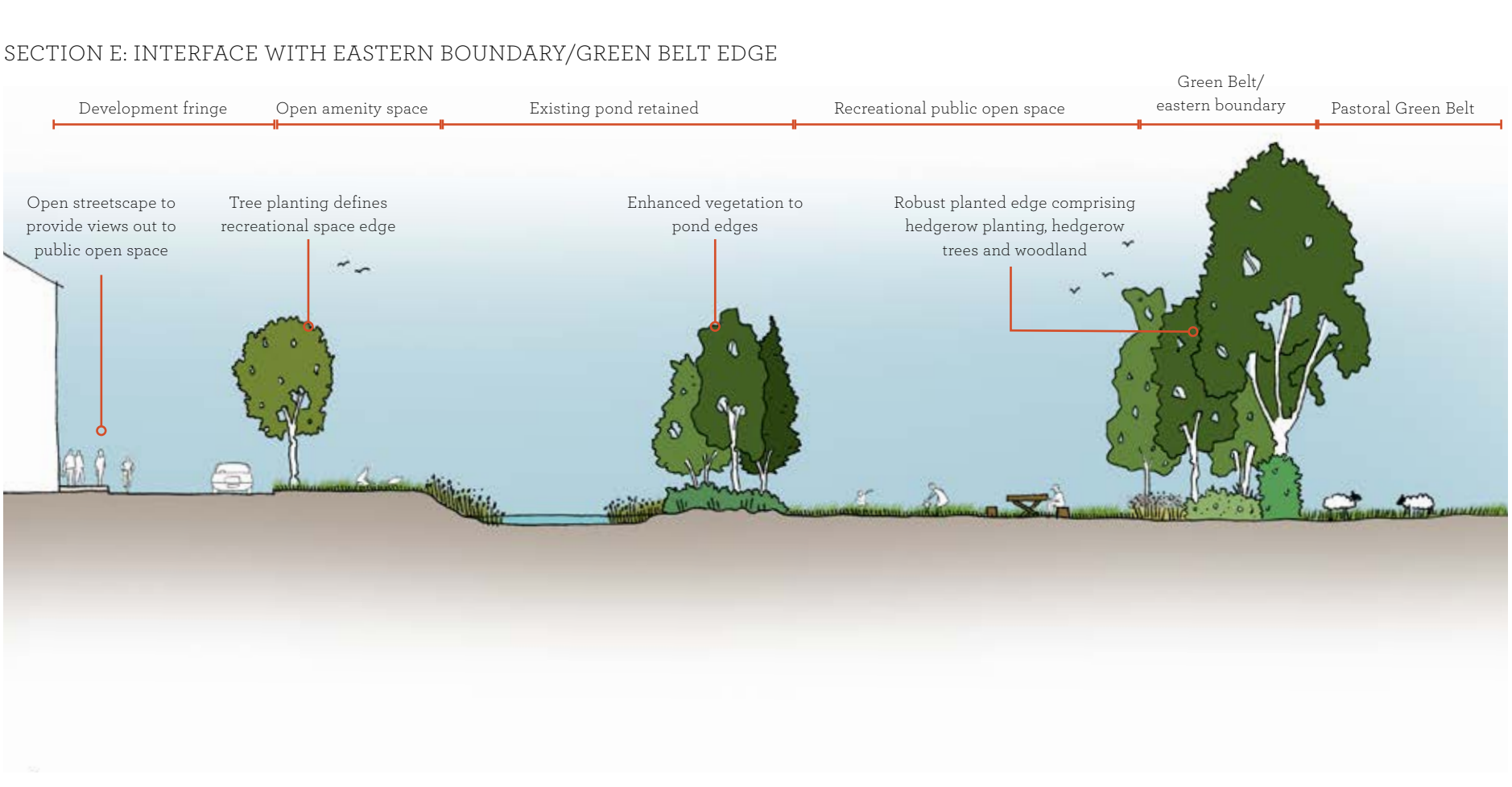
SECTION C: INTERFACE WITH WETLANDS



SECTION D: INTERFACE WITH RIDGE



SECTION E: INTERFACE WITH EASTERN BOUNDARY/GREEN BELT EDGE



Playing is not just for children; play can address fundamental human needs for interaction, movement, social interaction and activity.

PLAY

Dunton Hills Garden Village will embrace all aspects of play for all ages and abilities, and provide a social, convivial and truly playful environment within the landscape.

Dedicated play areas will be provided for young children as well as formal and informal pitches. As identified, the wider landscape contains woodland areas and the sloping ridge, as well as wetlands with the associated spring and water bodies. Together these form a unique series of areas to be explored by residents and visitors of all ages.

Adult play and recreation provision can be provided through the wellness trail (see page 112), wellbeing and cycling routes and outdoor gyms.



Multi-purpose pitches



Interactive play equipment within areas of open space



Eastlands Spring will be accessible and open to exploring



Formal pitches within the Primary Schools

PLAY



KEY

- 01 LEAPs
- 02 NEAPs
- 03 MUGAs
- 04 Football Hub
- 05 Cricket pitch
- 06 Community sports provision
- 07 School sports provision

MANDATORY SPATIAL PRINCIPLES - PLAY

01 **Locally Equipped Areas of Play (LEAPs)** - will be at least 400m^2 in area and at least 10m away from the closest residence. LEAPs will be distributed throughout the Garden Village to ensure catchments cover all development parcels. The maximum walking distance to each LEAP will be 400m. Each LEAP will provide a minimum of six individual play elements.

02 **Neighbourhood Equipped Areas of Play (NEAPs)** - will be at least 1000m^2 in area, with a minimum of 465m^2 hard surfaced. A 30m buffer will be established between each NEAP and closest residence. Play provision will be for both older and younger children, including space for sport and informal ball games. Play elements should be stimulating and challenging, with a minimum of nine individual play elements. A minimum of two NEAPs will be provided within the Garden Village, with walking distances less than 1000m.

03 **Multi Use Games Areas (MUGAs)** - will include provision for tennis, netball, basketball and 5-aside football with a minimum space requirement of 665m^2. A minimum of two MUGAs will be provided within the Garden Village, with walking distances limited to 700m.

04 **Football Pitches** - two full-size football pitches will be provided within the masterplan and will include buildings for changing and gathering at fixtures.

05 **Cricket Pitch** - will be provided on flat land in Dunton Waters, overlooked by homes to the north and south. A Cricket Pavilion accommodating changing and social facilities will also be provided adjacent to the cricket pitch.

06 **Community Sports Provision (as part of the Secondary School)** - will include the provision for four pitches (two of which are artificial), sports hall (to include four badminton courts)and a MUGA. Pitches will be designed to have interchangeable uses - football and rugby. A summer athletics track will also be provided. The needs of the school and the community will be balanced in sharing the facilities at different times of the day and year.

07 **Primary School Sports Provision** - will serve the school but not be accessible to the wider neighbourhood.

08 **'Doorstep Play' opportunities (throughout masterplan)** - will be provided throughout the Garden Village, maximising and integrating play into the landscape. Existing landscape elements such as the Eastlands Spring, the larger waterbodies and the woodland will all be made accessible for play and exploration. Informal kick-about spaces in addition to formal provision will be accommodated within the landscape. Activity and trim trails will connect development parcels and recreational landscape spaces.

HERITAGE

The Masterplan for the Garden Village sensitively integrates the site's rich agricultural heritage, whilst respecting the setting and character of the local environment.





The masterplan respects key heritage assets both within the site and the immediate surroundings including Dunton Hills Farm and All Saints Church, East Horndon.

The presence of a number of historic buildings and features within and around the site mean that heritage considerations have been central to the development of the Framework Masterplan. This has resulted in a scheme which not only seeks to sensitively preserve the historic landscape and nearby heritage assets, but enhance them where possible.

Key heritage design features incorporated into the Framework Masterplan are:

1. A comprehensive green infrastructure scheme, which seeks to improve the existing historic landscape features (such as the ancient woodland along Nightingale Lane, planting along Eastlands Spring and important hedgerows) and mitigate potential harm, (e.g. structural planting), to protect views of All Saints Church from Thorndon Park and the church itself.
2. The provision of generous 'buffer zones' around historic buildings, which provide new publicly-accessible green spaces from which to appreciate historic buildings but also respect their setting. This includes the provision of a new village green to the west of Dunton Hills farmhouse and grassland meadows in the vicinity of St Mary's Church and Dunton Hall.
3. The retention of key views across the site, including those towards and between the Dunton Hills farmhouse, Church of All Saints and Church of St Mary.
4. The proposals also seek to retain and reinstate historic routes through the site (e.g. the farmstead driveway).

Furthermore, the sensitive layout of new built form, the building heights, density and detailed design will be sympathetic and appropriate to its location and the surrounding areas.

Additional design benefits include the removal or mitigation of existing features which detract from an appreciation of the historic landscape and buildings, for example: the removal of the 78m high wind turbine; the removal of electricity pylons and overhead wires through burial; and the screening and noise mitigation of vehicle activity along the heavily-trafficked A127 and the A128 interchange.

The proposals have been developed in consultation with Brentwood Borough Council and Historic England, with advice and constructive criticism carefully considered and incorporated into the emerging design proposals.

HERITAGE



KEY

- Routes - mandatory alignment
- Routes - flexible alignment
- Routes - flexible landscape connections
- Indicative marker buildings
- View corridors

MANDATORY SPATIAL PRINCIPLES - HERITAGE

SETTING AND ROUTES

01 **Village Green setting** - will provide an appropriate setting for the farmstead within which residents and visitors can interact, play and relax. The setting will be defined by the farmstead to the east, the fields existing to the north and south, and the Eastlands Spring to the west. New homes will define, and be orientated to activate the edge of the Village Green. Heights will be limited to 3 storeys and the design will respond to the architectural vernacular of the farmstead, sensitively respecting this historic setting within the Garden Village.

02 **Existing farmstead drive** - to the east of the Eastlands Spring will be preserved and incorporated into the design of the Village Green. The existing farmstead drive will form a key part of the pedestrian and cycle route that connects the Village Centre to the Secondary School and Dunton Waters, in addition to connecting the farmstead with the Market Square.

03 **Historic farmstead drive** - the original and historic drive to the farmstead will be re-instated, enhancing the connectivity between the Village Green, the historic farmstead and Nightingale Lane.

04 **Nightingale Lane** - will be integrated into the design of the movement network, promoting sustainable movement within the wider Garden Village as well as healthy living.

05 **Nightingale Hall Woods** - historic setting will be preserved and respected as a key feature within Dunton Woods.

VIEW CORRIDORS

06 **Farmstead Avenue and view corridor** - will preserve a direct visual relationship between the junction onto the A128 and the Grade II listed farm house and associated farmstead. This is one of many masterplanning approaches that ensures that the historic farmstead becomes a focal point within the overall Garden Village. There is potential to thin the trees along Eastlands Spring to improve visibility of the farmstead.

07 **Church views:** between the farmstead forecourt and All Saints Church – the silhouette of the Church against the skyline should be preserved, so new development in the foreground and middle ground should not occlude views of the Church, and should preserve the viewers' ability to recognise and appreciate the landmark.

08 **Church views:** development in the foreground and middle ground will not occlude the views of the Church of St Mary from the viewpoint to the east of the farmstead, and will preserve the viewers' ability to recognise and appreciate the landmarks.

09 **Church view:** development in the foreground and middle ground will not occlude the view of the Church of St Mary from the south-west of the site, and will preserve the viewers' ability to recognise and appreciate the landmark.

DENSITY

A range of densities should be applied to further emphasise the character of the development. These will be appropriate to their location and setting within the Garden Village.

The Garden Village will comprise a range of different densities within the overarching framework.

The highest densities are accommodated around the Village Centre and at key gateways along the A128, comprising apartment buildings and terraces of townhouses.

The central areas of Dunton Fanns allow for mid-high densities, creating the ability to deliver a mixture of apartments and housing that is more compact. Areas of higher density are located around the Neighbourhood Hubs within Dunton Woods and Dunton Waters close to local amenities and services.

Large areas of Dunton Lakes and Dunton Woods would comprise lower density family housing of up to 40 dph.

Lower densities of up to 30dph are found along the more sensitive eastern boundary of the these neighbourhoods to maintain a rural feel.

The table below shows the potential numbers of homes which could be achieved within each development parcel as shown on the adjacent plan. These totals are based on the density ranges within the table to the right.

Density ranges for the indicative density strategy

Range	Lower	Middle	Highest
Up to 30	22	25	28
Up to 40	32	35	38
Up to 50	42	45	48
Up to 60	52	55	58
Over 60	62	65	68

Indicative densities for each sub-phase

Phase	Total units - at the lower density range	Total units - at the middle density range	Total units - at the highest density range
Phase 1A	758	798	839
Phase 1B	391	417	442
Phase 1C	360	390	420
Total	**1509**	**1605**	**1701**
Phase 2A	648	708	767
Phase 2B	200	218	236
Phase 2C	266	291	317
Total	**1114**	**1217**	**1320**
Phase 3A	423	462	500
Phase 3B	148	161	175
Phase 3C	199	222	246
Total	**770**	**845**	**921**

DENSITY



KEY

- Over 60dph
- up to 60dph
- up to 50dph
- up to 40dph
- up to 30dph

MANDATORY SPATIAL PRINCIPLES - DENSITY

General note: the density plan sets out broad density parameters for the Framework Masterplan (based on the density ranges above), in line with the overarching vision for the Garden Village. Depending where the boundary line is drawn, there may be pockets of density that exceed the overall density of the parcel. This is acceptable so long as the overall average density parameter is not exceeded.

01 **Village Centre** - As per the plan, higher densities are permitted within in the area envisaged as the Village Centre. This area stretches from the A128 along the western edge to the Market Square, where taller buildings will need to provide a suitable degree of enclosure. Higher densities in this location will allow for a range of different residential typologies to be delivered, including apartments, maisonettes and townhouses.

02 **A128 edge** - in addition to the Village Centre, the A128 edge will allow for higher densities with apartments and townhouses forming a prominent frontage address onto this main road. Taller buildings will particularly be encouraged around gateways into the village. Whilst a wall of built form will not be permitted, taller buildings here will aid in screening noise from the A128 and create a presence on the road frontage.

03 **Dunton Waters and Woods Neighbourhood Hubs**- greater densities are allowed for within the Neighbourhood Hubs, permitting apartments with non-residential uses at grade. This will ensure that these hubs realise their potential in becoming active and vibrant nodes within the village.

04 **Reduced outer densities** - outer areas, away from the Village Centre or Neighbourhood Hubs are designated with lower densities and are envisaged as comprising larger housing typologies on more generous plots.

BUILDING HEIGHT

A range of building heights will add variety and interest to the streetscape, enhance internal legibility and ensure that the Garden Village has a distinctive identity.

The building heights within the Garden Village will vary, but broadly correspond to the same spatial strategy as the proposed densities on the previous page.

Taller buildings will comprise apartments with the potential for non-residential uses at ground level. The tallest of these buildings will be located at the Village Centre, and in particular around the Market Square and the Station Road extension/Mobility Corridor. This will help to create a sense of enclosure to these key public spaces and routes.

Furthermore, taller buildings will be required along the western edge of the Garden Village as part of a noise mitigation strategy dealing with traffic noise on the A128. Taller buildings here will also offer the chance for more prominent gateway buildings at key entrance points into the site.

Taller buildings could be located in other parts of the site including key areas around the wetlands area (to prevent a uniform approach to height here) and in the area around the Neighbourhood Hub in Dunton Waters - to achieve higher density close to the facilities here.

As with the density plan, heights generally reduce towards the east of the site and along the more sensitive ridge-line, with a maximum height here of 12.5m. This area is likely to comprise housing of no more than two stories in height.

HEIGHTS



KEY

- 5 storeys (18.5m)
- 3 storeys (13.5m)
- 4 storeys (15.5m)
- 3 storeys (12.5m)

MANDATORY SPATIAL PRINCIPLES - BUILDING HEIGHTS

General note: the building heights plan sets out broad building height parameters for the Framework Masterplan, in line with the overarching vision for the Garden Village.

The building heights parameters established for the Village Centre and Neighbourhood Hubs must be adhered to in terms of the upper limits. Outside of these areas the upper limits are set at 3 storeys. However, some flexibility for occasional taller buildings in carefully considered locations could be considered where appropriate. This would add interest to large areas which might otherwise become overly uniform in height.

01 **Village Centre** - will allow for taller mixed-use buildings, up to 5 storeys in height with non-residential uses at ground floor level. The tallest buildings will be focused around the Market Square and provide an appropriate degree of enclosure.

02 **A128 edge** - will allow for a range of taller apartment buildings, ensuring that a prominent frontage address can be established along the western edge of the Garden Village. Taller buildings will particularly be encouraged around gateways into the village however, building heights should not affect views towards All Saints Church, identified in the Mandatory Spatial Principles relating to Heritage.

03 **Neighbourhood Hubs** - will allow for taller mixed-use buildings up to 4 storeys, ensuring that a small but prominent centres can be established at the centre of both Dunton Waters and Dunton Woods.

04 **School buildings** - will allow for the flexibility to deliver 2 storey landmark buildings with generous floor-ceiling heights.

05 **Village Green and farmstead setting** - heights surrounding the Village Green will be limited to 3 storeys, balancing the need to respect the historic farmstead (which sits on higher ground) setting, whilst ensuring that the large Village Green is appropriately fronted and overlooked.

06 **Employment buildings** - will allow for flexibility in providing buildings with generous floor-ceiling heights. Building heights of up to 3 storeys will be required so as to provide a suitable noise barrier against the A127, shielding homes to the south.

07 **Linear park** - will allow for taller apartment buildings up to 4 storeys in height, providing a definition for the open space that leads from the ridge-line to the Dunton Woods Neighbourhood Hub. Taller buildings here will also signify the centre of Dunton Woods from lower ground within the overall Garden Village and

08 **Eastern outer edges** - will be lower in height (as well as density) to ensure that development doesn't adversely impact views from Basildon or views towards the church of St Mary, identified in the Mandatory Spatial Principles relating to Heritage.





CHAPTER 6

MOBILITY STRATEGY

This chapter details the overarching Mandatory Overarching Principles for mobility in the Garden Village. These promote a step change in personal mobility and delivers a sustainable transport vision that underpins the Masterplan for Dunton Hills Garden Village.

6.

MOBILITY STRATEGY

The overarching objective of the mobility strategy is to contribute positively to climate change and healthy living whilst creating an integrated and socially inclusive society.

Dunton Hills can do this, and it will do this, because of its size, its location and its design.

It is not enough to simplistically do, and assess, mobility on the basis of what has gone before. Attitudes to mobility are shifting faster now than they have at any other time in recent history, and there is a marked difference between the generations. This is fuelled by equally fast changes in mobility technology, creating new options and expectations that meld liveability, mobility, health and climate effect with each element inextricably linked with the other.

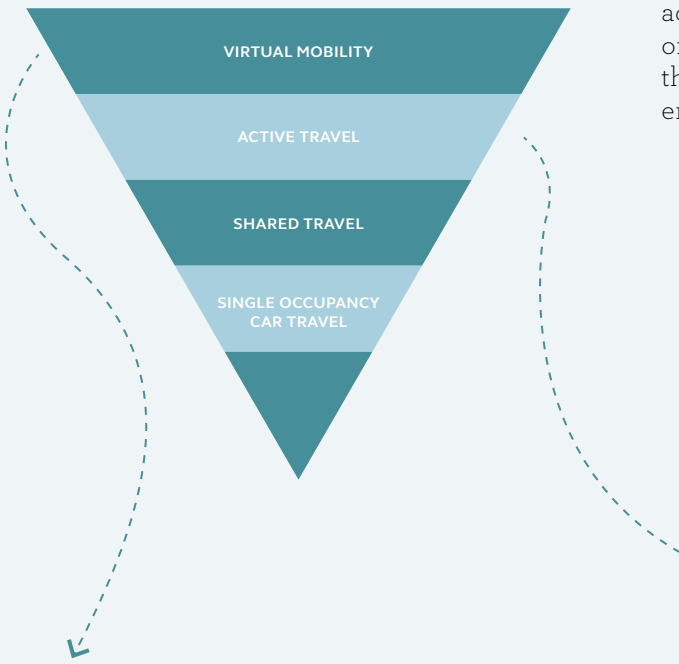
The building of a new Garden Village is an opportunity for radical step change in the way people move around, both within the development and across the surrounding area.

At the core of the objective is an aspiration for local living, measured across the day and week, and including but not focussing on the commuter peak period. When education, visiting friends, leisure, working, home or work hub working, shopping, healthcare and the other day to day activities are taken into account it is not unreasonable to aspire to 60% of activity to be undertaken locally, within the scheme or neighbouring settlements, employment and residential areas.

The design of the scheme itself, and connections to neighbouring villages, is at a pedestrian scale, and so this local living represents an opportunity to reinforce community spirit and inclusive society.

For travel within and beyond the vicinity of the local area, the design, availability and convenience of choice and behavioural influences are aligned in an order of priority that places those that achieve the objectives as highest first. Namely:

- Virtual Mobility
- Active Travel
- Shared Travel
- Single Occupancy Car Travel





Working from home



Convenient and high quality pedestrian and cycle links



Facilitating Active Travel



Delivery Drone (on land)

VIRTUAL MOBILITY

The internet is changing mobility patterns. Social media for is increasingly used for communication and the internet for shopping, research and home or hub working within the Neighbourhood Hubs, extending ones reach beyond their home. It is mobility without travel.

The consequences of virtual mobility, such as deliveries, will be dealt with through micro consolidation centres by the Community Concierge team, enabling either personal pick up, which is good for community integration, or efficient last mile of travel techniques using amongst others, ground drones.

To achieve virtual mobility high quality broadband connectivity is to be provided serving all homes, employment/commercial areas and community buildings.

ACTIVE TRAVEL

The masterplan has been designed at a walkable and cyclable scale. Clearly legible Mobility Corridors (set out earlier in this document) promote easy and direct access to key hubs and facilities by foot, bike, or scooters within the Garden Village. These form a mobility skeleton and are the most important network of corridors. This approach will make walking and cycling (aided or unaided) the default choice of travel for most residents and visitor, and make choosing to use a private car both unnecessary and less attractive.

Where some of these corridors happen to incorporate a carriageway it will be designed to be no more than 20mph and the cycleway/ footway will be segregated to create a safe environment for pedestrians and cyclists.

Active Travel extends beyond the site with the sustainability route leading from the Village Centre to connect to an improved footway/ cycleway along the north side of Station Road to promote walking and cycling towards West Horndon railway station for which there are improvements proposed. A footway/cycleway link is being proposed towards Laindon and Basildon albeit this relies upon the consent of the adjoining authority.



Online taxi service



Facilitating sustainable personal mobility

SHARED TRAVEL

The sharing economy is most significantly embraced by the younger generations, including Millennials, although not exclusively.

Modern shared travel includes buying rides from Transport Network Companies (TNCs such as Uber), and creating networks for private shared travel. Dunton Hills will create a real time private shared travel network, administered by Community Concierge team, and be alive to shifts in the way these networks are evolving, given the very fast pace of change.

It will also work with demand responsive (DRT) public shared travel companies to provide either a new or extended DRT service connecting the site with local employment sites and neighbouring settlements such as Brentwood, Basildon and Thurrock. This will provide significant benefit to the rural area surrounding Dunton Hills, reducing rural vulnerability.

The scale of Dunton Hills is sufficient to attract an increased provision of fixed route bus services, providing further benefits to West Horndon as well as adding to the attractiveness of shared travel for residents and visitors of Dunton Hills.

Finally, Dunton Hills is well connected to mass transit at West Horndon railway station. For people travelling occasionally, or even regularly, further afield, West Horndon station, which will be accessible by active travel and shared travel, provides excellent strategic connections, including to Central London, Basildon and Southend.

In the initial stages DRT and bus services to local secondary schools will be required until the new facility within Dunton Hills is available.

Choices such as Uber and other taxi services available in the local area are equally part of the choices available for shared travel.

INFLUENCING BEHAVIOUR

A important element in the promotion of sustainable travel choices is the Mobility Hub. This is prominently located within the Village Centre where there will be the highest level of use and access by the community. This facility will provide a focal point for the administration of the Mobility Plan and the shared transport initiatives, including Car Club, cycle and electric cycle hire, Community Concierge and micro consolidation.

The key principles of the Mobility Hub are as follows:

- Be in place (at first in a temporary facility) for the first residents moving into the development and act as a gateway facility for visitors;
- Forecourt/wide footway to allow cycles to be stored in front of the hub during main operational hours where, for example, people then go on to use other shared travel choices to go off-site;
- Internal storage facilities for bike share bicycles, electric bicycles, conventional cycles, electric scooter and cargo bikes within the hub to provide high levels of security for overnight storage etc;
- Locally accessed storage space for electric car sharing;
- Storage space for parcels for 'last mile' delivery and convenient drop off/loading facilities for delivery vehicles to allow transfer to storage area, for subsequent pick up, or cargo bikes or ground drones for efficient onward delivery. This will include appropriate future proofing for autonomous delivery vehicles as they are adopted; and
- Information provision covering Site Wide Travel Plan, Demand Responsive Transport (DRT), walking and cycling routes within the wider area, Car Club operation and car share schemes across Dunton Hills and Real Time Passenger Information.

The Community Concierge service will be based at the Mobility Hub to:

- Monitor the success of achieving the sustainable travel mode target;
- Provide the IT platform for the various shared travel initiatives and maintain the travel section of the community website and smart phone application;
- Deliver Personalised Travel Planning to residents and employees including the provision of digital or physical Welcome Packs;
- Co-ordinate the preparation and implementation of Travel Plans for employment and school users under the umbrella of the Mobility Plan;
- Offer bespoke travel planning advice to future businesses and schools when they are developed and co-ordinating these with the wider travel planning initiatives for Dunton Hills;
- Support the active travel across the Dunton Hills site, including promotional initiatives or activities;
- Hold regular events, including trials with new operators and organised community walks and rides;
- Manage the Car Club, car sharing and cycle hire and ensure that the mobility routes are available for people to use;
- Provide maintenance for cycles and other personalise modes of travel;
- Ensure the goods are delivered to the Mobility Hub reach their final destination; and
- Being alive to changes in travel habits and respond to emerging technologies.



EV charging



Easy, secure cycle parking and storage should be located at key destination points

PARKING

Dunton Hills Garden Village will support a modal shift towards a reduced need for cars. Appropriate levels of cycle and scooter parking provision should be located at key community and retail facilities and the Mobility Hub ensuring that cycling, both as a means of commuting and for leisure purposes, is made as convenient as possible.

Safe and secure cycle and scooter parking for each dwelling. Such parking can be provided in various forms and include the ability to charge e-bikes.

While the car will be accommodated in early phases, the Garden Village must be designed to promote and encourage sustainable modes of transport and be future proofed to take account of emerging policy with regards to provision of electric charging points. A critical factor in delivering this vision will be the development of an efficient, site specific parking strategy reflecting the reduced dependency on single user car travel. This strategy will pay particular focus to areas of higher density, the Village Centre/ Neighbourhood Hubs and promote car free education facilities. The reduced requirement for parking provision will yield more space to create an attractive, human scale public realm with a distinctive sense of place.

In light of this, the parking arrangement should be flexible and should be designed to preserve the human scale character of the streetscapes and avoid creating a car dominated environment. Masterplanning work undertaken to date has been based on both Essex County Council Policy Standards (September 2009) and discussions with Brentwood Borough Council relating to lower standards in line with advice from transport consultants Vectos (summarised on this page).

Indicative parking approaches are shown overleaf. Alternatively, more remote parking approaches could be considered to make driving less appealing (e.g. parking barns).

INDICATIVE CAR PARKING STRATEGY

Structure

- Garages generally provided for 3 bed houses and above.
- Parking to the front of dwellings to be utilised for terraces of 2 and some smaller 3 bed units. These can also be used to create parking squares where necessary.
- Parking courts for apartments should be secured and overlooked.
- Rear parking areas should be generally avoided but where they are to be used, this should be to serve a small number of houses (limited to 10 cars) and the area should be gated and overlooked.
- Visitor parking to be provided through on-street, parallel bays.

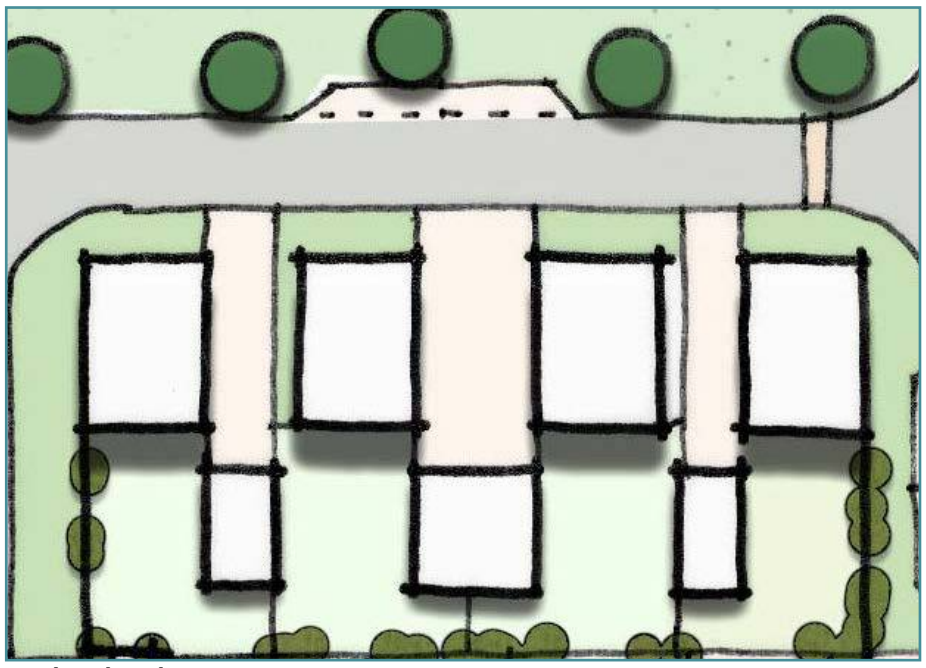
Potential parking ratios:

- 1 bedroom flats - 0.5 spaces/dwelling
- 2 bedroom flats - 0.75 spaces/dwelling
- 2+ bedroom houses - 2 spaces/dwelling
- Visitor parking - 0.25 spaces/dwelling

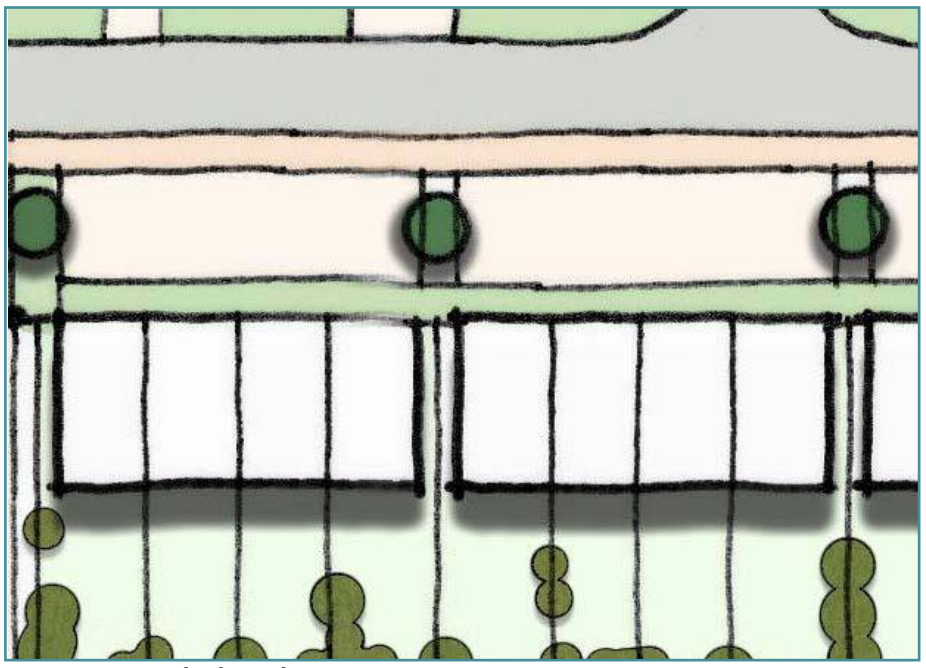
Other:

- Access to charging points for electric vehicles.
- Ability to charge e-bikes.

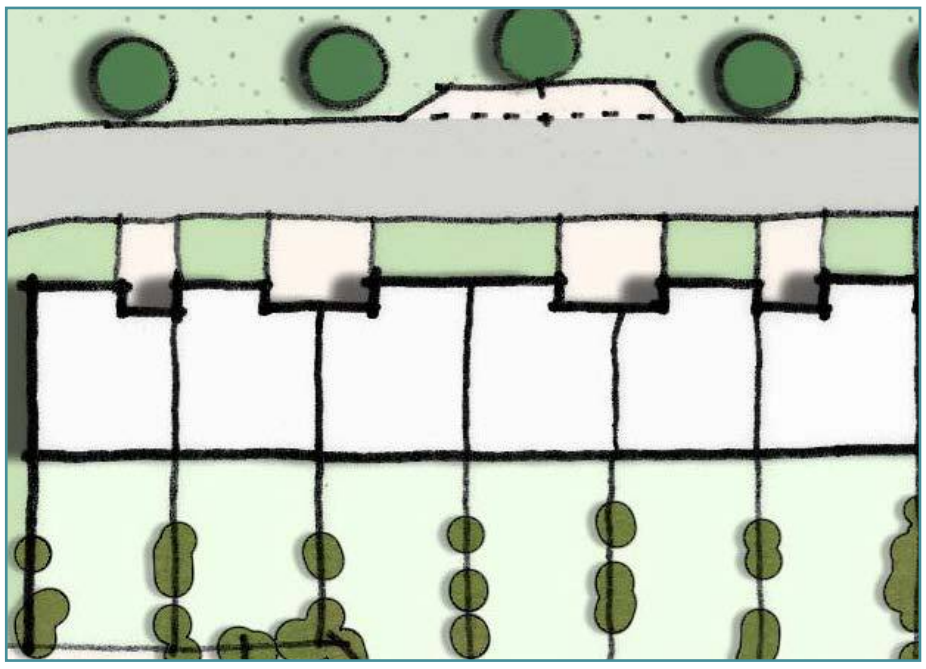
Indicative parking approaches



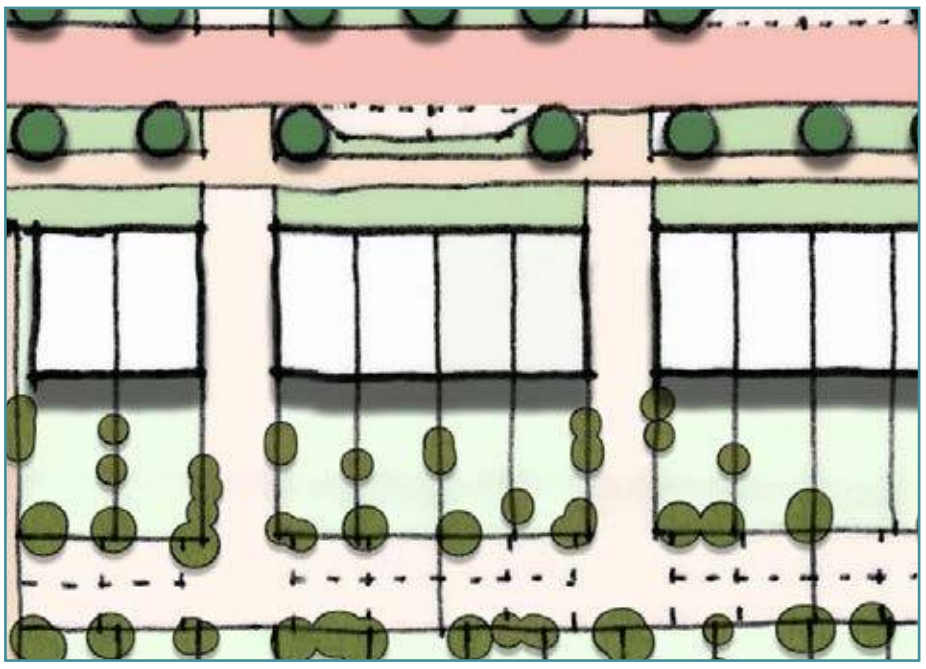
On-plot side parking



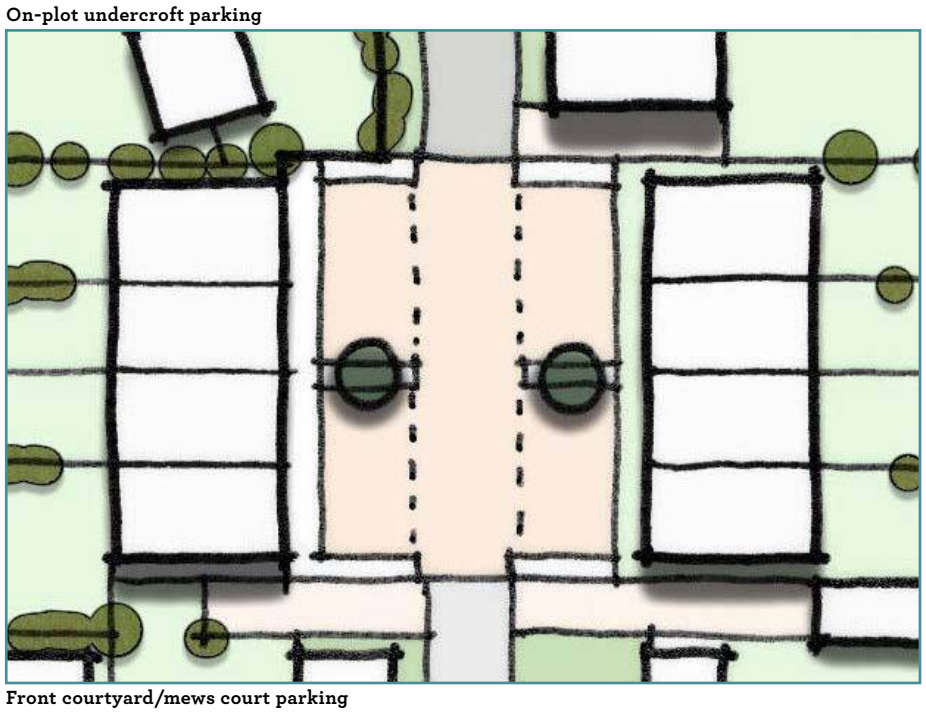
On-street - perpendicular Parking



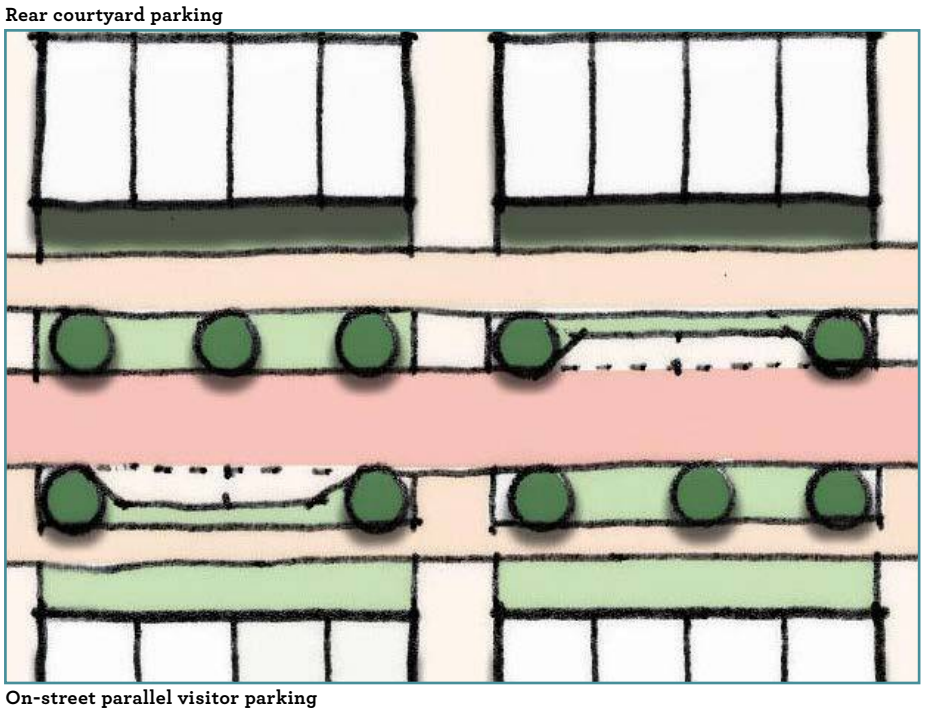
On-plot undercroft parking



Rear courtyard parking



Front courtyard/mews court parking



On-street parallel visitor parking

MANDATORY PRINCIPLES - MOBILITY

The Mobility Plan which promotes a step change in personal mobility and delivers a sustainable transport vision which underpins the Masterplan for Dunton Hills Garden Village by addressing the following key matters:

01 Promoting sustainable travel and healthy lifestyles within the Garden Village - creating and maintaining safe, attractive pedestrian and cycle routes, integrated within the network of streets and open spaces, including the wellness trail, a footpath/ cycle route adjacent to the A128 and a connection to the A127 cycleway.

02 A Mobility Hub - a Mobility Hub located within the Village Centre shall provide electric vehicle charging points, bicycle parking and hire, car club, bus stop, Demand Responsive Travel node, accommodation for the Community Concierge service and other related mobility facilities.

03 Community Concierge – Community Concierge Service which will co-ordinate and monitor mobility/travel planning, provide information about travel options whether via the web or other communication channels, operate the car club and car share schemes, co-ordinate occupiers' and schools' travel plans and promote other initiatives, including receiving delivered goods, shopping or parcels for onward transport to homes and businesses by cargo bikes and drones.

04 Share Travel Initiatives – the creating the ability for future residents and occupiers to use shared travel as a first choice for trips off-site including Demand Responsive Travel, traditional fixed bus services and other initiatives such as car sharing. The Primary Mobility Route shall be designed to accommodate buses to access all three neighbourhoods to encourage the creation of viable services.

05 Travel to School - establishing arrangements for pupils to travel to secondary schools (until the new secondary/all through schools is open) and 6th form education establishments via shared travel (i.e. principally buses)) rather than relying on personal travel.

06 Parking strategy - will be developed to control/limit parking to encourage a reduction in single use car travel both within the site and to other destinations within the local area. The Strategy will include a details of public bicycle parking.

07 Electric Charging - the provision and management of public charging facilities for electric vehicles, bicycles and mobility vehicles.

MANDATORY PRINCIPLES - MOBILITY (OFF SITE)

As part of the wider mobility initiatives secured by condition or obligation, the Garden Village will deliver or support the delivery of the following physical off-site works to promote wider connectivity:

01 Station Road - widening of the existing footway to provide a safe and lit route for pedestrians and cyclists from the Garden Village to West Horndon, including a controlled junction at Station Road to enable ensure pedestrians, cyclists and buses to have direct access to the Village via the Mobility Corridor.

02 East Horndon Hall - a controlled crossing of A128 Tilbury Road between the Village and this employment area.

03 A128 Tilbury Road – through design reducing traffic speed.

04 Thorndon Country Park– a footpath/cycle route to Thorndon Country Park's southern entrance.

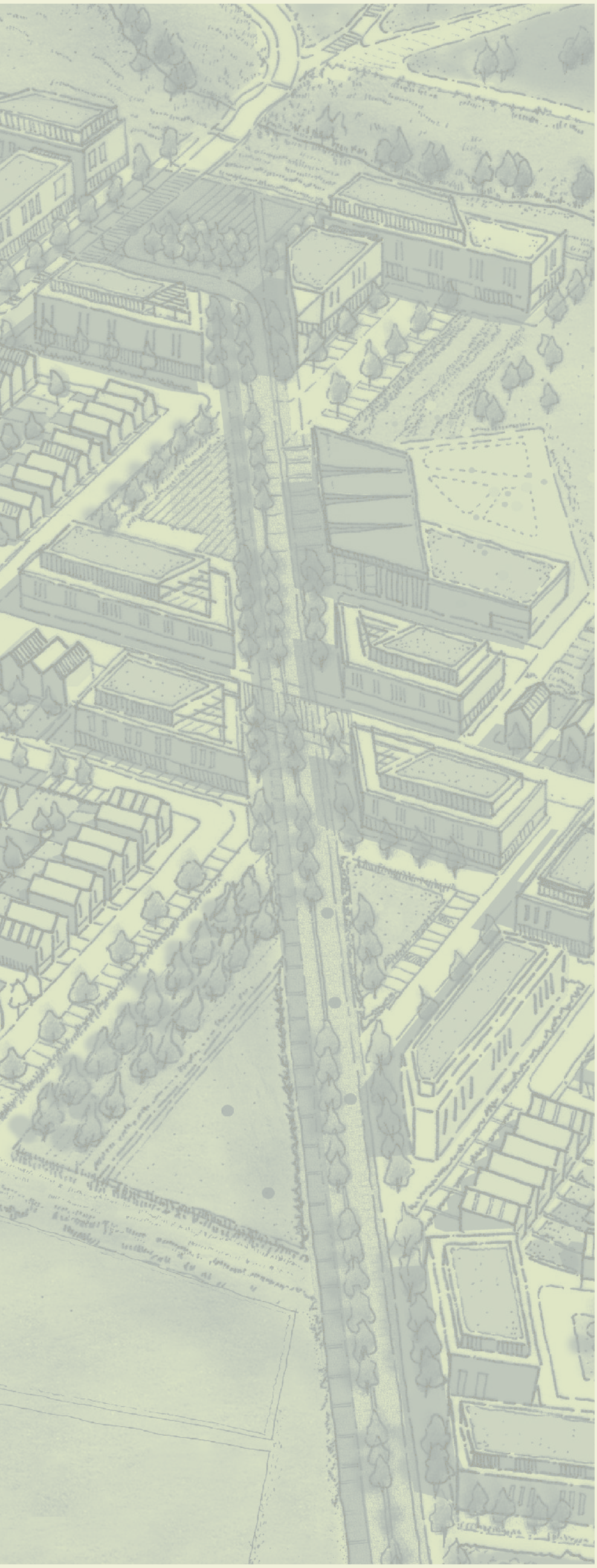
05 West Horndon - financial support for improvements within West Horndon to improve safety conditions for pedestrians and cyclists.

06 West Horndon Railway Station - financial support for the delivery of improvements to West Horndon railway station.

07 A127 Corridor - financial support for the delivery of appropriate and necessary schemes suggested in the A127 Growth Corridor Strategy and as may also be identified in the Infrastructure Delivery Plan.

08 Basildon Link - subject to the approval of Basildon Borough Council, a footway/cycleway link via Church Lane to Lower Dunton Road which can also serve as an access for emergency vehicles.





CHAPTER 7

SUSTAINABILITY STRATEGY

Creating a truly sustainable place is key to the long term success of Dunton Hills Garden Village. This strategy is wide ranging and includes social vitality, mental and physical well-being, education, employment and sustainable energy which are described in this chapter.

7.

COMMUNITY INTERACTION, HEALTH AND WELLBEING

To create a truly sustainable, healthy and socially integrated community, Active Design Principles promoting physical activity and well-being have been embedded at the heart of our vision for Dunton Hills Garden Village.

ACHIEVING ACTIVE DESIGN - ESSEX DESIGN GUIDE AND SPORT ENGLAND

The Essex Design Guide 2018 has presented a new theme in its latest edition establishing the need to give far greater weight to aspects of active design. These core principles are a driver to help activate spaces and encourage involvement and the strengthening of community.

The ten Active Design Principles echo urban design best practice and are also highly relevant for new Garden Villages. We consider these Active Design Principles as a strong starting point for the creation of well-being and a physically active community.

Activity for all



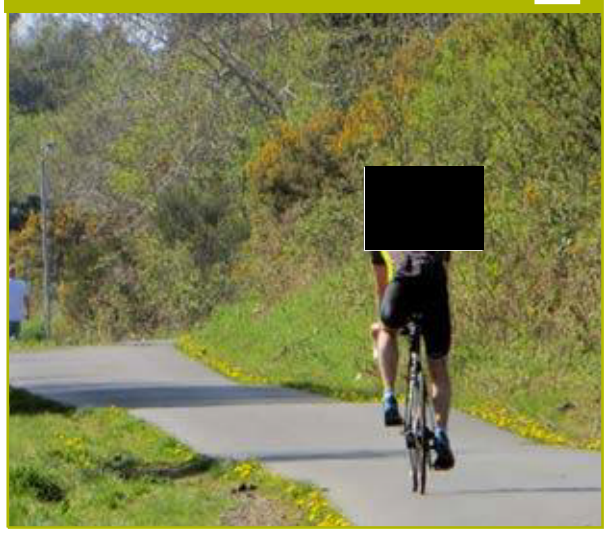
The Framework Masterplan ensures a range of recreational needs of the new community are met with easily accessible facilities including sports pitches for all ages (e.g. cricket and football), play facilities for toddlers to teenagers (LAP, LEAP, NEAPS), outdoor gym facilities and the Wellness Trail and high quality open spaces encouraging healthy movement, community engagement, physical activity and by extension social, physical and mental well-being. The indoor sports needs are catered for at the community Sports Hub associated with the secondary school.

Walkable communities



The Village Centre and two Neighbourhood Hubs are located to ensure maximum walkability at the wider settlement and neighbourhood scales. Schools, retail, employment facilities and open spaces are all linked by a comprehensive and convenient network of walking and cycling links.

Connected walking and cycling routes



Dunton Hills will have a sustainability connected Garden Village with a safe and attractive cycle routes integrated within the network of roads and open spaces. A 6.2 km wellness trail will further promote active recreation and connectivity within the site. The no-car Mobility Corridor provides a direct connection to Station Road and then on to West Horndon railway station.

Co-location of community facilities



The distribution of facilities within the Framework Masterplan is based on the co-location of retail, education and community facilities within three interlinked hubs. This will ensure a synergy of uses and will create active and well-populated public spaces to support an active community. The Village Centre with its Market Square provide the key central location for facilities and services.

Network of multifunctional open space



Dunton Hills is a landscape led masterplan and as such homes are set within an extensive network of multi-functional open spaces to support a wide array of users and uses including play and sports facilities, woodland, existing ponds, drainage features and parkland. The Village Green is a key social space for community activities.

Appropriate infrastructure



Key to creating a vibrant and attractive Garden Village is the early delivery of infrastructure and services on site which fully meets the future needs of residents and supports healthy and sustainable lifestyles. The range and nature of facilities has been fully considered to ensure that the majority of everyday needs can be met within the site. One of the facilities is a healthcare centre located within the Village Centre to cater for the needs of future residents and the wider local community.

Management, maintenance and evaluation



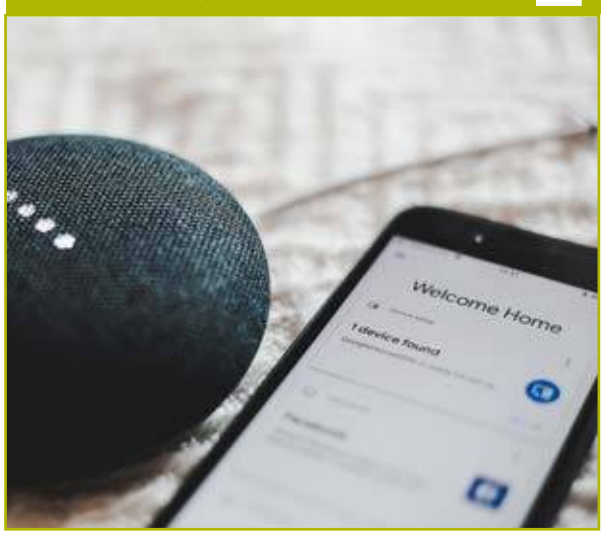
The site management and legacy of the Garden Village will be overseen by the community comprised of residents and representatives from the Borough and Parish Councils alongside an Estates trust (e.g. The Lands Trust). These parties would be responsible for the day to day management and maintenance of the site facilities and open spaces to make neighbourhoods safe, attractive and secure places to live and encourage active participation.

High-quality streets and spaces



Dunton Hills will comprise of permeable, inclusive neighbourhoods which prioritise sustainable transport and are connected through safe walking, cycling and bus routes. Attractive and well maintained green streets that accommodate all users will facilitate leisure and active transport opportunities.

Active buildings

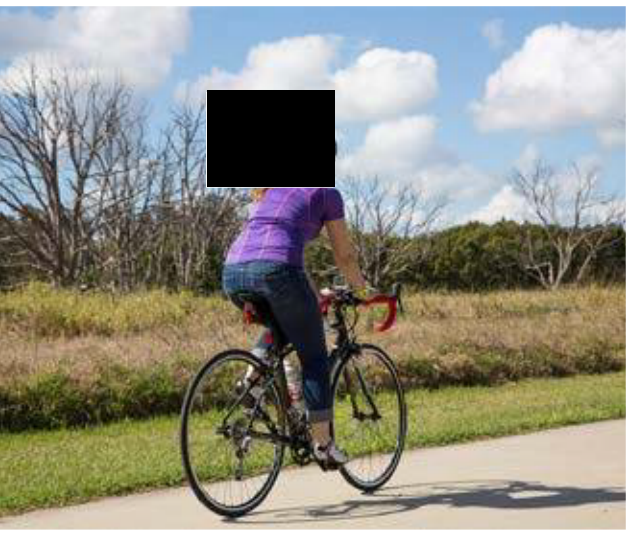


Buildings will be designed to ensure sustainability and energy efficiency are achieved. While this is an issue for later stages of detailed design and the SPD it is envisaged that this could include achievable methods of green energy generation such as P.V. panels, heat pumps, passive heating and homes with smart technologies that reduce energy consumption. In addition the housing mix should enable people to live at Dunton Hills throughout their lifetime, including the provision of suitable care home accommodation and affordable homes available to those residents in need.

Activity promotion and local champions



Local residents groups, clubs and forums will be established to promote opportunities for social engagement, active citizenship and interaction helping create a vibrant and integrated community. The Community Orchard and Community Growing Space are ideal focal points for such groups or clubs.





Creating opportunities that encourage outdoor activity and sustainable transport are to central to the design ethos and vision for Dunton Hills.

WELLNESS TRAIL

Our approach to connectivity is inextricably linked to mobility (touched upon in previous chapters) and is integral to promoting health and well-being within the Garden Village encouraging people to walk and cycle between their homes. place of work, learning and recreation.

The 6.2 Km wellness trail provides residents with a convenient way to get out of the house and keep active with their neighbours. It links together a number of key destinations along direct, pedestrian and cycle friendly routes. Key nodes include the Village Centre, the northern Employment Hub, the two Neighbourhood Hubs and the schools.

Large parts of this route are through open green space including the Ancient woodland, the ridge-line, and the linear corridor along the spring. As well as providing sustainable and high quality connections, this route could include trim trails for outdoor exercise for all age groups.

HEALTHY STREETS

Through the careful design of the streetscape we will improve air quality, reduce the dependence on the car and help make communities greener, healthier and more attractive, to optimise the network of open spaces and wooded areas within Dunton Hills Garden Village.

While the detailed design will come through at a later stage, street design should:

- Encourage walking and cycling for all residents especially children;
- Create streets that are easy to cross;
- Ensure there are adequate places to stop and rest (shade and shelter)
- Help people feel safe and are relaxed;
- Ensure that streets are overlooked and there is activity.

These elements have been incorporated into initial designs for the Framework Masterplan



Proposed route of the Wellness Trail

KEY

Proposed Wellness Trail

MANDATORY PRINCIPLES - COMMUNITY INTERACTION, HEALTH AND WELLBEING

The Masterplan Framework includes the following mandatory principles for delivering community infrastructure and creates formal and informal spaces for social, cultural and recreational activities to encourage interaction, foster a healthy community and promote individual wellbeing:

01 Accessibility - shops, schools and community facilities at locations which are both accessible and prioritise foot and cycle as the preferred mode of travel.

02 Village Green - a safe space to relax, play and interact at the heart of the Garden Village. The Green provides a setting for events that could be hosted throughout the year.

03 Market Square - a formal space events that could be hosted throughout the year including farmers' markets.

04 Healthcare Centre - will be provided within the Market Square, providing healthcare services for all residents at the heart of the Garden Village.

05 Other Formal Spaces - other areas provided as part of the Neighbourhood Hubs, principally associated with the schools, allowing parents/carers waiting for their children to interact.

06 Formal Play Areas for Children – spread throughout the site with different levels of equipment to serve different age groups.

07 Green and Blue Infrastructure – an extensive area of land, including interpretation boards and a viewing platform, available to the community for general recreation and play.

08 Community Orchard and Growing Space – providing a space for community interaction at the heart of the Garden Village while also promoting healthy eating and proving opportunities to learn new skills

09 Wellness Trail - a dedicated and signposted pedestrian/cycling trail though the Green Infrastructure incorporating external gym equipment.

10 Footpaths/Cycleways –including Nightingale Lane, non car routes connecting neighbourhoods, hubs, schools and other facilities. Externally, connections to the cycleway along the A127 and to the southern entrance of Thorndon Country Park.

11 Community Sports Hub – a sports hall and sports pitches at the centre of the Village shared by the community with the secondary/all-through school.

12 Sports Pitches – dedicated football hub and cricket pitches including changing rooms.

13 Community/Village Hall – a space within a building available to the community for a variety of meetings or activities.

14 Mobility Hub – promoting mobility initiatives to encourage sharing transport and sustainable forms of mobility.

15 Housing Mix – homes that allow people to stay in the community over changing circumstances and life stages, including homes for the older and vulnerable members of the population.

16 Healthy and Energy Efficient Buildings – including houses with gardens for play and growing food.

MANDATORY PRINCIPLES - OTHER INITIATIVES

01 Social Events - the ability through the community management body or Friends of Dunton to use the buildings and spaces within the Village for a programme of events that would bring the community together.

02 Affordable Housing- devising a housing strategy to support a planning application which can retain existing residents, especially younger people, and priorities identified key worker groups at Dunton Hills.



Creating a strong sense of community is a key aspect of a truly sustainable Garden Village.

EDUCATION, EMPLOYMENT AND LEARNING

The Masterplan integrates a range of education and employment facilities throughout the masterplan ensuring the Garden Village meets a wide range of needs and requirements.





The Framework Masterplan will provide up to three new primary schools while also offering opportunities to learn new skills through outdoor learning.

EDUCATION

The rational for the physical location of the education facilities, required as an integral part of the Garden Village, has already been established through the Mandatory Spatial Principles. These education facilities include free-standing nurseries, co-located 2 form entry primary schools and either a secondary school or an all-through school are focused on the Village Centre, Neighbourhood Hubs and the Employment Hub. All should include car free spaces by their entrances. These locations place the primary schools facilities at the heart of the three neighbourhoods and the secondary school and its sporting facilities at the heart of the Dunton Hills.

All these facilities are accessible on foot and foster vibrancy and activity at these hubs. The specifications and standards for the schools are a matter for detailed design. The secondary or all through school will include sporting facilities that will be a shared resource with the community.

By providing a range of schools and nurseries there will be enough places on-site for every child living at Dunton Hills who wants one. There is the basis to create an all through learning environment for the community with children being able to progress from early years to secondary education at Dunton Hills.

The first co-located primary school will be available at an early stage of the development as part of the Village Centre so that there is a realistic opportunity for children to attend their local school. There will inevitably be a gap in the delivery of the secondary education provision whilst the new school is delivered and it will be necessary for suitable sustainable transport provision to be provided between Dunton Hills and local education facilities.

Some of the new educational facilities may attract children from a wider area and, as such, there is a need to ensure the provision of suitable space for buses, DRT vehicles, cycles and scooters at the schools to encourage the use of sustainable modes of travel. Active travel planning for all educational facilities will need to fit within the umbrella of the wider mobility principles for Dunton Hills.

Education is more than just the physical location of any buildings and their high design standard. Instead, there is the access to, and creation of, external spaces for educational activities enabling children to directly connect to their surrounding landscape and wildlife. The connectivity also extends to the provision of a range of constructive and challenging play areas and other facilities which are accessible to children of all ages and abilities.

Connectivity to the wider environment, whether through formal learning or play, is about enabling children to be actively engaged in understanding, maintaining and positively contributing to their surroundings instilling a culture of being proud to be part of the Dunton Hills community. Connecting children with their wider environment will support their physical and mental health and well-being as well as their learning development.

Who might operate the schools has yet to be determined. However, the operator will be required to sign up to the vision and principles which underpin Dunton Hills Garden Village and be an active partner in the ongoing management of the community. Through the schools, the young voices of children living at Dunton Hills should be heard about what they want to be provided as part of the community, whether physical items or social events. Exploring the potential for key worker accommodation for teacher and other support staff should be explored as part of the housing strategy.

Learning also extends outside the formal education system to encompass apprenticeships being available for those living at Dunton Hills to engage younger members of the community to be involved in the place where they live, work and play. The opportunity exists to create apprenticeship and training schemes based at Dunton Hills which could, if the demand existed, be extended to retraining adults.

MANDATORY PRINCIPLES - EDUCATION AND LEARNING

The Masterplan Framework fosters a learning environment with the mandatory principles being:

01 Primary Schools – inclusion of sites for a primary school with early years provision within each Neighbourhood.

02 Early Years – up-to a further 4 nurseries or crèches located at the Neighbourhood Hubs and the Employment Hub.

03 Secondary Schooling – a secondary school or all through school site at the heart of the Garden Village with associated sports provision shared with the community.

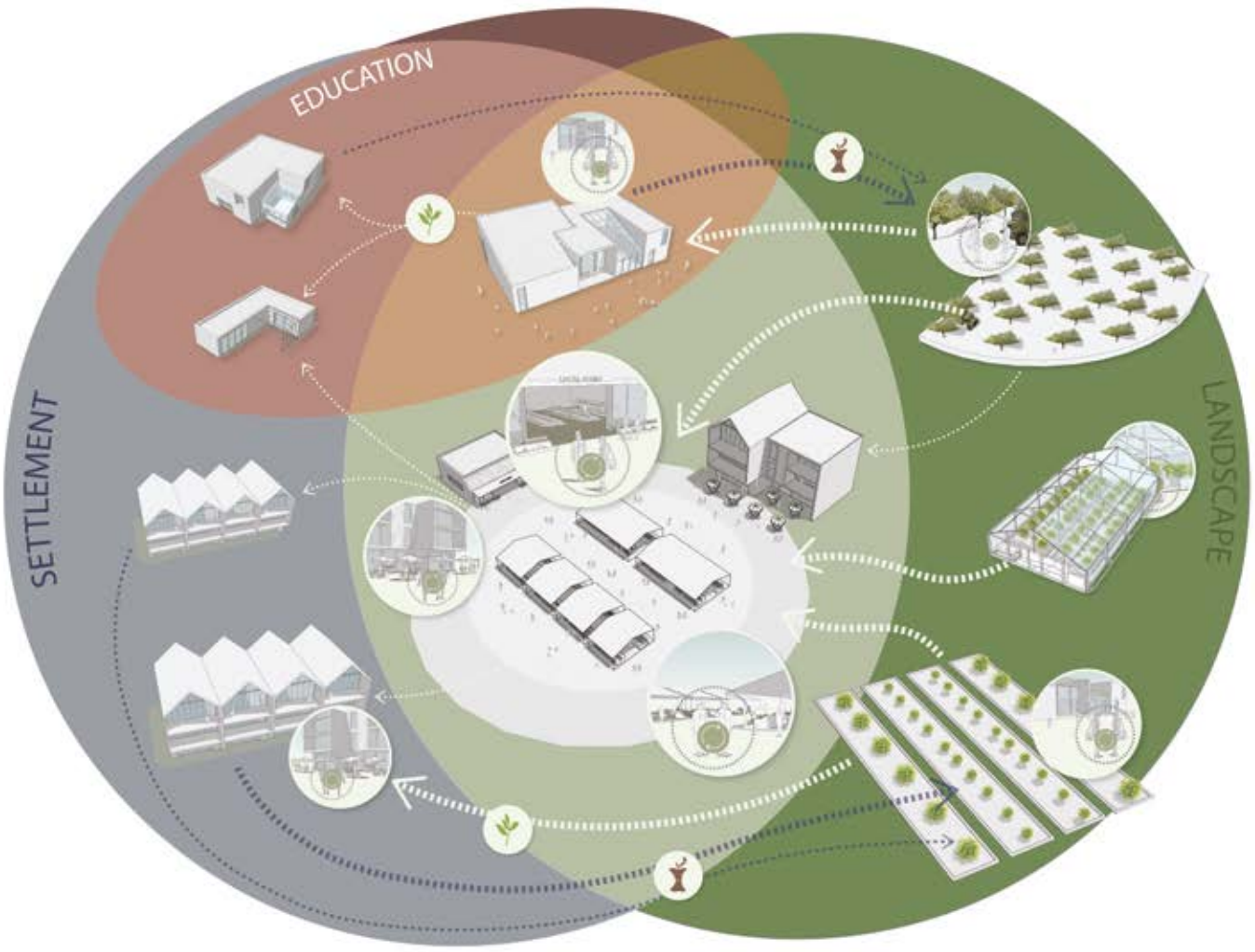
04 Space Around Schools - establishing safe car free spaces for taking children to and collecting them from schools and creating clean air zones around schools.

05 Outdoor learning - will be facilitated though careful positioning of school buildings within the Garden Village to enable access to quite areas within the surrounding Green infrastructure for outdoor learning.

06 Apprentices – recruiting young local people to be taken on as apprentices during the construction period and for the management of the Green and Blue Infrastructure.

07 High Quality and Innovative Design Standards –taking the best practice and innovative ideas for school design, both internally and externally, but applying these within the context of the design vision for Dunton Hills to create a high quality learning environment for children

08 Heart of the Community – the schools themselves, including the Community Hub, and the operators of the schools will be an active partner in the community and will promote the voice of children and other young people



The framework masterplan facilitates a synergy of uses ensuring that educational facilities are in close proximity to outdoor learning environments and public spaces.





Apprenticeships will be supported through the construction and on-going management while a range of jobs will also be provided for through services and on-site facilities.

EMPLOYMENT AND LEARNING

Supporting a vibrant community at Dunton Hills is not just about delivering housing and community facilities. Instead, it is about quality and availability of employment space to foster a dynamic economy. This is particularly true at Garden Villages where the opportunity should exist to live work and play and where the close proximity of residents and job opportunities minimises the need to travel, especially by private car.

However, because of technology the modern economy is flexible and traditional employers are less tied to a specific geographical space. Technology enables firms and workers to be footloose. The same technology enables people to innovate and start new businesses from their homes without needing formal employment floorspace. High quality broadband and other communication technology is key for the modern economy and this includes its provision at Dunton Hills.

To create the innovation and entrepreneurship culture, and to enable such businesses to thrive, Dunton Hills will provide a range of flexible spaces for business to establish and grow with excellent access to modern technology, a high quality environment and supporting local services such as shops, nurseries and both recreation and leisure opportunities. These spaces will be from people working from home, to small scale office space with support services such as meeting rooms in the Village Centre and then more traditional accommodation within the Employment Hub.

Jobs will also be created on-site through the retail, leisure and community facilities, including the healthcare centre and schools. People will be employed to manage and maintain Dunton Hills. However, flexibility is not just a matter for employment floorspace but equally applies to retail outlets. The high street is changing and whilst some shopping facilities and support services will inevitably be required on-site, other traditional retailers are moving more on-line. The aim to promote virtual mobility and the use of micro consolidation opportunities through the concierge service will discourage some retailers from operating at Dunton Hills. The retail floorspace within the Village Centre and Neighbourhood Hubs will need to be able to respond to changing shopping behaviour.

Dunton Hills is not expected to have large scale employment uses on-site because they are already planned elsewhere along the A127 growth corridor. Dunton Hills will complement rather than compete these strategic employment locations, including East Horndon Hall. Connectivity with these other locations is an integral part of the mobility strategy. This strategy extends to connectivity to West Horndon railway Station and places such as Basildon and Brentwood which are established employment locations.

The opportunity exists to employ local labour at Dunton Hills. This will be secured through young local people being taken on as apprentices and promoting the employment of people in the local area with the necessary skills or capable of learning such skills, including through Construction Training and Employment initiatives. These jobs can be both during the construction period and beyond. The availability of a good supply of skilled labour are now much more important than other location factors and this equally underpins the delivery of high quality educational opportunities at Dunton Hills.



MANDATORY PRINCIPLES - ECONOMY

The Masterplan Framework provides the opportunity to promote economic growth through the following mandatory principles:

01 **Living/Working at Dunton Hills** – space being available in a proportion of homes with connectivity to high speed broadband to enable people to work from home or start-up their own companies.

02 **Support Space and Facilities** - dedicated and available space, such as meeting rooms or teleconference facilities, where people living/working can hire/use to support their business activities.

03 **Employment Floorspace** – different types of flexible and adaptable employment and commercial floorspace at the Employment Hub, Village Centre and Neighbourhood Hubs offering a range of accommodation to potential occupiers both upon construction and in the future responding to market demands.

04 **Enabled Buildings** – provision of high speed broadband connectivity for all employment and commercial buildings.

05 **Retail Space** – commercial units within the Village Centre and Neighbourhood Hubs to be of a flexible design to adapt to changes in the retail sector.

06 **Apprentices** – recruiting young local people to be taken on as apprentices during the construction period and for the management of the Village.

07 **Local Recruitment Strategy** – promoting the employment of people with the necessary skills or capable of learning such skills through Construction Training and Employment initiatives.

ENERGY EFFICIENCY AND RENEWABLES

Dunton Hills will be a low Carbon Garden Village. This section sets out the site's sustainability strategy.

SUSTAINABILITY STRATEGY

Energy Strategy which maximises energy efficiency, minimises energy use and promote renewable energy technologies will be prepared. However, energy efficiency and renewable energy initiatives continue to evolve alongside Government legislation and policy and, for these reasons, the Energy Strategy will need to be a living document to enable changes to be made in response to these external factors.

RENEWABLE ENERGY

Dunton Hills will be a very low carbon development and the starting point is to reduce energy use and hence carbon dioxide emissions. Although a matter for detailed design, high fabric standards combined with smart control systems enable buildings to be operated well from an energy perspective, reducing energy use and cost of utility bills.

The masterplanning of Dunton Hills has considered how it would be possible to maximise the number of buildings which can be orientated to maximise solar gain and daylight albeit there will be a need to minimise the risk of overheating. However, these types of measures principally address heating of buildings, including reducing the risk of fuel poverty, but energy will be required for other activities, including lighting and changing of electric vehicles.

Through the Design Review process opportunities to incorporate renewable energy technologies have been explored. These opportunities have included those which are currently available. However, this is not to say that over the lifetime of the construction these will be the only technologies because new innovations may arise and become commonplace.

At this time, wind power has been ruled out on practical considerations. Biomass and combined heat and power have been discounted because they require a heat network which is considered unviable at Dunton Hills due to the low thermal demand density. Gas combined heat and power is now considered to be a high carbon technology due to the de-carbonisation of the electrical system. This might change if hydrogen gas becomes the norm.

Initially, some of the properties will include gas-fired boilers to provide space heating and hot water. However, this will stop in 2025 for new homes to be replaced by electricity. The renewable electricity generating technologies will include solar panels which themselves influence the orientation of buildings, air source heat pumps and ground source heat pumps. The potential for battery storage of renewable electricity, especially from solar panels offers the opportunity to reduce, rather than totally eliminate, the need for Dunton Hills to be on the grid. The current best practice is directed towards battery storage adjacent to sub stations rather than a battery for each dwelling. Storage of surplus daytime electricity offers a solution of charging of vehicles overnight by homeowners. Equally, vehicle batteries can be drawn upon by the occupiers at each dwelling.

MANDATORY PRINCIPLES - RENEWABLE ENERGY

The Energy Strategy shall address the following key matters::

01 Target for Carbon Reduction - placing shops, schools and community facilities at locations which are both accessible and prioritise foot and cycle as the preferred mode of travel.

02 Domestic Energy Efficiency – how buildings maximise energy conservation and efficiency through layout, siting, orientation, design and a 'fabric first' approach achieving, as far as is practicable based upon relevant technologies, nearly zero energy use.

03 Smart Homes - technology to monitor energy efficiency.

04 Commercial and Community Efficiency – achievement of BREEAM 'excellent' rating.

05 Overheating – principles for designing out overheating of buildings and avoiding the creation of urban heat islands.

06 Construction – use of low carbon technologies, materials and methods of construction.

07 Domestic Heating – adopting the Government's stated policy of methane gas not being used for domestic heating from 2025.

08 Renewable Energy Target – achieving the Local Plan minimum of 10% of the predicted energy needs of the development from renewable energy.

09 Renewable Energy Technologies – identification of the suitable and appropriate technologies. The use of photovoltaic panels, air sources heat pumps and ground source heat pumps as the initial renewable energy technologies are currently the most appropriate forms of technology.

10 Centralised Heating – the potential for apartment schemes, commercial buildings and community facilities to incorporate low carbon combined heat and power technologies.

11 Battery Storage - using suitable battery storage facilities on-site to recover excess renewable energy for use later.

OTHER SUSTAINABILITY CREDENTIALS

ADDITIONAL PRINCIPLES

There are some mandatory principles which do not fit neatly into the previous chapters but are important to the delivery of a high quality Garden Village at Dunton Hills. These other Mandatory Principles are included in this section and are self-explanatory in their aims and objectives and are highlighted below.



Well integrated drainage will be key to placemaking and sustainability.

MANDATORY PRINCIPLES - OTHER SUSTAINABILITY CREDENTIALS

There are other principles that will need to be taken forward from the Masterplan Framework:

01 Air Quality – minimise emissions associated with Dunton Hills including through appropriate energy technologies, making walking and cycling the way to move around, clear employment uses and promoting electric vehicles.

02 Biodiversity – a net gain in biodiversity, protecting and retaining species and important green assets on the site, informal rather than formal landscaping and creating spaces/ planting species for wildlife to flourish.

03 Climate Change Resilience – through the construction period keeping sufficient flexibility to adapt to climate change and adopt new technologies as they emerge.

04 Heritage – retain and respect designated heritage assets and integrate these into the Garden Village.

05 Noise – careful layout of relationships between noisy and non-noisy uses and use of appropriate attenuation within building fabric.

06 Soil – retaining and re-using soil on-site.

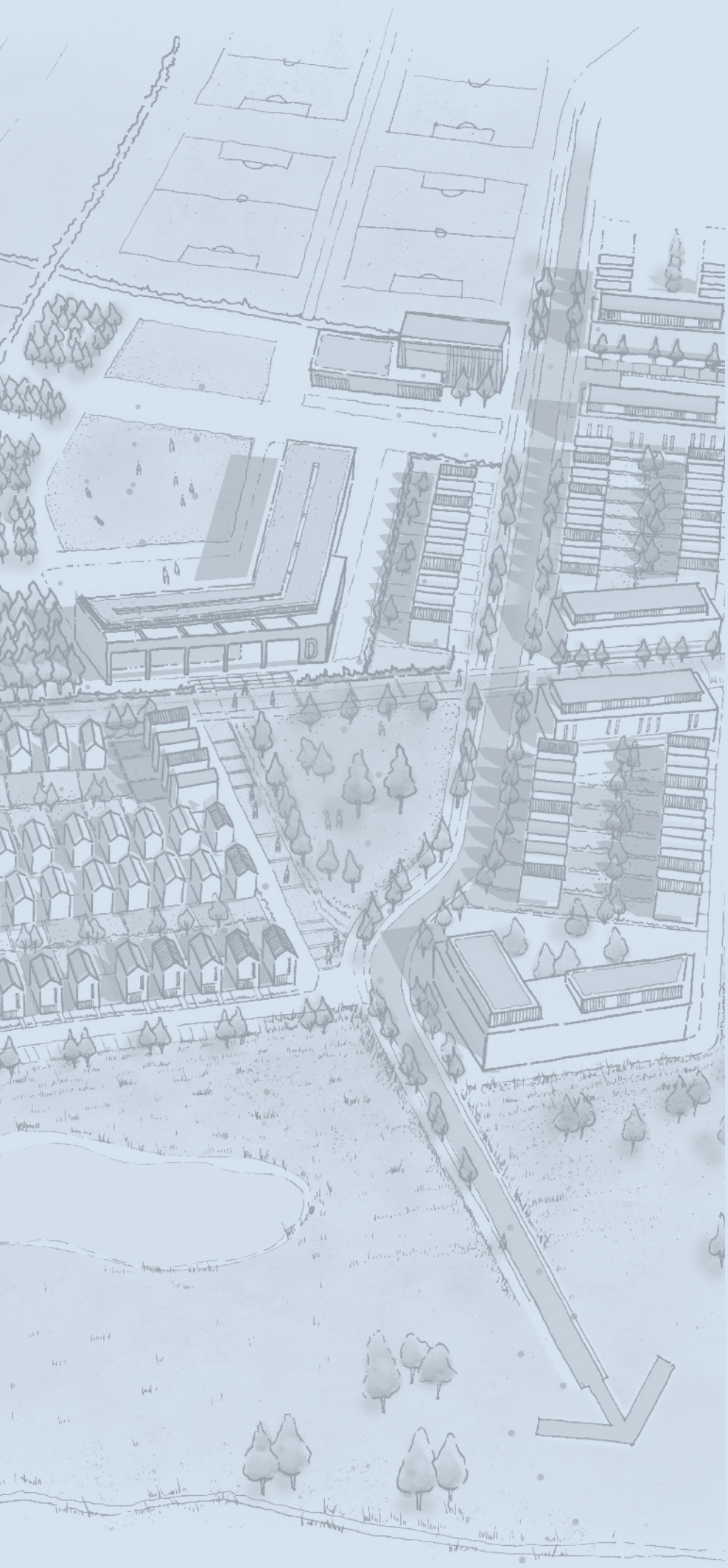
07 Sustainable Drainage – incorporation of sustainable drainage techniques based upon the Masterplan Framework's strategy and for buildings to keep out of the flood zone.

08 Virtual Mobility – a strategy to enable on-line shopping and similar initiatives to enable goods and services to be purchased over the internet, including broadband, mobile telephone coverage and WiFi. Also allows for initiatives such as autonomous cars and ground drones to be adopted.

09 Waste Minimisation - a Waste Management Statement identifying measures to reduce waste during construction and operation.

10 Water Efficiency - limiting the use of potable water to no more than 110 litres/person/day and harvesting rainwater, especially for maintaining gardens and landscaped areas.





CHAPTER 8

COMMUNITY, STEWARDSHIP AND LEGACY

This chapter outlines the long term sustainable management of Dunton Hills Garden Village, its public spaces and community assets for the benefit of all residents.

8.

COMMUNITY, STEWARDSHIP AND LEGACY

MANAGEMENT STRUCTURE

The Management Approach to secure the legacy of the Garden Village is summarised in the hierarchy on the adjacent spread.

Community Management Organisation

The oversight of the management of Dunton Hills Garden Village is provided by the Community Management Organisation (CMO) which will predominantly comprise members of the Dunton Hills community together with representatives of the Borough and Parish Councils. The community representatives would be elected/appointed to serve an agreed on term.

The CMO would be responsible for the management strategy for Dunton Hills Garden Village; overseeing the activities of the Estate Trust; oversight of the concierge service, including the appointment of the key staff; approval of yearly management and business plans; agreeing to collective purchasing of services and utilities; monitoring local employment initiatives and confirmation of the annual precept payable by the occupiers. The CMO would hold the freehold of the site save for residential properties, the Employment Hub and other parcels of land as may be agreed. If established, the CMO would have input into the operation of a site specific Housing Association. Retaining the freehold would enable the CMO to capture any land value from sales or development.

Estate's Trust

To enable the effective day-to-day management of the Green Infrastructure and other public spaces, potentially including the sustainable drainage features, an Estates Trust would be set up or the Lands Trust appointed. The Trust's role could include collecting the precept from the occupiers of the properties; ensuring any other estate covenants are observed and administrative support for the CMO Board. The income, including from any commercial activities operated by the Trust, would be distributed to and used by the Trust.

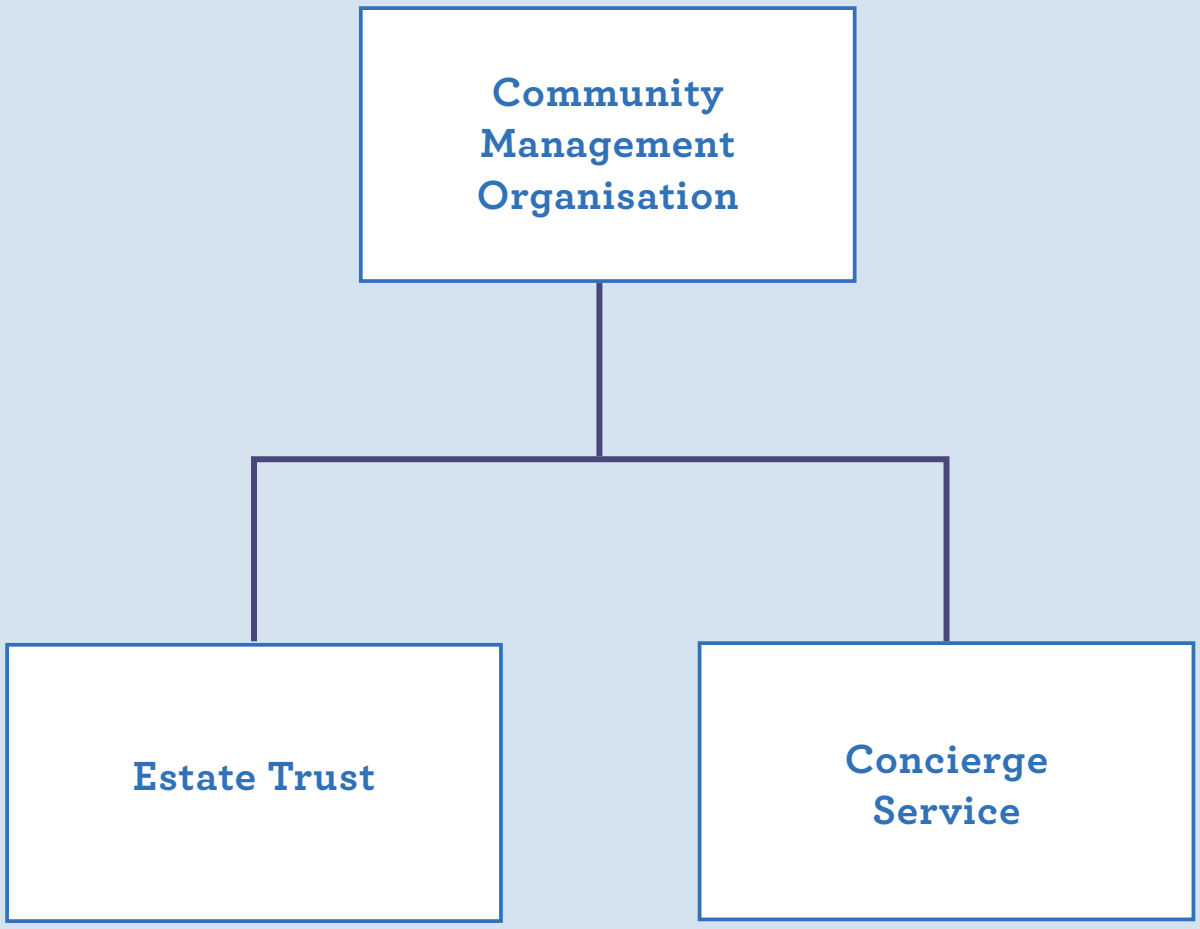
If the Lands Trust is involved then it would have a long leasehold of the land to be managed and maintained. The Trust would liaise with the management company for the Employment Hub to ensure effective management of the green spaces and parking areas is maintained.

Concierge Service

The concierge service, based at the Mobility Hub, would be overseen by the CMO but with the input from an independent Transport Review Group which would include members of the community together with representatives of the Borough and County Councils. The Group's role is to monitor and review the operation of the Mobility Plan and advise the CMO how it is performing; what additional actions might be required by the concierge service and whether the Plan requires amendment to reflect new ideas/ change in circumstance. The concierge service would undertake personal travel planning and assist with the preparation of Travel Plans by others, such as schools and employers, to ensure they incorporate the Mobility Plan's initiatives. Any commercial income to the concierge service would be used to off-set operating costs.



DUNTON HILLS MANAGEMENT STRUCTURE



MANDATORY PRINCIPLES - COMMUNITY, STEWARDSHIP AND LEGACY

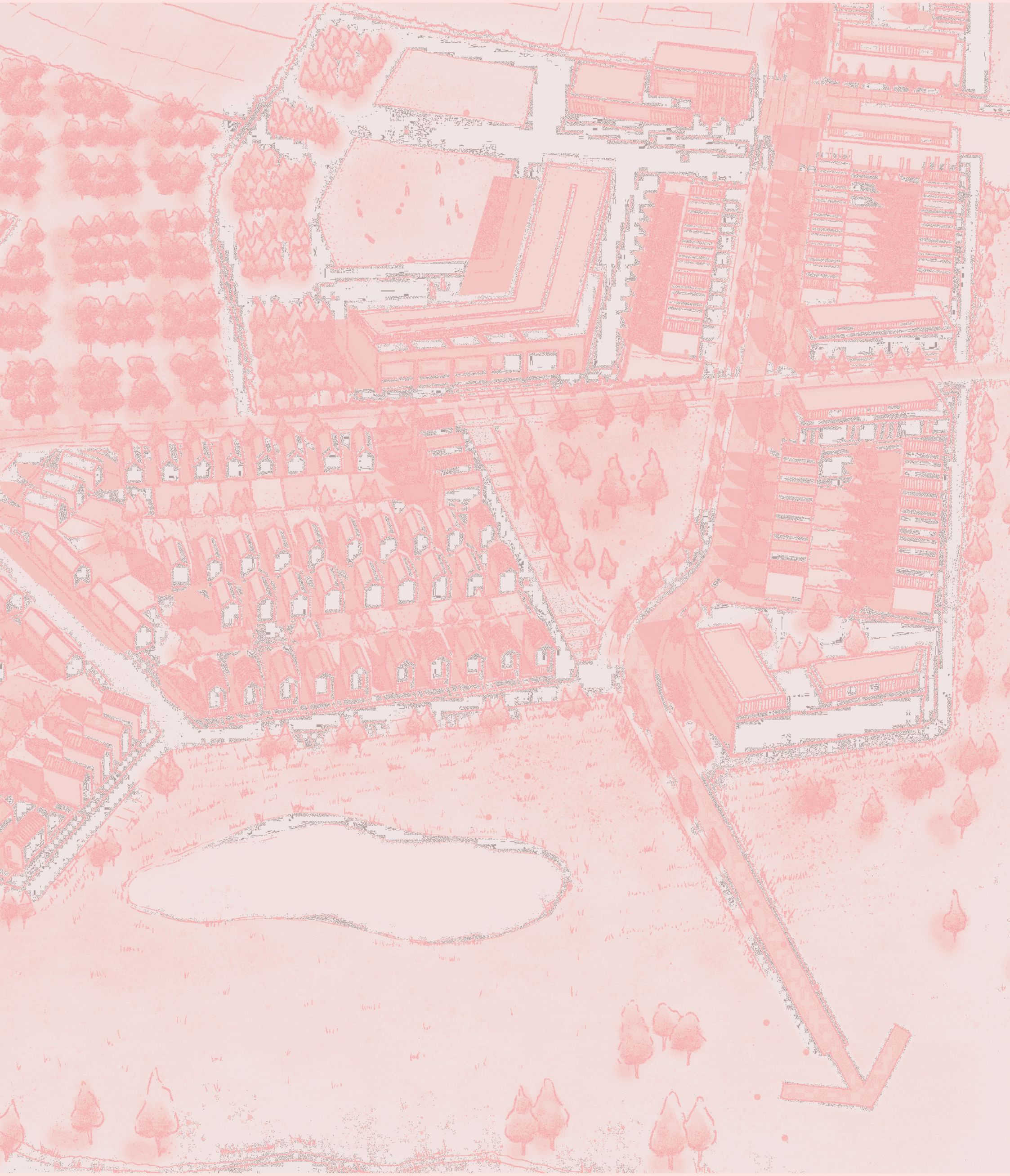
The indicative management structure for the Garden Village above will evolve further as the legacy proposals are discussed between the stakeholders. However, based upon what is being discussed the key elements which can be taken forward are:

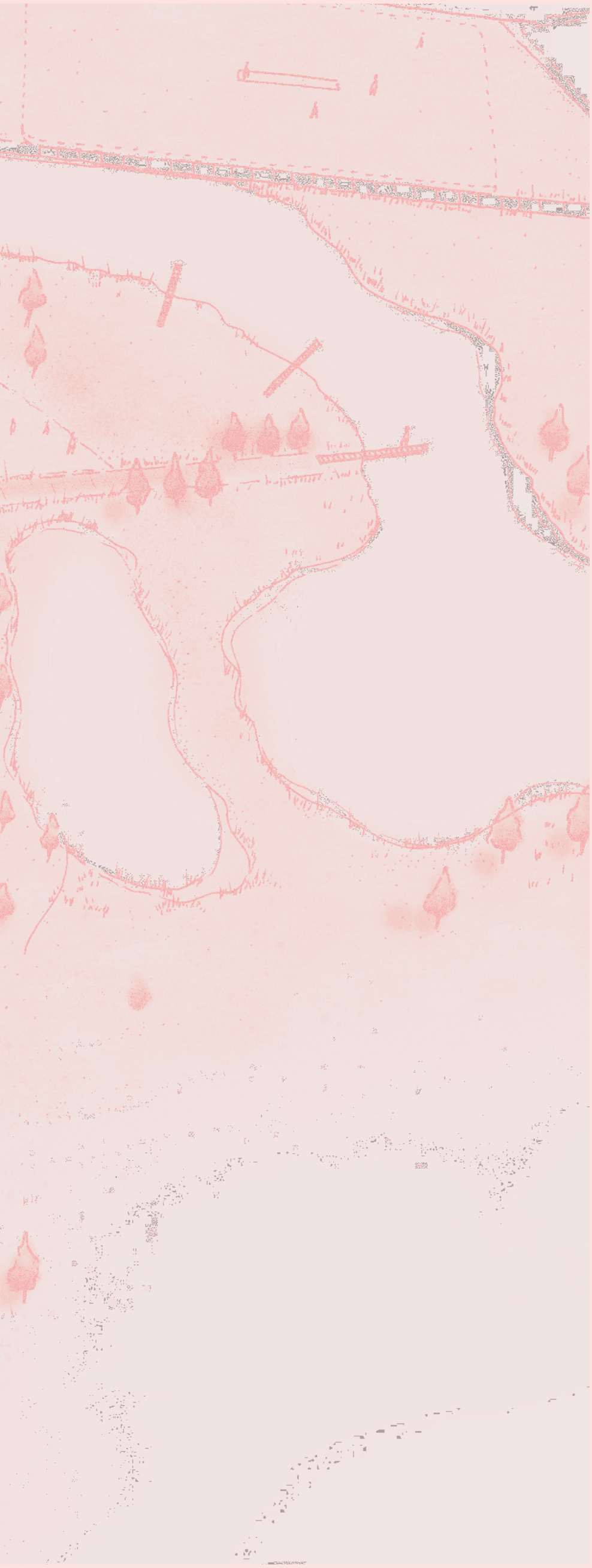
01 Community Management Organisation – will be established and comprise residents of the Garden Village as well as representatives from the Borough and Parish Councils.

02 Management Body – the body which will undertake the management and maintenance of the Garden Village initially funded via the landowners but the through income from community facilities and precepts.

03 A Community Concierge Service – located at the Mobility Hub to undertake a range of services set out in the Mobility Section.

04 Management Strategy – will be put in place with yearly management and business plans.





CHAPTER 9

PHASING AND DELIVERY

This chapter details the potential phasing strategy for Dunton Hills Garden Village and sets out estimated residential capacity, community facilities and other related works.

9.

PHASING AND DELIVERY

MANDATORY PRINCIPLES - PHASING AND DELIVERY

Prepare a delivery plan which includes:

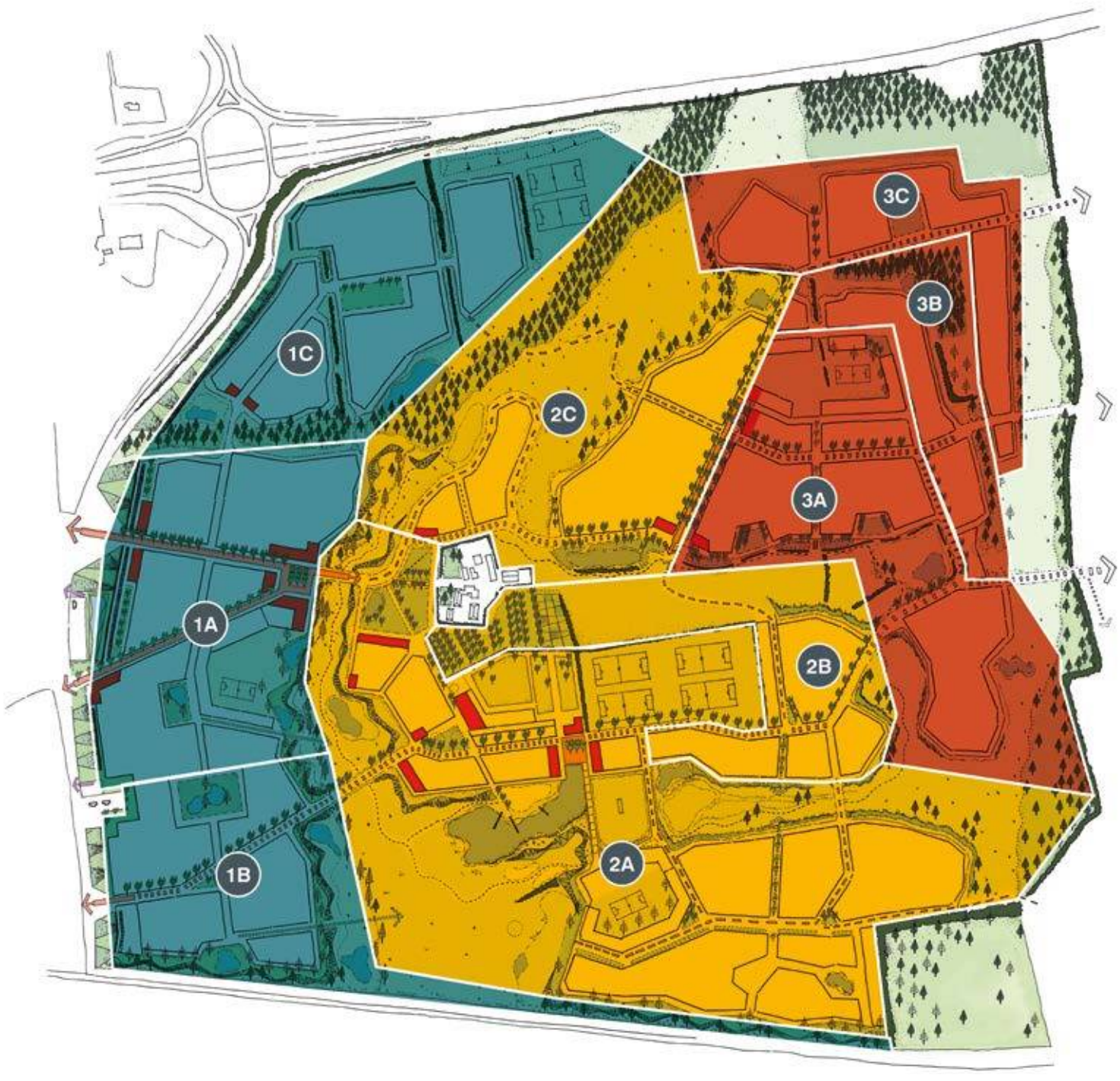
01 Phasing Plan – identifying the location of each phase and sub-phase. Together with estimated housing capacity and other uses.

02 Housing Delivery – anticipate rates of delivery of new homes.

03 Physical Infrastructure and Services – timing of key access, utilities/services, undergrounding of overhead electricity lines, ecological mitigation and advance planting for each phase and sub phase.

04 Social and Community Infrastructure – education, healthcare, open spaces, sporting facilities, village hall, etc. for each phase and sub phase.

05 Business Uses – phasing of Village Centre, Neighbourhood Hubs and Employment Hub within each phase and sub phase.



Indicative phasing strategy.

	Estimated Capacity	Estimated Time Period	Examples of Facilities to Be Provided On-Site	Examples of Other Related Works
Mobilisation		Years 0 to 1		Northern Access Services and Utilities to the site Start of undergrounding overhead lines – 3 years
Dunton Fanns				
Phase 1A	798	Years 1 to 3	2FE Co-located Primary School Healthcare Facility Mobility Hub and related facilities Temporary Management Facilities Private nursery Care Home Start of Village Centre around Square Play Facilities	Sustainability Route Mobility Routes Station Road footway/cycleway Station Road/Sustainability Route junction West Horndon Station interim works Temporary sports pitches using golfing facilities as a base Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology including advanced planting Southern Access an remainder of A128 corridor works
Phase 1B	417	Years 3 to 4	Ongoing Village Centre Community Hall and Management Facilities 5 travellers pitches Play Facilities	A127/A128 Junction Link towards Country Park Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology including wetlands area
Phase 1C	390	Years 4 to 7	Ongoing Village Centre Employment Hub – take-up demand related Crèche/Nursery Football Hub Play Facilities	Noise attenuation Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology including orchard
Dunton Waters				
Phase 2A	708	Years 6 to 10	Ongoing Village Centre 2FE Co-located Primary School Private Nursery Neighbourhood Hub Play Facilities Cricket Pitch Village Green Care Home Secondary School including Community Sports Hub	Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology Link through to Basildon – pedestrian/cycle and emergency access
Phase 2B	218	Years 10 to 12	Ongoing Village Centre Community Growing Space Community Orchard	Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology including part of Ridge Park
Phase 2C	291	Years 12 to 14		Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology including rest of Ridge Park
Dunton Woods				
Phase 3A	462	Years 14 to 16	Play Facilities	Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology Wind turbine removal
Phase 3B	161	Years 14 to 15	2FE Co-located Primary School Private Nursery Neighbourhood Hub Play Facilities Care Home	Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology
Phase 3C	222	Years 15 to 17	Play Facilities	Mobility Routes Blue Infrastructure - SuDS Green Infrastructure – landscape/ecology

Appendix C

Dunton Hills Garden Village Landscape Mitigation Assessment
Essex County Council

Client:
National Infrastructure Planning Team

Date:
25/02/2026



About Us

Place Services is a specialist provider of integrated Environmental Assessment, Planning, Design and Management Services. With a thorough and demonstrable understanding of environmental decision making within the public sector, Place Services has been established to specifically serve and actively embrace the new powers given to Local Authorities through the Localism Act. From our base at Essex County Council we combine our public sector knowhow with a competitive business approach and in doing so partner and support over 25 local authorities within Essex, London and the wider south eastern region.

Our combination of specialist skills and experience means that we are uniquely qualified to help organisations create and deliver innovative and practical design solutions. Place Services is a leading public sector service provider with a loyal and growing client base. We offer a multidisciplinary team, including Planners, Urban Designers, Landscape Architects, Historic Environment Advisors, Ecologists, Arboriculturists, Conservation, Public Art and Community Engagement specialists; we have a strong reputation for high quality work undertaken by highly skilled professionals.

With strong partnerships alongside a number of key specialist groups including Highways and Asset Management as well as our well-established private sector associates, Place Services insightful position with experience on both sides of the public and private sectors enables us to add significant value when improving the operation of the planning process. We are astutely aware of how the public sector can benefit from a business-like approach as an effective and efficient way of working. Through our own experience we can assist local authorities to work with change in a truly empathetic way.

Our Values

- We add lasting value to the people and environments we work with, achieving shared priorities for better places.
- Enablement is a key value – we see ourselves as an extension of our client's team, sharing knowledge, ideas and innovative solutions to help officers, councillors and all stakeholders gain focused outcomes and maximum value for money.

Our Philosophy

- Our approach is to engage and collaborate, sharing knowledge and understanding, whilst working collectively towards the generation of viable solutions which reconcile often competing agendas. We strive to forge joint working arrangements, trust and understanding with client officers, councillors and other key stakeholders. We believe that good communication is essential to developing valuable partnerships.
- We bring an enthusiastic, flexible and integrated team approach; using our experience, dedication and skills to effectively meet your needs and expectations. By adhering to recognised principles and standards, we aim to make a positive impact on the people and places we work with. For these reasons, we are also keen to give something extra to the communities we work in.
- We believe in helping improve our communities, which is why we commit up to four weeks of the year on community projects.

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Report Information	
Title of Report	Dunton Hills Garden Village Landscape Mitigation Assessment
Client	Essex County Council
Survey completed by	Laura Cohen
Report contributors	Catherine Bailey & Laura Cohen

Version	Date	Issued by	Reviewed by	Description of Changes
WORKING DRAFT	24/12/2025	LC	CB	
WORKING DRAFT 2.0	27/01/2026	LC	CB	Additional information added

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Introduction

Background and Purpose

Place Services have been commissioned by National Infrastructure Planning Team to undertake an assessment to understand the influence of Norwich to Tilbury NSIP on Dunton Hill Garden Village (DHGV) and how the NSIP project will likely affect the deliverability of Mandatory Principles on which DHGV had been developed and adopted. The second stage of the assessment will provide recommendations on mitigation measures required to achieve these Principles where conflict has been identified.

This document sets out the analysis undertaken and Place Services desktop and field appraisals of the site, including an assessment of how the Norwich to Tilbury project affects landscape and visual factors in relation to the proposed DHGV. A site visit was undertaken on 11/12/2025.

This study is guided by the following policy and evidence base documents:

- EN-1 Overarching National Policy Statement for Energy
- Brentwood Local Plan 2016 - 2033 policies
- Dunton Hills Garden Village Framework Masterplan (2020)
- The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council January 2023 (SPD)
- Consideration for the National and Local Landscape Character Assessments was included within the assessment.

The assessment comprises three work stages:

- Stage 1 Assessment
- Stage 2 Mitigation Development
- Stage 3 Ballpark Costs (Strategic)

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Methodology

Assessment Approach

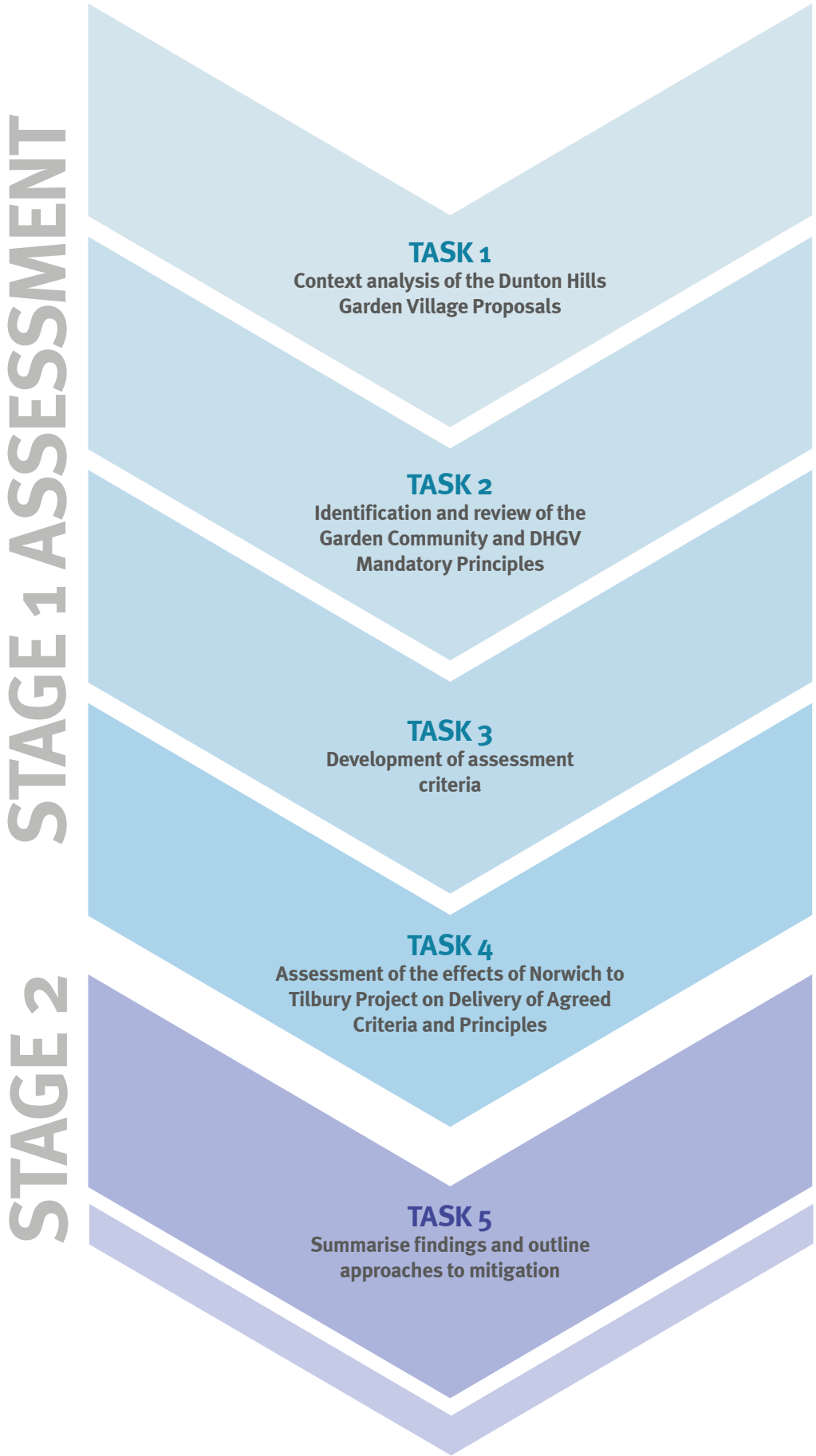
The assessment considers the likely effect on the deliverability of key criteria derived from the Mandatory Principles of the Dunton Hills Masterplan Framework. Assessment is based on a combination of desktop study and detailed field survey. The principal source of written information for carrying out the assessment is the The Dunton Hills Garden Village Framework Masterplan (2020). Further written supporting documents include The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council (2023) (SPD), TCPA Garden Villages Guidance by the TPCA (2017) and The Essex Landscape Character Assessment. This describes the variations in character between different types of landscape in the county. It also sets out strategies and guidelines for the protection, management and planning of the landscape.

The assessment and mitigation process was undertaken by Chartered Landscape Architects and comprised the following key tasks, each of which are described in more detail below:

- Desktop assessment of plans and aerial photographs
- Development of criteria
- Site visit and assessment of site characteristics
- Assessment of effects of Norwich to Tilbury on the proposed garden community
- Recommendations on mitigation

Where it is considered that the DHGV Principles are not deliverable, a concise narrative explaining the effects from N2T has been provided.

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Methodology
Task Descriptions

TASK 1
Context analysis of the Dunton Hills Garden Village Proposals

The assessment considers the description of the Dunton Hills Garden Village (DHGV) Proposals embedded within The Dunton Hills Garden Village Framework Masterplan (2020) which was informed by Town and Country Planning Association (TCPA) 'Understanding Garden Villages'.

This task combines desktop analysis incorporating landscape character identified within published Landscape Character Assessments, relevant policy context and observations gained from a site survey.

TASK 2
Identification and review of the Garden Community and DHGV Mandatory Principles

The development and description of the assessment criteria is based on desktop research and published information. Each of these documents was reviewed to identify and review the approach to and scope of the relevant principles in relation to garden community development in general and DHGV in particular. This includes:

The Dunton Hills Garden Village Framework Masterplan (2020)
The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council (2023) (SPD)
Brentwood Borough Local Plan 2016 - 2033
Town and Country Planning Association (TCPA) 'Understanding Garden Villages'

The above sources allowed an initial assessment to be made of the DHGV Principles prior to making a site visit. This included an understanding of: landscape character context, key landscape features (e.g. topography, vegetation, transport corridors, rivers/watercourses and field patterns), land use context, public rights of way (PRoW) and key planning and environmental designations.

Following desktop surveys, a field work survey was undertaken in December 2025 to further understand the landscape and visual qualities. The site visit was used to verify information collected from the desk-based assessment and to record additional information.

The following was recorded for each criteria:

Key views identified as part of Mandatory Principles of the DHGV proposals
Future landscape and visual baseline expected as part of the DHGV proposals

The site visit was recorded using photographs and annotated plans.

The overall aims of the desktop and field studies included:

Review the future baseline proposed by the DHGV assessment criteria and the susceptibility to the Norwich to Tilbury Project

Any mapping included, utilised ESRI's ArcGIS ModelBuilder GIS platform to collate the information.

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TASK 3
Development of assessment criteria

The assessment considers the description of the Norwich to Tilbury Project submitted as part of the targeted consultation documents submitted by National Grid (2025).

The study assesses the variations in landscape and visual sensitivity within the site itself, including consideration of the key criteria contributing to landscape and visual sensitivity, including topography, extent of enclosure by vegetation, complexity of the landscape, historic character, landscape character quality/condition, openness to public view, openness to private view, openness to views towards landmark buildings/natural features and existing built form.

Judgements were made through reference to the landscape and visual criteria outlined in Table 1 and relate to the Norwich to Tilbury Project. The assessment group criteria derive from the Dunton Hills Garden Village Framework Masterplan (2020) which sets out six Mandatory Principles and five Advisory Guidelines.

The Mandatory Principles were brought forward as distinct criteria groups for assessment, these were expanded using the The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council (2023) to form methodology criteria where considered necessary and appropriate.

For the assessment, a 3-point scoring system has been used to consider whether the agreed and approved Mandatory Principles (the criteria) are deliverable in the context of Norwich to Tilbury Project. The terminology used is as follows:

Deliverable
Partially Deliverable
Not Deliverable

The thresholds for this terminology are defined for each criterion in Table 1

TASK 4
Assessment of N2T Project on Delivery of assessment criteria

A written rationale of the scoring is provided regarding the assessment. This highlights key landscape characteristics and features of high sensitivity.

TASK 5
Summarise findings and outline approaches to mitigation

Identify potential landscape and visual measures that could be considered to mitigate the effects of the Norwich to Tilbury Project to avoid, reduce or offset any conflict derived.

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Context Analysis
Site Description

The allocation site for Dunton Hills Garden Village is located within Brentwood Borough, Essex, immediately south of the A127 corridor and in proximity to West Horndon village. It occupies a strategic position between Brentwood and Basildon, with excellent connectivity to the M25, A127, and A13, supporting its role as a major growth location within the borough.

The site extends to approximately 224 hectares, encompassing Dunton Hills Golf Course and surrounding agricultural land. Its current designation as Green Belt is proposed for removal under the Brentwood Local Plan to accommodate significant housing growth. The boundaries are defined by a combination of field hedgerows, watercourses, and local road networks, creating a semi-enclosed character while maintaining visual links to the wider landscape.

The wider landscape context is influenced by the Essex Fanns character area, typified by open arable farmland, hedgerow field patterns, and scattered woodland blocks. Views from the site include long-distance panoramas towards London and the Thames Estuary, as well as local features such as church spires and historic farmsteads, which contribute to its rural setting. The proposed masterplan seeks to retain and enhance these qualities through green infrastructure corridors and integrated blue networks.

Topographically, the site is structured around a prominent east–west ridgeline, offering elevated vantage points and shaping the visual experience of the development. A series of natural watercourses, including Eastlands Spring, traverse the site, with associated floodplain areas and ponds concentrated in the southern extent, informing drainage and ecological strategies.
Public Rights of Way (PRoWs) currently cross the site, providing connections between West Horndon and the surrounding countryside. The development framework incorporates these routes into a comprehensive network of pedestrian and cycle paths, including a proposed 6.2 km wellness trail, to promote active travel and maintain recreational access.

In terms of designations, the site benefits from Garden Village status, which supports its delivery as a sustainable community. It contains heritage assets, notably a Grade II listed farmstead, which will be preserved and integrated within the masterplan to maintain cultural continuity. The removal of the Green Belt designation is a key policy consideration underpinning its allocation.



Fig 1. Site photo



Fig 2. Site photo

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Context Analysis
Site Visit

The site visit was undertaken 11/12/2025. The weather was grey but clear. Focus was on key visual and landscape features associated with the eastern boundary and from high ground along the ridge-line.

Photography was taken from locations identified on the below viewpoint plan.



Fig 3. Photography Viewpoint Plan

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Context Analysis
Landscape Character

Natural England National Character Area

The Site is categorised as NCA 111: Northern Thames Basin. Key characteristics of this area include but are not limited to:

- A layer of thick clay producing heavy, acidic soils, resulting in retention of considerable areas of ancient woodland.
- The pattern of woodlands is varied across the area and includes considerable ancient semi-natural woodland. Hertfordshire is heavily wooded in some areas as are parts of Essex, while other areas within Essex are more open in character. Significant areas of wood pasture and pollarded veteran trees are also present.
- A diverse range of semi-natural habitats including ancient woodland, lowland heath and floodplain grazing marsh provide important habitats for a wide range of species including great crested newt, water vole, dormouse and otter.
- The medieval pattern of small villages and dispersed farming settlement remains central to the character of parts of Hertfordshire and Essex. Market towns have expanded over time as have the London suburbs and commuter settlements, with the creation of new settlements such as the pioneering garden city at Welwyn and the planned town at Basildon.

Statements of Environmental Opportunity (SEO) are identified as part of the NCA guidelines. These include:

SEO 3: Protect and appropriately manage the historic environment for its contribution to local character and sense of identity and as a framework for habitat restoration and sustainable development, ensuring high design standards (particularly in the London Green Belt) which respect the open and built character of the Thames Basin. Enhance and increase access between rural and urban areas through good green infrastructure links to allow local communities recreational, health and wellbeing benefits.

SEO 4: Manage and expand the significant areas of broadleaf woodland and wood pasture, and increase tree cover within urban areas, for the green infrastructure links and important habitats that they provide, for the sense of tranquillity they bring, their ability to screen urban influences and their role in reducing heat island effect and sequestering and storing carbon.

Essex Landscape Character Assessment (2003)

The site is located within Brentwood Hills (D2). Key characteristics include [inter alia]:

- Gently to strongly undulating hills/ridges.
- Semi enclosed character due to presence of numerous small woods, large interlocking blocks of woodland and frequent hedgerow trees.
- Patchwork of small irregular pasture and arable fields, opening out to medium to large regular arable fields in the centre of the area.
- Dense linear settlement pattern along major south west to north east road/rail routes.

Landscape Character of Brentwood Borough (2006)

The site is located within G1 Horndon Fenland. Key characteristics include:

- Large arable and pasture fields.
- Predominantly flat topography.
- Mature hedgerow field boundaries (sometimes gappy), which contain several single mature trees.
- Relatively sparse settlement pattern.
- Views to surrounding wooded hills to the north.
- Long distance views to pylons and Tilbury power station to the south.

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Context Analysis
Policy Context

Overarching National Policy Statement for Energy

The UK Government's position on power is set out in the Overarching National Policy Statement for Energy (EN-1), which recognises the importance of understanding and addressing landscape and visual impacts (Department of Energy Security & Net Zero, 2023). Of which, Para 4.6.2 states that:

"Applying 'good design' to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area."

Furthermore, Para 3.5.2 of the National Policy Statement for Renewable Energy Infrastructure (EN-3) (2023) also states "Proposals for renewable energy infrastructure should demonstrate good design, particularly in respect of landscape and visual amenity, opportunities for co-existence/co-location with other marine uses, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage."

Brentwood Borough Local Plan 2016 - 2033

The following policies have been saved and are relevant to the site from a landscape perspective:

BE14: 'Creating Successful Places' requires high-quality design that retains natural features, integrates trees and green infrastructure, and safeguards visual amenity.

NE01: 'Protecting and Enhancing the Natural Environment' seeks to avoid harm and deliver net biodiversity and landscape gains.

NE02: 'Green and Blue Infrastructure' mandates multi-functional green spaces, ecological corridors, and tree planting for climate resilience and visual quality.

NE03: 'Trees, Woodlands, Hedgerows' protects existing trees and hedgerows for their landscape and amenity value, requiring native species and compensatory planting.

R01(i): 'Dunton Hills Garden Village Strategic Allocation' states that proposals must comply with masterplanning and delivery requirements in Policy R01(ii) and other relevant policies.

Policy R01(ii): 'Spatial Design of Dunton Hills Garden Village' requires a comprehensive masterplan covering:

- A phasing plan for housing, employment, and infrastructure.
- Landscape-led design integrating green and blue infrastructure.
- High-quality public realm, tree-lined streets, and biodiversity net gain.
- Sustainable transport links to West Horndon station and surrounding areas.
- Must include governance and stewardship arrangements for long-term management.

Policy states that: "The development will align to the principles and qualities for Garden Communities as set out in two key publications: the TCPA Garden Villages Guidance by the TPCA (2017) which incorporates the 'Garden City Principles', and the government's Prospectus on 'Garden Communities' (MHCLG, 2018)."

DHGV Strategic Aims and Objectives (Para 9.19-9.20)

Strategic Aim DH01: To create a distinctive and well-designed garden village at Dunton Hills that responds to its spatial context and incorporates all the necessary components to achieve a healthy, liveable and self-sustaining new community.

DH01a: 'Distinctive Character & Harmonic Design' requires development that delivers homes and neighbourhoods that have their own unique character, with architectural design and materials that are durable and human-scale in nature.

DH01b: 'Landscape-Led' requires development to take a natural landscape-led approach to urban design, to deliver a healthy, walkable and climatically adapted public realm and multi-functional green and blue infrastructure, amongst the backdrop views of the Essex countryside.

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Garden Community and DHGV Mandatory Principles

TCPA Garden Villages Guidance by the TPCA (2017)

Understanding Garden Villages outlines the defining characteristics of historic model and garden villages to inform the design and delivery of new garden villages. It provides guidance and inspiration for planning, design, and long-term management, helping local authorities and delivery partners create successful places that are distinct from larger new communities.

Box 1 of the guidance sets out a list of Garden City Principles. The most applicable of these have been underlined.

- Land value capture for the benefit of the community.
- Strong vision, leadership and community engagement.
- Community ownership of land and long-term stewardship of assets.
- Mixed-tenure homes and housing types that are genuinely affordable.
- A wide range of local jobs in the Garden City within easy commuting distance of homes.
- Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.
- Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and that uses zero-carbon and energy positive technology to ensure climate resilience.
- Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
- Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.

The guidance incorporates the principles of the government's Prospectus on 'Garden Communities' (MHCLG, 2018) which sets out 10 Garden community qualities:

- **Clear identity** – a distinctive local identity as a new garden community, including at its heart an attractive and functioning centre and public realm.
- **Sustainable scale** – built at a scale which supports the necessary infrastructure to allow the community to function self-sufficiently on a day to day basis, with the capacity for future growth to meet the evolving housing and economic needs of the local area.
- **Well-designed places** – with vibrant mixed use communities that support a range of local employment types and premises, retail opportunities, recreational and community facilities.
- **Great homes** – offer a wide range of high quality, distinctive homes. This includes affordable housing and a mix of tenures for all stages of life.
- **Strong local vision and engagement** – designed and executed with the engagement and involvement of the existing local community, and future residents and businesses. This should include consideration of how the natural and historic environment of the local area is reflected and respected.
- **Transport** –integrated, forward looking and accessible transport options that support economic prosperity and wellbeing for residents. This should include promotion of public transport, walking, and cycling so that settlements are easy to navigate, and facilitate simple and sustainable access to jobs, education, and services.
- **Healthy places** – designed to provide the choices and chances for all to live a healthy life, through taking a whole systems approach to key local health & wellbeing priorities and strategies.
- **Green space** – generous, accessible, and good quality green and blue infrastructure that promotes health, wellbeing, and quality of life, and considers opportunities to deliver environmental gains such as biodiversity net gain and enhancements to natural capital.
- **Legacy and stewardship arrangements** – should be in place for the care of community assets, infrastructure and public realm, for the benefit of the whole community.
- **Future proofed** – designed to be resilient places that allow for changing demographics, future growth, and the impacts of climate change including flood risk and water availability, with durable landscape and building design planned for generations to come. This should include anticipation of the opportunities presented by technological change such as driverless cars and renewable energy measures.

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Garden Community and DHGV Mandatory Principles

The Dunton Hills Garden Village Framework Masterplan (2020)

To ensure the vision of Dunton Hills Garden Village is realised, a series of Mandatory Spatial Principles have been established alongside a set of Advisory Neighbourhood Guidelines. The Mandatory Spatial Principles reflect critical outcomes to ensure that a series of unique and high quality new neighbourhoods are developed, which are reflective of their setting within the overall Garden Village.

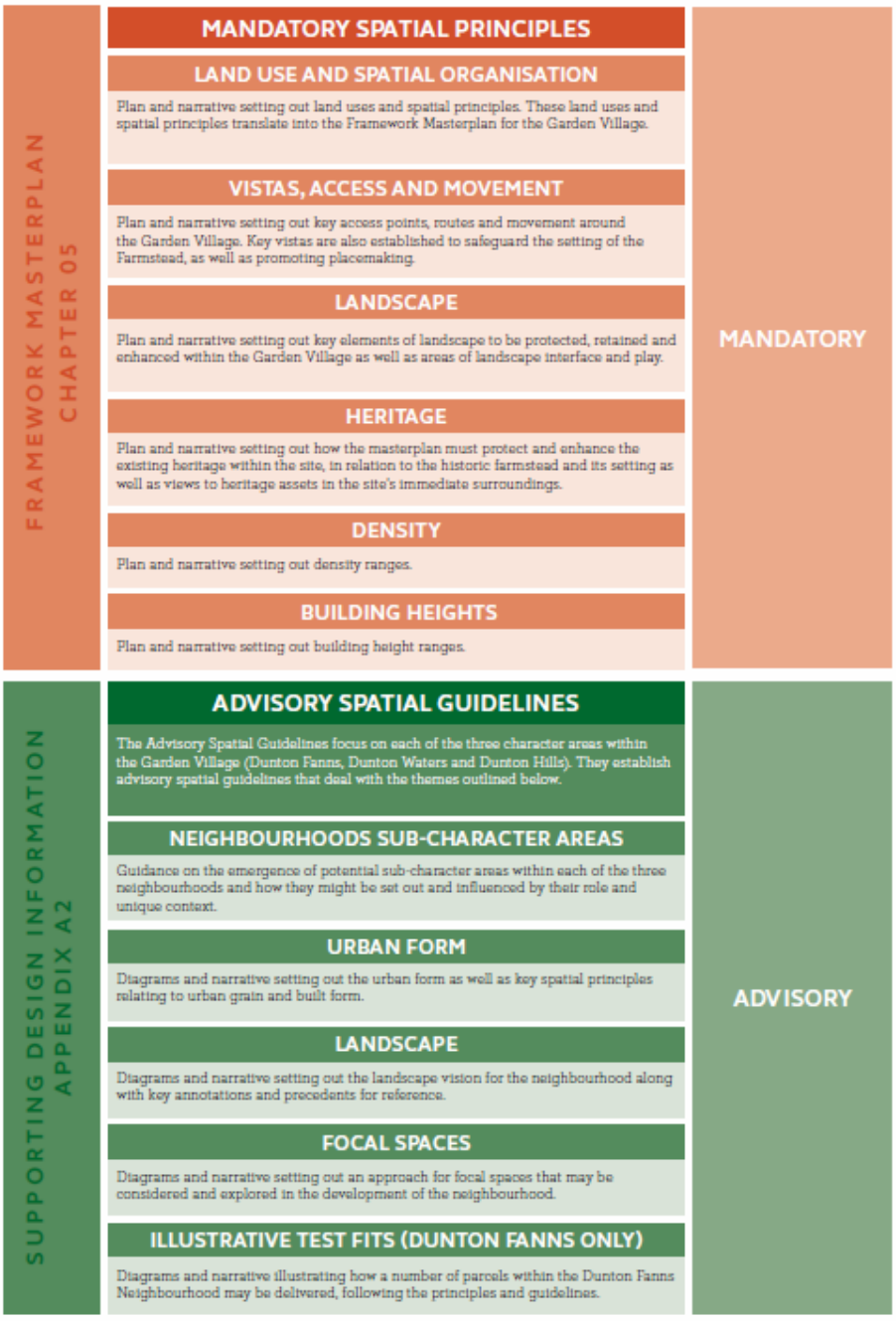


Fig 4. Extract The Dunton Hills Garden Village Framework Masterplan (2020)

The Mandatory principles have been extracted to inform the assessment criteria. These include:

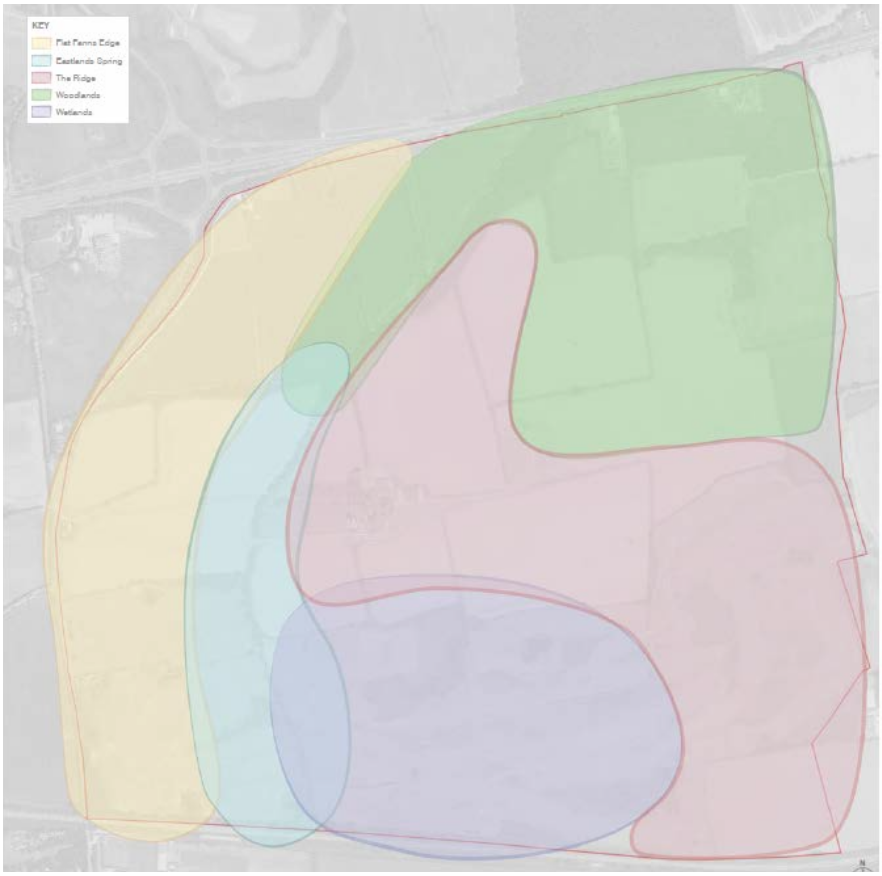
- Land Use and Spatial Organisation
- Vista, Access and Movement
- Landscape
- Heritage
- Density
- Build Heights

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Garden Community and DHGV Mandatory Principles

The Dunton Hills Garden Village Framework Masterplan (2020)

Dunton Hills Garden Village will be arranged as three distinctive neighbourhoods. The Framework Masterplan Document establishes the development of five site wide character areas as part of the proposals; of particular interest will be The Ridge and Woodlands character areas to the east.



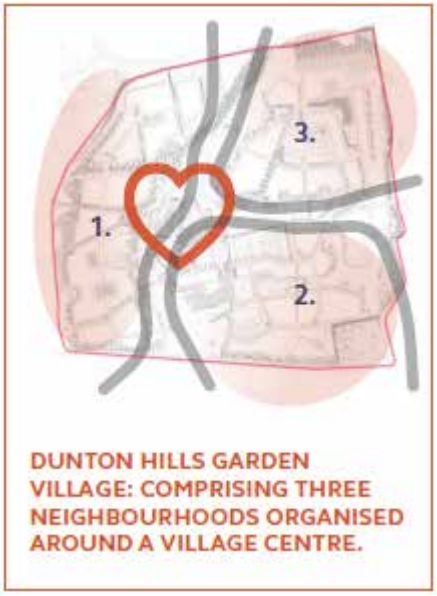


Fig 5. Extract from The Dunton Hills Garden Village Framework Masterplan (2020)

The following Landscape Key Objectives are relevant:

The Ridge

- Landscaped spaces should be created along the Ridge-line walk to connect development parcels with the Ridge.
- The productive landscape should include orchards, bee hives, self-grow and community facilities.
- Open views to heritage features and long vistas should be retained and celebrated.
- The Ridge itself should be managed for both recreation and biodiversity benefits.

Woodlands

- Eco-tone buffer to be provided along the edges of the ancient woodland, 15m minimum.
- Recreational landscape to be provided throughout the Woodlands area to include walking and jogging routes, informal play space, landscape restful spaces, exercise routes and open space.
- New trees to be planted extensively to increase canopy cover and embody the woodland character.
- The Green Belt boundary should be clearly and robustly defined with new hedges, hedgerow trees and woodland.

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Garden Community and DHGV Mandatory Principles

The Dunton Hills Garden Village Framework Masterplan (2020)

The Framework Masterplan sets out the intention to sensitively integrate the site's rich agricultural heritage, whilst respecting the setting and character of the local environment. This includes additional design benefits including the removal or mitigation of existing features which detract from an appreciation of the historic landscape and buildings, for example: the removal of electricity pylons and overhead wires through burial.



Fig 6. Extract from The Dunton Hills Garden Village Framework Masterplan (2020)

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Garden Community and DHGV Mandatory Principles

The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council (2023) (SPD)

The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council January 2023 (SPD) was commissioned and led by the Council, to provide an additional layer of detail to elements of the Framework Masterplan Document. In some cases, it provides additional detail on matters not covered by the Framework Masterplan Document, and in others it explains additional requirements which must be met to achieve policy compliance.

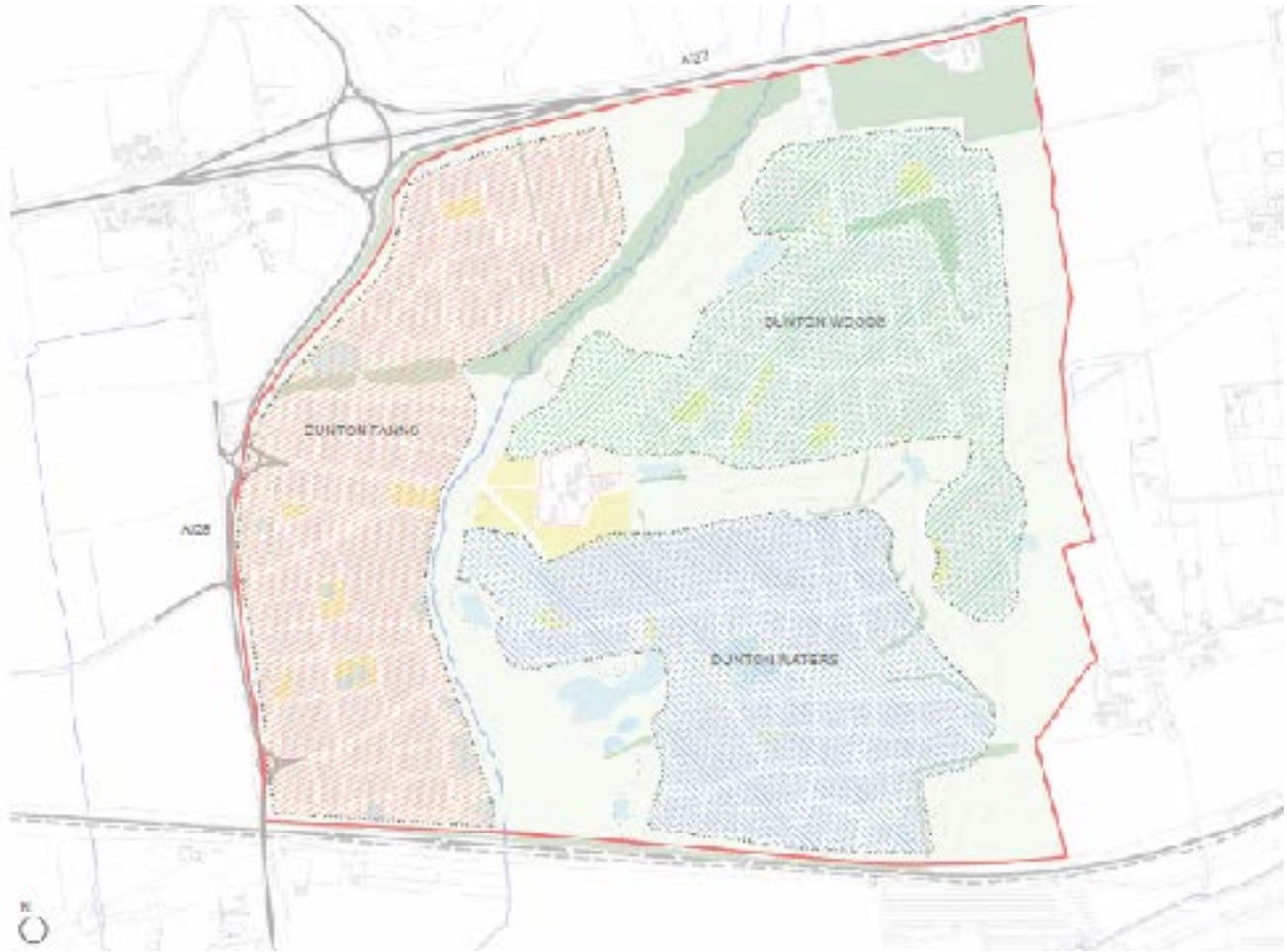


Fig 7. Extract from The Dunton Hills Garden Village SPD (2023)

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Norwich to Tilbury Project

Norwich to Tilbury is a proposal to build a new 400 kilovolt (kV) electricity transmission connection for approximately 180 kilometres from the Norwich Main substation via Bramford substation, a new East Anglia Connection Node (EACN) Substation and a new Tilbury North Substation.

As part of the proposals, National Grid are proposing to reposition the existing UK Power Networks (UKPN) 132 kV line close to Lower Dunton Road. This 132 kV connection is currently above ground and carried on lattice pylons but, to allow Norwich to Tilbury to come forward, it would need to be moved and placed underground.

The summer 2024 statutory consultation presented an underground route for the 132 kV connection, this was repositioned to more closely follow existing field boundaries on either side of Lower Dunton Road duirng the targeted consultation that took place in 2025.

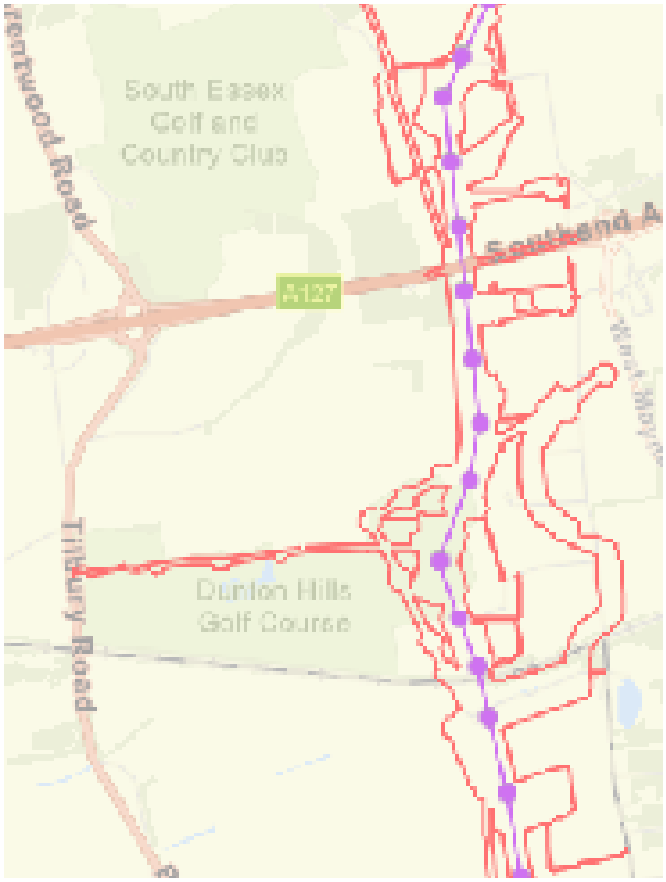


Fig 8. Extract from Norwich to Tilbury Interactive Map (2025)

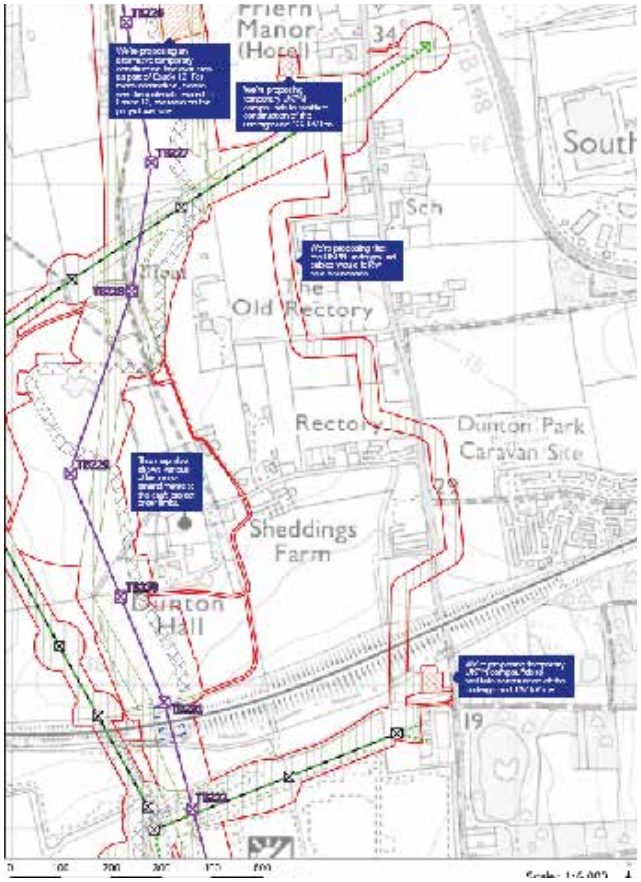


Fig 9. Extract from Norwich to Tilbury Targeted Consultation (2025)

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Proposal Overlay

Overlay of the Norwich to Tilbury Project on The Dunton Hills Garden Village Framework Plan identifying the removal of existing 132Kv route, construction access route and proposed N2T route.

The removal of the 132Kv route is proposed as part of the Dunton Hills Garden Village Framework standalone from Norwich to Tilbury Project.

The construction access proposed as part of Norwich to Tilbury Project extends through the site west to east.



Fig 10. Overlay of Norwich to Tilbury Project and Dunton Hills Garden Village Framework.

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Assessment

Assessment Criteria

Table 1: Assessment Criteria

Criteria Group	Methodology Criteria	Measurement of Criteria
The assessment group criteria derive from six Mandatory Principles of the Dunton Hills Garden Village Framework Masterplan (2020). These principles were developed and underpinned by national TCPA Garden Villages Guidance (2017).	The criteria group are then sub-divided into methodology criteria which draw upon the individual elements set out within the Dunton Hills Garden Village Framework Masterplan (2020)	The measurement criteria have been informed by definitions within the The Dunton Hills Garden Village Supplementary Planning Document For Brentwood Borough Council (2023) (SPD).

All assessment criteria must have consideration for the ability to deliver against the TCPA place-making principles and Government Prospectus on 'Garden Communities' (MHCLG, 2018). ADD LINE RE QUALITATIVE STUDY

Table 2: Assessment Criteria Definitions

Criteria Group	Methodology Criteria	Measurement of Criteria	Comments
Land Use and Spatial Organisation	**General**	Deliverable Land uses and spatial principles translate into the Framework Masterplan for the Garden Village.	Considers the ability to provide three distinct neighbourhoods proposed as part of the Framework Masterplan for the Garden Village. Dunton Fanns, Dunton Woods and Dunton Waters. The Garden Village must provide the mix of uses needed to create a self-sustaining and adaptable community.
		Partially Deliverable Land uses and spatial principles partially translate into the Framework Masterplan for the Garden Village.	
		Not Deliverable Land uses and spatial principles do not translate into the Framework Masterplan for the Garden Village.	
Vistas, Access and Movement	**Farmstead Avenue and View Corridor**	Deliverable A direct visual relationship between the A128 and the Grade II listed farmhouse is preserved where the historic farmstead becomes a focal point within the Garden Village.	The viewing corridor towards the historic farmstead includes consideration for the backdrop provided by the eastern boundary.
		Partially Deliverable A direct visual relationship between the A128 and the Grade II listed farmhouse is partially preserved where the historic farmstead becomes a focal point within the Garden Village.	
		Not Deliverable A direct visual relationship between the A128 and the Grade II listed farmhouse is not preserved where the historic farmstead becomes a focal point within the Garden Village.	

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Vistas, Access and Movement	**Potential Future Connections East**	Deliverable Potential connections to the east will be safeguarded into the layout of the masterplan to allow for future expansion and connectivity.	Considers the potential to form future sustainable and active travel links including a future east-west bus route towards Basildon along the eastern boundary of the site, avoiding ransom strips.
		Partially Deliverable Potential connections to the east will be partially safeguarded into the layout of the masterplan to allow for future expansion and connectivity.	
		Not Deliverable Potential connections to the east will not be safeguarded into the layout of the masterplan to allow for future expansion and connectivity.	
	Dunton Woods Viewing Corridor	Deliverable A visual relationship between the Neighbourhood Hubs of Dunton Woods and Dunton Waters promotes a sense of community cohesion within the overall Garden Village.	Consideration should be given to siting of proposed planting to not obscure important viewing corridors.
		Partially Deliverable A visual relationship between the Neighbourhood Hubs of Dunton Woods and Dunton Waters partially promotes a sense of community cohesion within the overall Garden Village.	
		Not Deliverable A visual relationship between the Neighbourhood Hubs of Dunton Woods and Dunton Waters does not promotes a sense of community cohesion within the overall Garden Village.	
Landscape	**Wellness Trail**	Deliverable A pedestrian and cycling only trail can be provided within the landscape, promoting a healthy lifestyle within the Garden Village. The trail will connect the facilities provided within the Market Square and Village Green within Dunton Fanns to the other Neighbourhood Hubs and Schools	Features such as wellness trails connect neighbourhoods and the green assets they share. This network includes strong landscape interfaces to the site boundaries.
		Partially Deliverable A pedestrian and cycling only trail can be partially provided within the landscape, promoting a healthy lifestyle within the Garden Village. The trail has potential to connect the facilities provided within the Market Square and Village Green within Dunton Fanns to the other Neighbourhood Hubs and Schools	
		Not Deliverable A pedestrian and cycling only trail can not be provided within the landscape, promoting a healthy lifestyle within the Garden Village will not be possible.	

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Landscape	**The Ridge**	Deliverable The Ridge will remain open in character and retained as a key feature of the site as set out by the masterplan drivers, separating Dunton Woods from Dunton Waters.	Will be characterised by a tree lined avenue running along the ridge-line, embodying the woodland character and including informal play opportunities for all residents within the neighbourhood. Woodland trees will be grouped informally within the landscaped amenity spaces to frame views out of the development edge, and views to the development
		Partially Deliverable The Ridge will remain partially open in character and retained as a key feature of the site as set out by the masterplan drivers, separating Dunton Woods from Dunton Waters.	
		Not Deliverable The Ridge will not remain open in character and retained as a key feature of the site as set out by the masterplan drivers, separating Dunton Woods from Dunton Waters.	
	The Ridge-Line Route	Deliverable A route will be provided along the top of the ridge, with restful landscaped spaces where views across to the North Downs and towards London can be enjoyed.	Views from the top of the ridgeline to the south and west must be protected. Tree planting will ensure a wooded skyline balances new homes along the ridge-line. A viewing platform will be provided at the top of the ridgeline to enjoy the views over the land to the south and west and be supported by a footpath along the top of the ridgeline.
		Partially Deliverable A route will be partially provided along the top of the ridge, with some restful landscaped spaces where views across to the North Downs and towards London can be partially enjoyed.	
		Not Deliverable A route will be provided along the top of the ridge, restful landscaped spaces where views across to the North Downs and towards London will be restricted.	
	Woodland	Deliverable Woodlands will be retained for recreational benefits as well as enhancing the woodland character existing in this part of the site, wrapping around the homes within Dunton Woods.	Will ensure recreational routes leading directly from the neighbourhoods to existing woodland pockets.
		Partially Deliverable Woodlands will be partially retained for recreational benefits as well as enhancing the woodland character existing in this part of the site, wrapping around the homes within Dunton Woods.	
		Not Deliverable Woodlands will not be retained for recreational benefits as well as enhancing the woodland character existing in this part of the site, wrapping around the homes within Dunton Woods.	

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Landscape	**Eastern Boundary Interface**	Deliverable The Eastern Boundary Interface will be established through robust vegetation of native hedges, hedgerow trees and woodland, reinforcing and defining the Green Belt edge.	Consideration for planting restrictions in accordance with National Grid Guidelines.
		Partially Deliverable The Eastern Boundary Interface will be established through partial vegetation of native hedges, hedgerow trees and woodland, reinforcing and defining the Green Belt edge.	
		Not Deliverable The Eastern Boundary Interface may not be established through vegetation of native hedges, hedgerow trees and woodland, reinforcing and defining the Green Belt edge.	
	Play	Deliverable Play and recreation will be adequately delivered to support children of all ages in order to promote a healthy and active lifestyle, encourage learning through play and support inter-generational integration at a neighbourhood level.	Locally Equipped Area of Play (LEAP) must be at least 400m2 provided in line with the Indicative Play Provision Plan (SPD).
		Partially Deliverable Play and recreation will be partially delivered to support children of all ages in order to promote a healthy and active lifestyle, encourage learning through play and support inter-generational integration at a neighbourhood level.	
		Not Deliverable Play and recreation will be not delivered to support children of all ages in order to promote a healthy and active lifestyle, encourage learning through play and support inter-generational integration at a neighbourhood level.	
Heritage	**Church Views**	Deliverable Development in the foreground and middle ground will not occlude the views of the Church of St Mary from the viewpoint to the east of the farmstead, and will preserve the viewers' ability to recognise and appreciate the landmarks	View from South East corner of the farmstead should be maintained, limiting the height of development and its proximity to the ridge at the borough boundary to maintain a visual connection and recognise the spire as a feature in the landscape.
		Partially Deliverable Development in the foreground and middle ground will partially occlude the views of the Church of St Mary from the viewpoint to the east of the farmstead, and will partially preserve the viewers' ability to recognise and appreciate the landmarks	
		Not Deliverable Development in the foreground and middle ground will occlude the views of the Church of St Mary from the viewpoint to the east of the farmstead, and will not preserve the viewers' ability to recognise and appreciate the landmarks	

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Heritage	**Church View**	Deliverable Development in the foreground and middle ground will not occlude the view of the Church of St Mary from the south-west of the site, and will preserve the viewers' ability to recognise and appreciate the landmark.	A view corridor should be established from the low ground looking eastward toward the spire, in order to maintain the spire as a historic feature in the landscape.
		Partially Deliverable Development in the foreground and middle ground will partially occlude the view of the Church of St Mary from the south-west of the site, and will partially preserve the viewers' ability to recognise and appreciate the landmark.	
		Not Deliverable Development in the foreground and middle ground will occlude the view of the Church of St Mary from the south-west of the site, and will not preserve the viewers' ability to recognise and appreciate the landmark.	
Density	**Reduced Outer Densities**	Deliverable Development densities set out in the Framework Masterplan are achievable.	Outer areas, away from the Village Centre or Neighbourhood Hubs are designated with lower densities and are envisaged as comprising larger housing typologies on more generous plots.
		Partially Deliverable Development densities set out in the Framework Masterplan are partially achievable.	
		Not Deliverable Development densities set out in the Framework Masterplan are not achievable.	
Building Heights	**Eastern Outer Edges**	Deliverable Development heights set out in the Framework Masterplan are achievable.	Will be lower in height (as well as density) to ensure that development doesn't adversely impact views from Basildon or views towards the church of St Mary, identified in the Mandatory Spatial Principles relating to Heritage.
		Partially Deliverable Development heights set out in the Framework Masterplan are partially achievable.	
		Not Deliverable Development heights set out in the Framework Masterplan are not achievable.	

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Assessment

Assessment Outputs

The methodology criteria has been considered and the deliverability of these have been assessed. Where it is considered 'Not Deliverable', supporting narrative clearly defines where the proposals set out as part of the N2T Project conflicts with the approved Policy documentation, Dunton Hills Garden Village Framework Masterplan (2020) which was developed and underpinned by national TCPA Garden Villages Guidance (2017).

Table 3: Assessment Output

Criteria Group	Methodology Criteria	Supporting Notes	Not Deliverable	Partially Deliverable	Deliverable
Land Use and Spatial Organisation	**General**	The Land Use and Spatial Plan extracted in fig. 4 identifies the eastern boundary as 'Informal Open Space' with an indicative tree planting. Planting restrictions may prevent this proposed land use.		●	
Vistas, Access and Movement	**Farmstead Avenue and View Corridor**	A direct visual relationship between the A128 and the Grade II listed farmhouse will likely remain unchanged. The N2T Project may be seen in the background of the Farmhouse from the west, but will not likely alter the principle which ensures the historic farmstead becomes a focal point within the Garden Village.			●
	Potential Future Connections East	Connections to the east will be partially safeguarded into the layout of the masterplan; however, the treatment of these remains uncertain with regards to place making principles of the TCPA Guide which expects integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport		●	
	Dunton Woods Viewing Corridor	The visual relationship between the Neighbourhood Hubs of Dunton Woods and Dunton Waters will remain unaffected by N2T as the view corridor follows a broadly north-south direction where views will likely be flanked by development on the eastern side of the corridor where views of N2T will be restricted.			●
Landscape	**Wellness Trail**	The Wellness Trail is proposed along the southern open space where the N2T Project will affect the visual amenity and tranquillity experienced by users where the path routes close to the eastern edge. MHCLG states that Green spaces should be good quality green and blue infrastructure that promotes health, wellbeing, and quality of life. Plant restrictions around the project will limit the ability to achieve this.		●	

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Landscape	**The Ridge**	The Ridge is proposed to remain open in character and retained as a key feature of the site. WK3 Waters East: The Ridge of the SPD requires Long-distance views across the Garden Village, the nearby church spires and the London skyline must be maintained. This will not be possible with the N2T routing in the intervening view of the church, the setting of the London Skyline view will also be affected. Wireline visuals (13.9.84d) extracted from the N2T Statutory Consultation PEIR identify the effect the pylons will have on the view towards the church spire from elevated ground (see appendices).		●	
	The Ridge-Line Route	OI2 of the SPD requires a viewing platform at the top of the ridgeline to enjoy the views over the land to the south and west and be supported by a footpath along the top of the ridgeline providing a clear identity of the central heart to the Garden Village. This is a key principle of the Garden Village vision set out in all supporting documents. Wireline visuals (13.9.84d) extracted from the N2T Statutory Consultation PEIR identify the effect the pylons will have on the view south from elevated ground (see appendices).		●	
	Woodland	The Framework Masterplan states: “Reinforcing the green edge of the Green Belt is vital to establish a strong vegetated buffer of native trees and hedgerows along this edge.” Plant restrictions within the Project which follows this eastern boundary will restrict a strong vegetated buffer.		●	
	Eastern Boundary Interface	The character of the eastern boundary interface relies heavily on a robust vegetation of native hedges, hedgerow trees and woodland, reinforcing and defining the Green Belt edge. Plant restrictions within the Project which follows this eastern boundary will restrict this key characteristic. SPD OL1 requires views from front gardens to be provided towards the open landscape. The N2T Project will diminish this open landscape.		●	
	Play	A LEAP is proposed in the location where pylon TB229 is proposed. Therefore, the Play Strategy would not be deliverable in full.	●		

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Heritage	**Church Views**	N2T Project will be seen on the horizon in the context of the church spire where the church will appear subservient in the landscape. This is anticipated to affect the key viewpoint from the east of the farmstead where the appreciation of the landmarks will likely be altered. Wireline visuals (13.9.84d) extracted from the N2T Statutory Consultation PEIR identify the effect the pylons will have on the view towards the church from the Farmhouse (see appendices). Therefore, this will not be deliverable.	●		
	Church View	N2T Project will be seen on the horizon in the context of the church spire where the church will appear subservient in the landscape. This is anticipated to affect the key viewpoint from the south-west of the site where the appreciation of the landmarks will likely be altered. Wireline visuals (13.9.84d) extracted from the N2T Statutory Consultation PEIR identify the effect the pylons will have on the view towards the church from the open space to the south-west (see appendices). Therefore, this will not be deliverable.	●		
Density	**Reduced Outer Densities**	The N2T Project will not likely affect the ability to deliver reduced outer densities. Therefore, this remains deliverable.			●
Building Heights	**Eastern Outer Edges**	Building heights to the eastern outer edges have been proposed to reduce in height (as well as density) to ensure that development doesn't adversely impact views from Basildon or views towards the church of St Mary, identified in the Mandatory Spatial Principles relating to Heritage. Although the reduced heights will be deliverable, the N2T Project will contradict the purpose of reducing these heights.		●	

This assessment is based on the assumption that the undergrounding of the 132Kv pylons currently on site will take place as part of the DHGV scheme.

Conclusion

In light of the supporting evidence and policy base, the assessment criteria includes 14no. criteria which were derived from the Key Mandatory Principles of the DHGV Framework Masterplan. Of the 14 criteria assessed, 11 are considered to be affected by the presence of the Norwich to Tilbury Project with the following conclusions regarding the deliverability of these have been reached:

Not Deliverable - 3 criteria

Play - A LEAP is proposed in the location where pylon TB229 is proposed. Therefore, the Play Strategy would not be deliverable in full. There is potential that Strategic Aim DH01 of the DHGV will be affected which strives to incorporate components to achieve a healthy community. Healthy places also forms one of the 10 Garden Community qualities set out by

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the government's Prospectus on 'Garden Communities' (MHCLG, 2018).

Church Views (08) - The presence of N2T will occlude the views of the Church of St Mary from the viewpoint to the east of the farmstead, and will not preserve the viewers' ability to recognise and appreciate the landmarks. Long views across this landscape character (G1 Hordon Fenland) are noted as characteristic. The setting of a notable landmark has recognised qualities such as wayfinding, sense of place and identity, all of which are notable qualities within the TCPA Garden Villages Guidance(2017) and the government's Prospectus on 'Garden Communities' (MHCLG, 2018).

Church View (09) - The presence of N2T will occlude the views of the Church of St Mary from the viewpoint to the south-west of the site, and will not preserve the viewers' ability to recognise and appreciate the landmarks. Long views across this landscape character (G1 Hordon Fenland) are noted as characteristic and this viewpoint is located along the linear Public Open Space (POS); therefore, views will be persistent when travelling east towards the church. The setting of a notable landmark has recognised qualities such as wayfinding, sense of place and identity, all of which are notable qualities within the TCPA Garden Villages Guidance(2017) and the government's Prospectus on 'Garden Communities' (MHCLG, 2018).

Partially Deliverable - 8 criteria
These criteria are considered partially deliverable, predominantly owed to anticipated plant restrictions within the 'Exclusion Zones'. Further conflict arises where open views east and south are required by the criteria in addition to the provision of a wellness trail where N2T will likely affect the sense of place and strength of this purpose.

- **General**
- **Potential Future Connections East**
- **Wellness Trail**
- **The Ridge**
- **The Ridge-Line Route**
- **Woodland**
- **Eastern Boundary Interface**
- **Eastern Outer Edges**

Deliverable - 3 criteria

- **Farmstead Avenue and View Corridor**
- **Dunton Woods Viewing Corridor**
- **Reduced Outer Densities**

Stage 2 is to follow and will consider and outline potential mitigation to reduce or offset these effects. These will include [inter alia]:

- Undergrounding
- Re-routeing
- Alternative Pylon Design

Stage 3 will provide ballpark costing for this mitigation.

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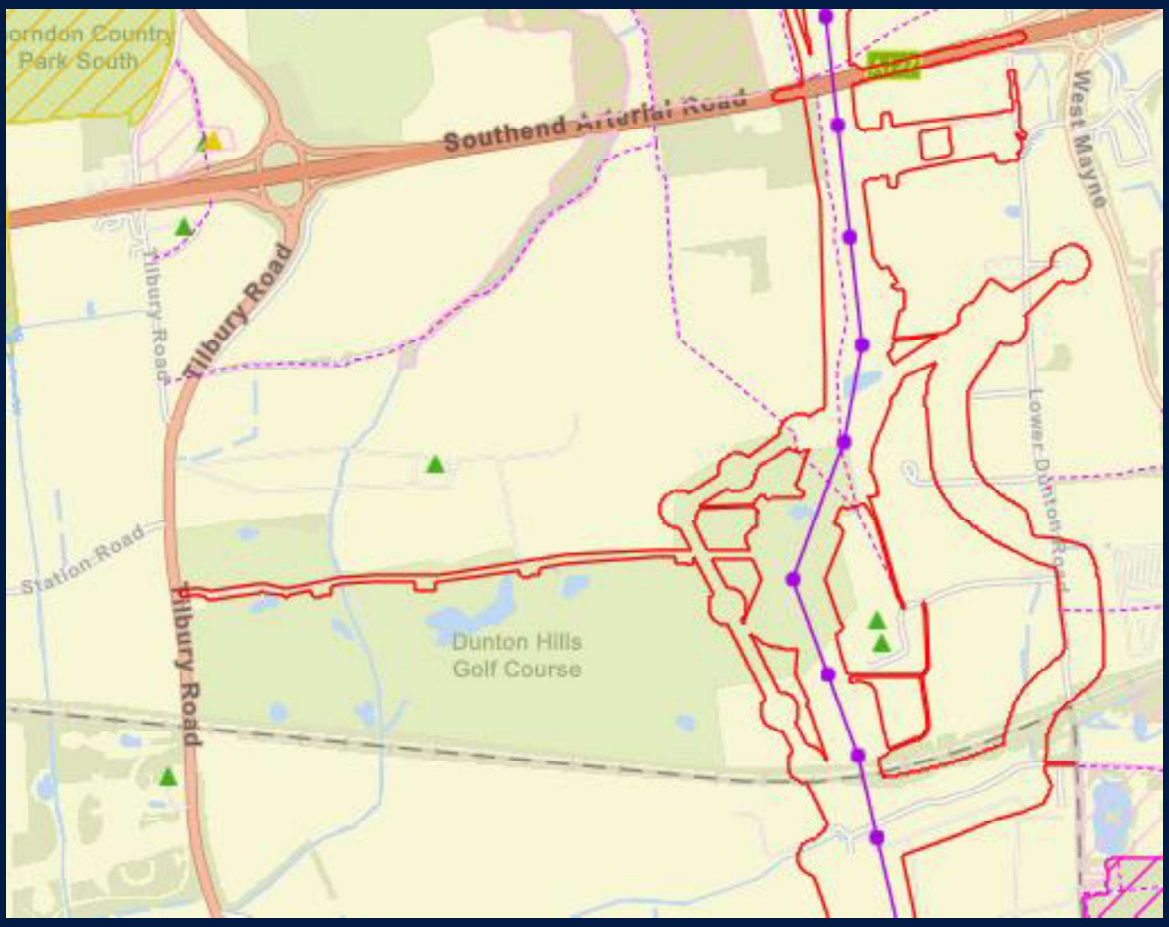


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Appendix D

Property and Viability Impact of N2T on Dunton Hills Garden Village

Stage B Report Final Issue



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Executive Summary

This report is an exercise to provide an estimate of the broad impacts of the Norwich to Tilbury (N2T) line proposals on property prices and the Residential Gross Development Value (RGDV) of the proposed Dunton Hills Garden Village (DHGV) scheme.

The DHGV site was identified by the government in 2017 as one of several new garden villages across England. The new village is expected to deliver up to 4,000 homes over the next 20 years.

The DHGV site is divided into two parcels, with two separate owners. Commercial Estates Group (CEG) own the majority of the site and have a pending planning application (reference 21/01525/Out) for a mixed use development including 3,700 residential units.

Crest Nicholson ('Crest') own the remaining portion of the DHGV site, which is situated in the north-east corner. This plot of land would provide the balance of up to 300 units, though a planning application is yet to be made.

The Norwich to Tilbury line is a proposal by National Grid Electricity Transmission (National Grid) to reinforce the high voltage power network in East Anglia between the existing substations at Norwich Main in Norfolk, Bramford in Suffolk, and Tilbury in Essex, as well as connect new offshore wind generation. The proposed line of N2T runs through the DHGV site.

Our review of relevant published work, complemented by primary Savills research, on the impact of power lines on house prices and land values has informed our assessment of the anticipated impacts on values and viability of the Dunton Hills proposals.

On impacts on scale of development, drawing on National Grid guidance, we conclude that a new overground or undergrounded line on the route currently proposed would not affect the location of any of the homes planned at the Garden Village in the current masterplan.

On impact on values we found that the most relevant evidence for the impact on house prices is that on average homes within 300m of the power line are estimated to have 10% less value, those between 300m and 1.2km have 3.6% less value and there is no impact on those beyond 1.2km.

We have applied these findings regarding the impact of power lines on house prices to estimate the RGDV of the proposed DHGV scheme in light of the National Grid's plan for the proposed N2T line to run adjacent/through the DHGV site. We have considered three scenarios:

- **Scenario 1 –** The N2T Line is not delivered
- **Scenario 2 –** The N2T Line runs through the subject site, with the cables undergrounded
- **Scenario 3 –** The N2T Line runs through the subject site, with the cables running overhead.

For Scenario 3, we have considered two options on how to assess the impact of the N2T line on the value of the development:

- **Option A (Higher Impact) –** Assumes that properties within 0m to 300m of the N2T line will see a 10% reduction in value; properties within 300m to 1200m of the N2T line will see a 3.6% reduction in value, and properties over 1200m from the N2T line will see no reduction in value.
- **Option B (Lower Impact) –** Assumes that properties within 0m to 300m of the N2T line will see an 5% reduction in value; properties within 300m to 1200m of the N2T line will see a 2% reduction in value, and properties over 1200m from the N2T line will see no reduction in value.

For each of the scenarios an estimate of the RGDV is provided. This is set out in **Table E1** below.

Table E1 Estimated Residential Gross Development Value for the 3 Development Scenarios

	Scenario 1 Value	Scenario 2 Value	Scenario 3A Value	Scenario 3B Value
CEG Site	£1.304 billion	£1.304 billion	£1.267 billion	£1.284 billion
Crest Site	£106 million	£106 million	£99 million	£102 million
Total	**£1.410 billion**	**£1.410 billion**	**£1.366 billion**	**£1.386 billion**

Source: Savills (2025)

Scenario 1, which assumes that the N2T Line is not delivered, is used as the benchmark as it is considered that the maximum RGDV would be achieved in this scenario.

Table E2 shows our estimate of how many units will fall into each of the property value impact zones as well as the estimated impact on the value of each residential unit:

Table E2 Residential Units by Property Value Impact Zone

	CEG Scheme Units	Crest Scheme Units	Total Units
Within 300m of an N2T Pylon (10% Reduction in Value)	301	136	437
300m – 1,200m from an N2T Pylon (3.6% Reduction in Value)	2,104	164	2,268
1,200m + from an N2T Pylon (No Reduction in Value)	1,295	0	1,295
Total	**3,700**	**300**	**4,000**

Source: Savills (2025)

Our assessment is that if Scenario 2 occurs, and the N2T Line is delivered with the cables undergrounded, then there would be no difference in RGDV between Scenario 1 and 2 as undergrounded cables are not anticipated to impact property values.

If Scenario 3A occurs, the implication for the RGDV of the entire 4,000 unit DHGV scheme, is a reduction of £44 million. This represents a 3.1% fall in the RGDV compared to the estimated £1.41 0 billion if the N2T line is not delivered.

If Scenario 3B occurs the implication for the RGDV of the entire 4,000 unit DHGV scheme, is a reduction of £24 million. This represents a 1.7% fall in the RGDV compared to the estimated £1.410 billion if the N2T line is not delivered.

Table E4 below compares the estimated RGDV between Scenario 1 and the two options for Scenario 3.

Table E4 Difference in Residential Gross Development Value Between Scenario 1 and Scenarios 3A and 3B

	Scenario 1 Value	Difference Between Scenario 1 and 3A		Difference Between Scenario 1 and 3B	
		Absolute (£)	Per cent (%)	Absolute (£)	Per cent (%)
CEG Site	£1.304 billion	-£37 million	-2.9%	-£20 million	-1.5%
Crest Site	£106 million	-£7 million	-6.5%	-£4 million	-3.4%
Total	**£1.410 billion**	**-£44 million**	**-3.1%**	**-£24 million**	**-1.7%**

Source: Savills (2025)

This is a relatively modest impact on overall scheme value. However there is a ratcheting effect on changes in GDV and impact on land values and viability and we would anticipate a bigger impact on these variables. Together with other viability challenges this would result in the scheme facing increased viability and deliverability challenges.

It is understood that significant planning contributions are expected to be delivered by the scheme in addition to an optimised policy level of on-site affordable housing delivery at 35% of total homes. Alongside a policy level of affordable housing, financial contributions sought are understood to be in the order of £20.9m (£5,650 per plot) plus £242m (£65,450 per plot) of infrastructure/S106 obligated sums. It is understood that such contributions remain subject to viability pending the outcome of ongoing negotiations between the Applicant and Council.

Given the nature and scale of the subject scheme the financial modelling carried out to support viability negotiations has been based upon a 'master developer' approach, which assumes a single lead organisation being responsible for strategic investment in site-wide enabling and infrastructure works with the subsequent sale of serviced land parcels (SLPs) to house builders, RPs and/or developers. Strategic infrastructure and S106 costs are set against periodic SLP receipts to determine the overall scheme viability with development timings carefully considered to maximise developer returns.The RLV for the Master Developer appraisal is then compared to Site Value Benchmark (SVB) to ascertain whether there is a deficit or surplus against SVB.

For the purposes of our viability assessment we have prepared an assessment of RLV across two scenarios: Scenario 1 assumes the running of pylons overhead whilst Scenario 2 assumes the undergrounding of pylons. For each scenario we have adopted the following 'bookends' in order to fix a range in affordable housing contribution i.e. from a policy quantum through to no affordable being provided.

- Scenario 1A – pylons run overhead at a policy level of affordable housing
- Scenario 1B – pylons run overhead with no affordable housing
- Scenario 2A – pylons undergrounded at a policy level of affordable housing, and
- Scenario 2B – pylons undergrounded with no affordable housing.

As part of the continuing negotiations we understand that there is a difference between the Applicant and Council in respect of Benchmark Land Value (BLV). In this respect Chester Harcourt applied a BLV of £101m (£182,100/acre) which compares with Carter Jonas reduced allowance of £69m (£125,000/acre). Within our assessment we have considered the impact of both figures with the results set out below.

We have adopted equivalent base revenue and cost assumptions to those set out within the Carter Jonas FVA albeit adjusting for the reduction in residential sales values across scenarios 1A and 1B. As an approximate estimate of the research presented in our research we have included a c.3% reduction to market residential sales values across Scenario 1A and 1B to account for the impact of overhead pylons. (This is for the LSE assessed impacts. Our higher impact scenario results in an average impact of around 3.1% reduction in GDV and our more conservative scenario results in around a 1.7% reduction in GDV). Our work makes no further distinction between unit typologies and applies a blended value reduction which is considered appropriate at this stage.

Our provisional viability assessment suggests that the introduction of overhead pylons has a material impact on residual land value with a reduction in the order of £17.5 million to a policy compliant scheme[1]. Despite a reduction in residual land value, the extent to which the scheme is deemed viable whilst supporting a policy level of planning obligations remains dependent upon Benchmark Land Value as shown within **Table E5** and **Table E6**.

Table E5 Benchmark to £69m

Scenario	Description	Affordable	SLP RLV	MD RLV	SVB	Surplus / (Deficit)
1A	Pylons run overhead	Policy	£11m	£93.8m	£69.3m	£24.5m
1B		Nil Affordable	£13.1m	£139.2m		£69.9m
2A	Pylons undergrounded	Policy	£11.8m	£111.3m		£42m
2B		Nil Affordable	£14m	£158.5m		£89.2m

Source: Savills (2025)

Table E6 Benchmark to £101m

Scenario	Description	Affordable	SLP RLV	MD RLV	SVB	Surplus / (Deficit)
1A	Pylons run overhead	Policy	£11m	£93.8m	£101m	(£7.2m)
1B		Nil Affordable	£13.1m	£139.2m		£38.2m
2A	Pylons undergrounded	Policy	£11.8m	£111.3m		£10.3m
2B		Nil Affordable	£14m	£158.5m		£57.5m

Source: Savills (2025)

At this stage we would advise that viability is held under continuous review to reflect any changes in the underlying assumption base pending the outcome of viability negotiations between the Applicant and Council. The appraisal work carried out is able to form the basis for additional sensitivity in helping to determine scheme viability and the level of planning obligations which may be reasonably supported.

[1] Assumes no additional cost associated with pylon infrastructure.

1. Introduction

1.1. Purpose

1.1.1. Savills has been commissioned by Essex County Council (ECC) and partners as part of the Stage B work to advise on the potential impact of the proposed Norwich to Tilbury overhead power line (N2T) on property prices and viability of the Dunton Hills Garden Village (DHGV) and other allocated development along the line of the N2T in Basildon and Brentwood boroughs.

1.1.2. This report provides an estimate of the broad impacts of the N2T Line proposals on running along and through DHGV on property prices and the Residential Gross Development Value (RGDV) of the proposed DHGV scheme. It also provides an indicative assessment of the viability of the DHGV scheme.

1.2. Report Structure

- Chapter 2 – Site and development context
- Chapter 3 – Literature review
- Chapter 4 – Savills wider research on pylons and property values
- Chapter 5 – Estimated impact on DHGV property values
- Chapter 6 – Estimated impact on DHGV viability.

2. Proposed Development and Site Context

2.1. Introduction

2.1.1. This chapter details the Proposed Development and its context, including the subject site's current use and location.

2.2. Dunton Hills Garden Village

Garden Villages Initiative

2.2.1. The site was identified by the government in 2017 as one of several new garden villages across England. Garden Village status recognises the potential of the new settlement to embed garden city principles in a locally led vision for the site and the opportunity to develop a distinct new place that is high quality, attractive and well designed.

2.2.2. The DHGV is intended to help ensure that enough new homes are built for the growing population in the borough of Brentwood. The site is currently used as farmland and for the Dunton Hills Golf Course. The landscape includes historic woodlands, wetlands and ponds. It is also home to Dunton Hills Farmhouse which is Grade II listed. It is near the A127 and A128, West Horndon station (with direct links to Central London and Southend), and nearby employment areas, including Brentwood and Basildon. The transport links offer the potential for good public transport connections to support a new community.

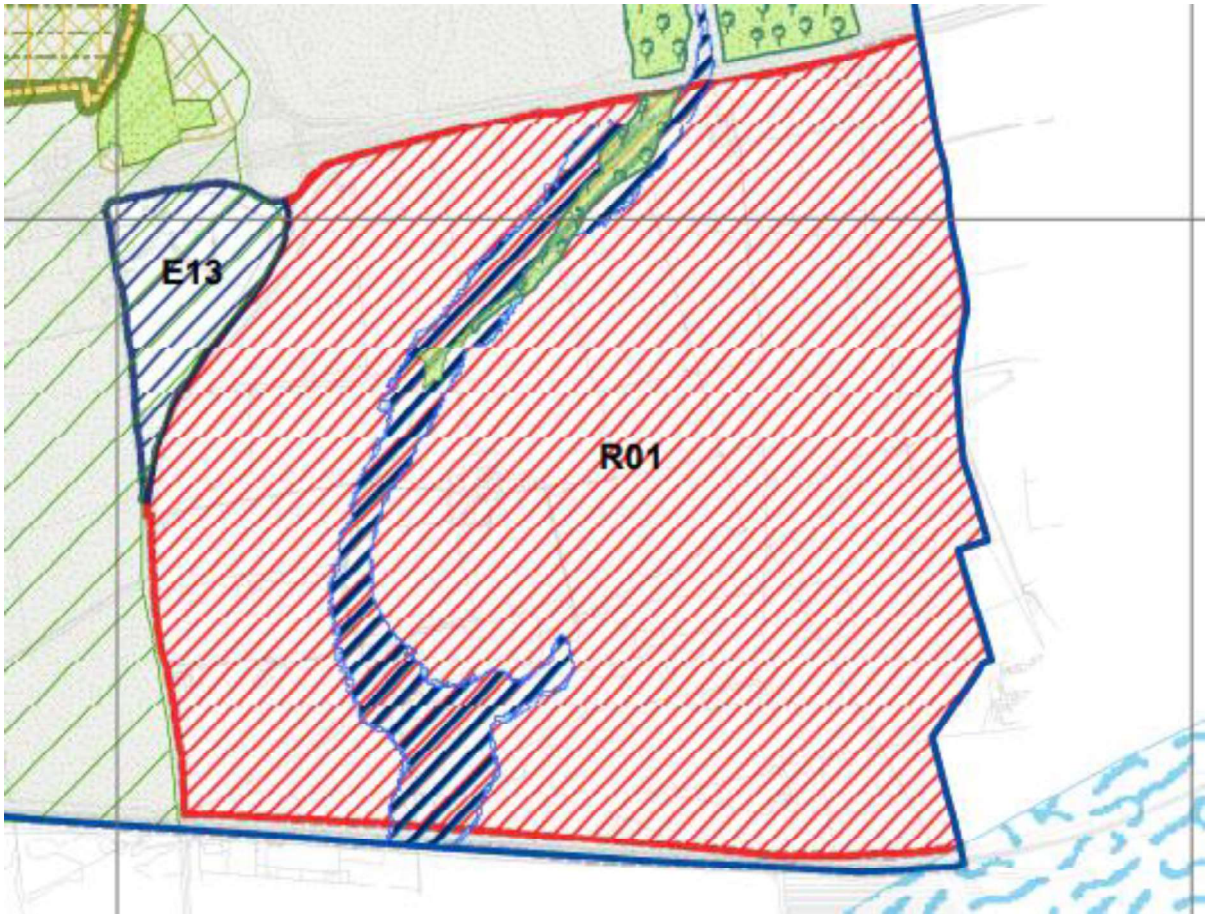
2.2.3. Its size means it will be large enough not only to provide a substantial number of new homes, but also the supporting facilities and infrastructure needed to create a self-sustaining community. The new garden village will be an opportunity to provide new homes within a sustainable new place which respects its landscape character and heritage, provides sustainable lifestyle choices, and is designed to meet the needs of future residents.

Local Plan Allocation

2.2.4. The DHGV site is allocated in the Brentwood Borough Council (BBC) Local Plan (LP) 2016-2033 which was adopted in March 2022. According to the LP the site was selected as a strategic allocation (R01) to meet the majority of Brentwood's housing need, within the Plan period and beyond. The DHGV site is allocated for 4,000 homes.

2.2.5. As can be seen from **Figure 2.1** the allocated DHGV site is bordered to the north-east by the Land at East Horndon (E13), which is allocated for around 5.5 ha of land for employment development which may comprise offices, light industrial, research and development (within Class E), B2, B8 or sui generis employment uses.

Figure 2.1 DHGV Strategic Allocation RO1



Source: Brentwood Borough Council Local Plan Policy Map (2022)

Planning Applications and Proposals

2.2.6. In September 2021 a planning application (reference 21/01525/Out) for the majority of the Dunton Hills Garden Village (DHGV) scheme was submitted by Commercial Estates Group (CEG). This application is pending determination.

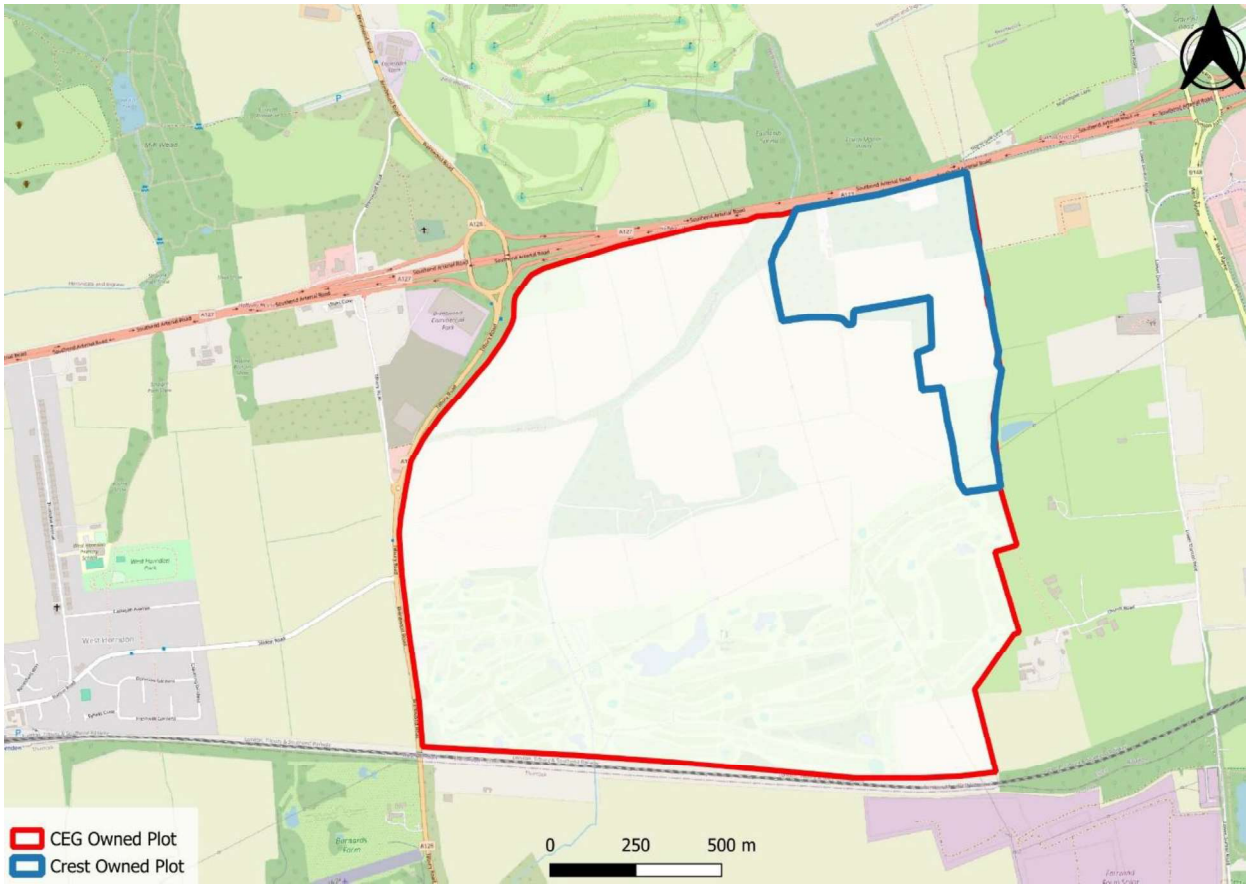
2.2.7. The planning application is for:

'Up to 3,700 dwellings, 3 care homes, 5 gypsy/travellers pitches, secondary and primary schools, children's nurseries and creches. Employment hub, village centre and neighbourhood hubs, mobility hub, community sports hub, football, hub, cricket ground, green and blue infrastructure, sustainable drainage system, accesses to A128 Tilbury Road, footpath and cycle link to the A127 and other associated infrastructure and works including noise barrier, demolition of structures and undergrounding of the overhead lines.

2.2.8. In addition to the 2021 planning application (reference 21/01525/Out) made by CEG, a separate parcel of land to the north-east of the application site, owned by Crest, would provide the balance of up to 300 units, a planning application has yet to be made for this.

2.2.9. **Figure 2.2** below shows the site boundary for the entire DHGV site and **Figure 2.3** shows the boundary of the CEG owned majority of the site, for which the planning application (21/01525/Out) is pending.

Figure 2.2 DHGV Site Boundary



Source: Savills (2025)

Figure 2.3 DHGV Existing Planning Application (21/01525/Out) Boundary



Source: Broadway Malyan (2024)

2.2.10. The development on the CEG owned area will be split into three key phases, which will comprise smaller sub-phases as shown in **Figure 2.4** below.

2.2.11. **Table 2.1** below provides information on densities by phasing zone. It shows a range of total dwellings produced depending on whether it is a lower, medium or high density implemented for the site. Depending on density, the potential number of units ranges from 3,217 to 3,700. As described above the portion of land to the north-east of the application site would provide the balance of up to 300 units.

2.2.12. For the purpose of our Residential Gross Development Value (RGDV) analysis in Chapter 4 we have assumed that the maximum 4,000 units are delivered.

Figure 2.4 Phasing Schedule for the DHGV Scheme



Source: Source: Broadway Malyan (2024)

Table 2.1 Density Scenarios for the Dunton Hills Garden Village Scheme

Phase	Total Units at the Lower Density Range	Total Units at the Middle Density Range	Total Units at the Highest Density Range
1A	786	830	870
1B	349	372	394
1C	286	312	336
Phase 1 Total	**1,421**	**1,514**	**1,600**
2A	704	760	820
2B	233	253	271
2C	233	254	275
Phase 2 Total	**1,170**	**1,267**	**1,366**
3A	477	515	556
3B	149	164	178
Phase 3 Total	**626**	**679**	**734**
Crest Owned Land (North-East Corner)	**300**	**300**	**300**
Overall Total	**3,417**	**3,760**	**4,000**

Source: Brentwood Borough Council (2022)

2.3. The N2T Proposals

2.3.1. Norwich to Tilbury is a proposal by National Grid Electricity Transmission (National Grid) to reinforce the high voltage power network in East Anglia between the existing substations at Norwich Main in Norfolk, Bramford in Suffolk, and Tilbury in Essex, as well as connect new offshore wind generation. The proposed N2T route can be seen in **Figure 2.5** below.

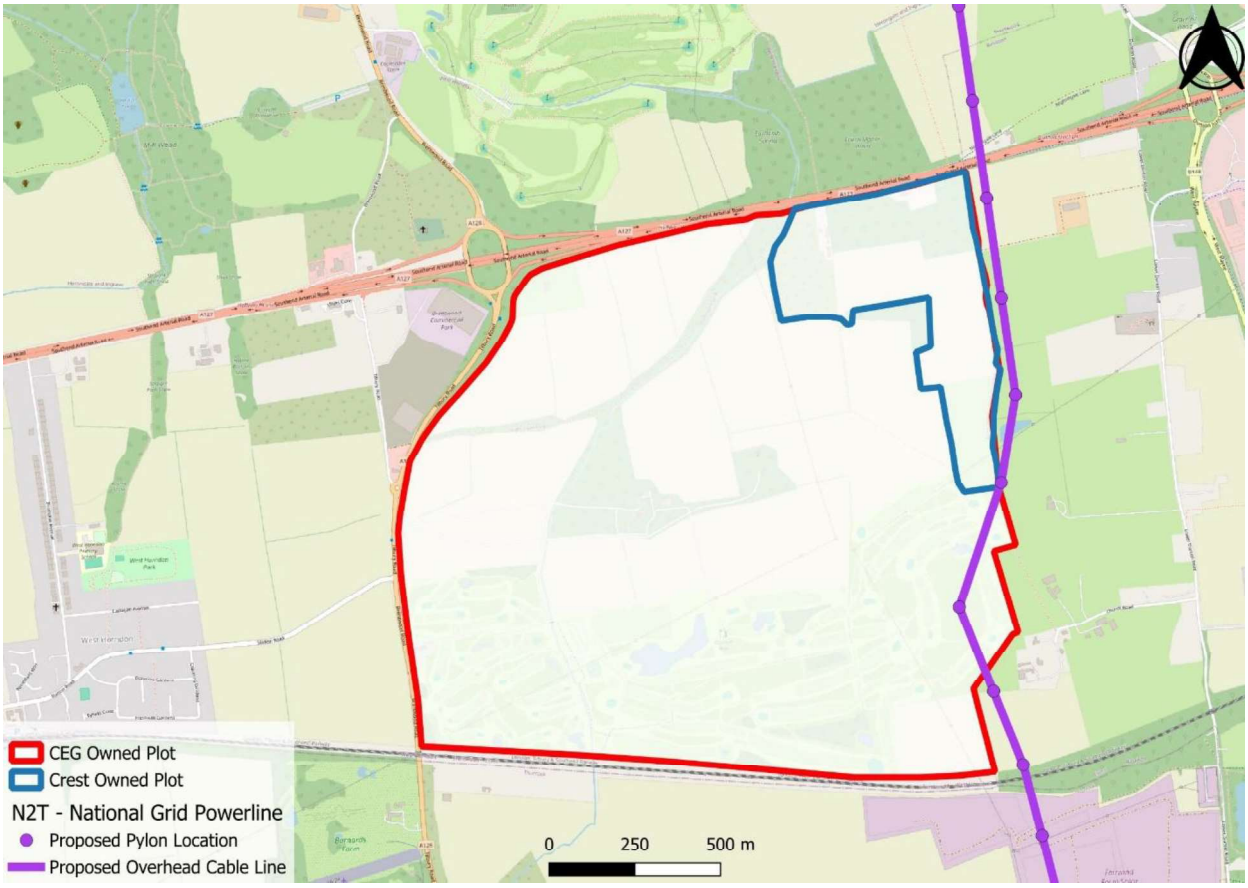
Figure 2.5 N2T Running through Essex



Source: National Grid (2024)

2.3.2. The proposed line of N2T runs through the DHGV site. It also runs close to and/or through other proposed development sites in Brentwood and Basildon BCs, for example including Lower Langdon and West Horndon. The line's route alongside and through the DHGV site can be seen in **Figure 2.6** below.

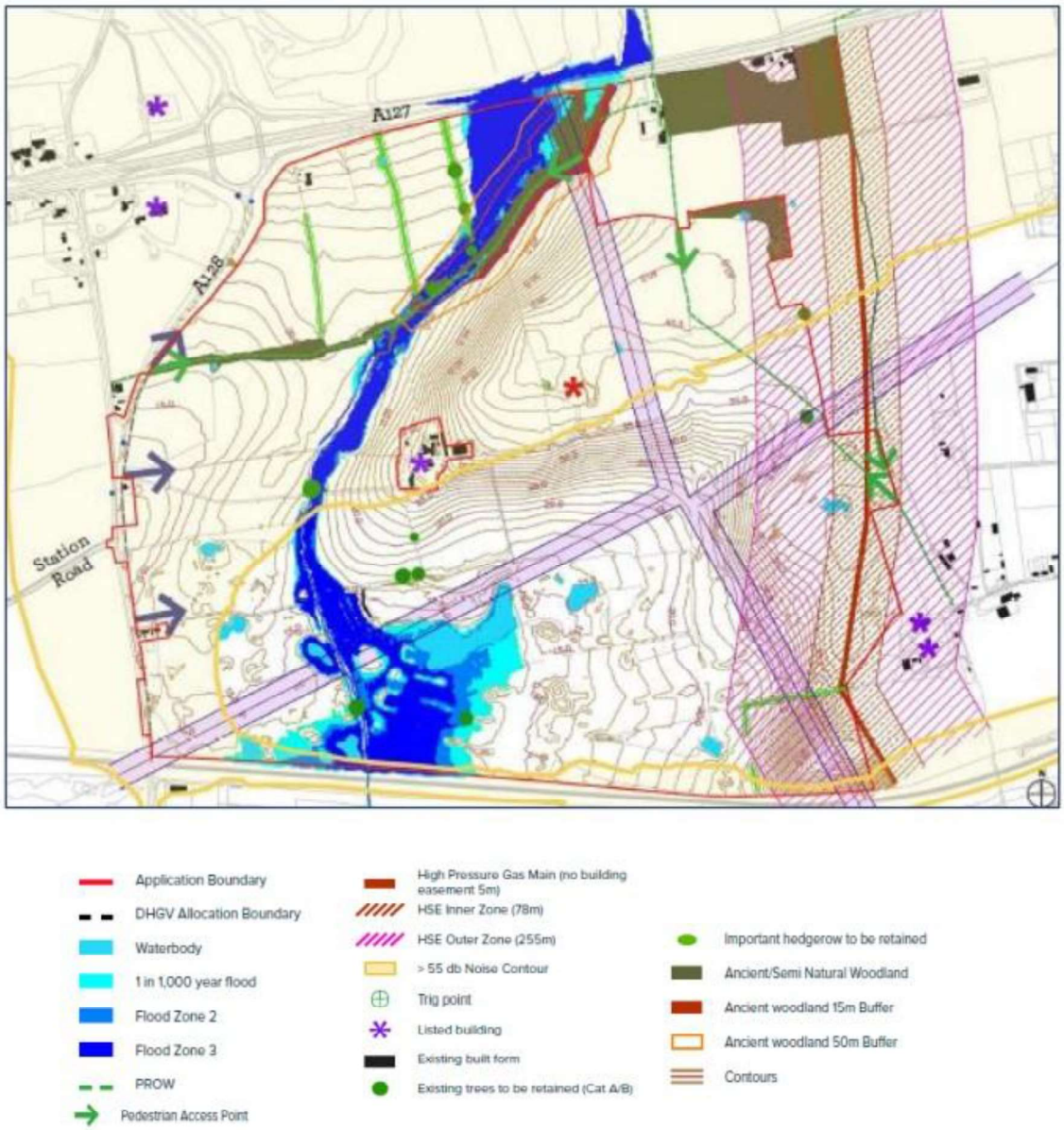
Figure 2.6 N2T in Relation to the DHGV Site Boundary



Source: Savills (2025), QGIS (2025)

2.3.3. **Figure 2.7** below shows the potential site constraints associated with the DHGV site. As can be see, there is an existing high pressure gas main running from the north to the south of the site, within 5m of which, no building easement is permitted. It Is likely that the proposed N2T route may need to be amended slightly to ensure a safe distance from the gas main.

Figure 2.7 DHGV Site Constraints Map



Source: Dunton Hills Garden Village Viability Report (2021)

3. Impact of Power Lines on House Prices and Land Values

3.1. Summary and Recommendations

3.1.1. In this chapter we summarise the relevant published work on the impact of power lines on house prices and land values. We have used this to inform our assessment of levels of impact appropriate for our modelling of the potential impact at Dunton Hills. The following chapter then moves onto primary research into a number of case studies examining the impact at new build development sites.

3.1.2. The most relevant evidence for the impact on house prices comes from a 2023 LSE paper entitled *'Are Friends Electric'* with the key finding that on average homes within 300m of the power line have 10% less value, those between 300m and 1.2km have 3.6% less value and there is no impact on those beyond 1.2km.

3.1.3. Other studies have also shown some evidence of lower values by power lines, often showing the effect of a powerline diminishing and disappearing from 250m-300m from the power line. These studies are summarised in section 3.3.

3.1.4. Homes closer to power lines may take longer to sell, but the evidence around this is limited and not conclusive. A 2005 paper showed that surveyors expected homes near overhead power lines to take longer to sell (See Section 3.3.12), but this was based on survey responses rather than sales data.

3.1.5. Based on the National Grid guidance we also conclude in this initial assessment that a new overground or undergrounded line on the route currently proposed would not affect the location of any of the homes planned at the Garden Village in the current masterplan.

3.2. Review of Space Required for Power Lines

Overhead Lines

3.2.1. National Grid guidance and documentation[2] states that National Grid does not consider there to be general minimum distances between properties and overhead lines and each instance must be dealt with on its merits. National Grid states it seeks to route new lines away from residential property on grounds of general amenity.

3.2.2. The only limitation on new development prescribed by National Grid is the statutory safety clearances. For example the minimum clearance for 400kV overhead lines is 8.6-16.3m to roads, 5.3m to platforms where a person could be standing, 3.1-5.3m to trees and 4.0m to street lighting. Other minimum distances depend on the power of the lines, with higher voltage lines requiring bigger separation distances.

[2] National Grid, Development near overhead lines: Planning and amenity aspects of high voltage electricity transmission lines and substations

3.2.3. The consequence of these requirements is that there are a range of examples of residential and other development that have been carried out beneath and adjacent to overhead lines. This includes sites such as in Aylesbury (Fairford Leys), Marston Moretaine, Didcot (Great Western Park) and Backworth (Northumberland Park).

Underground Lines

3.2.4. In some cases undergrounding lines is the most appropriate option. (For example power lines were undergrounded as part of the London Olympics proposals to help create a suitable environment for the Olympics and post-Olympics legacy). However the cost is considerably higher at 15 to 25 times that of overgrounding the lines according to National Grid[3]. This is partly due to underground conductors tending to be hotter than overhead ones, which results in the need for a larger conductor underground than would be necessary overhead. This could be up to four times larger and may result in as many as 12 separate cables for a 400kV cable circuit, all of which need to be well spaced.

3.2.5. Where underground cables are installed National Grid requires an approximate width of 30 metres in perpetuity above the cables to be kept free from development or planting in order to allow ready access for maintenance and to ensure that the cables are not disturbed.

3.2.6. Based on this information we make the assumption that if the powerline was undergrounded through Dunton Hills Garden Village, 30m would be needed (15m either site of the centre of the line) by National Grid and homes could be built up to that point. From our initial assessment this would not affect any of the homes planned at the Garden Village in the current masterplan.

3.3. Review of Evidence on the Impact of Power Lines on Land Value

3.3.1. We have reviewed a range of relevant published work into the impact of power lines on house prices. This is detailed below including comments on the relevance to Dunton Hills Garden Village.

Are Friends Electric

3.3.2. This is a 2023 paper by Tang and Gibbons published by Centre for Economic Performance, a part of the London School of Economics. It analyses house prices near high voltage power lines in the UK. The paper conducted two main pieces of analysis:

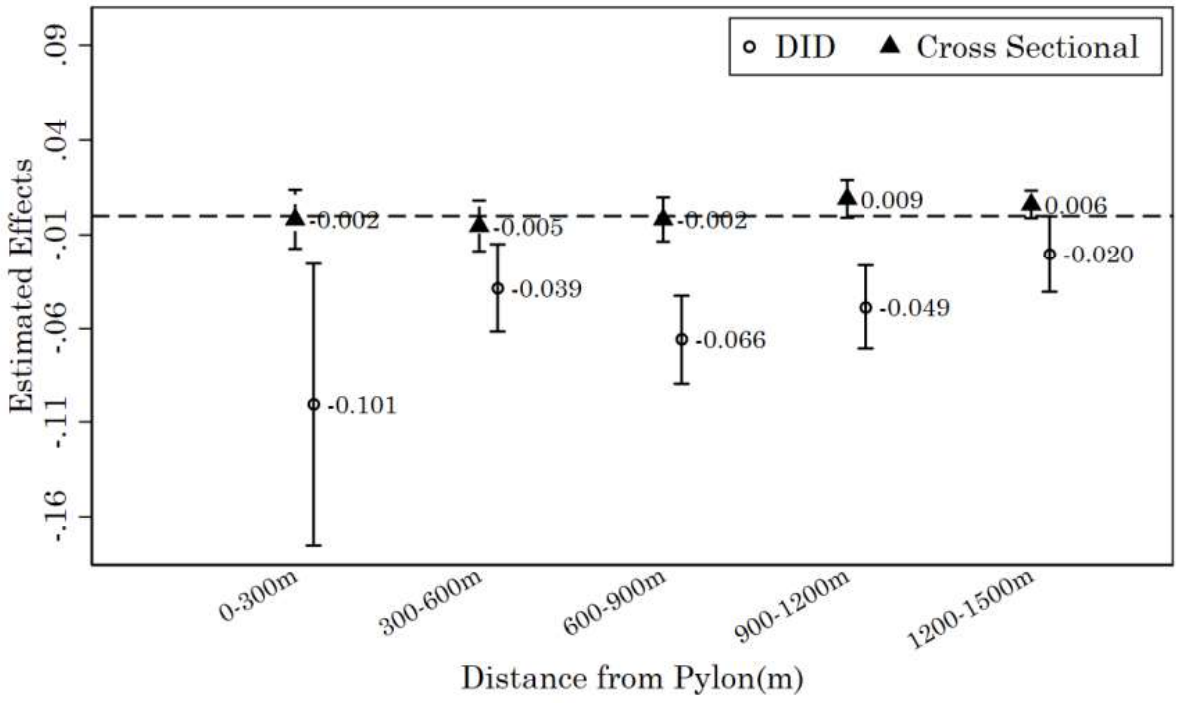
- A Cross Sectional study that looked at the values of homes in increasing distance bands from power lines, while also considering the voltage of the power lines, and whether they were visible or not. This study controlled for the type and prices of properties.

[3] National Grid, A Sense of Place: design guidelines for development near high voltage overhead lines

- A Difference-in-Difference (DID) model that compared the values of homes at varying distances from new power lines before and after they were installed. (The key differences being the DID model compares before and after effects, looking at the differences in values with the installation of power lines as a variable. It also incorporates more sophisticated statistics to compensation for endogenous variables – i.e variables that may affect both home values and powerline locations together, such as locations of rivers or landscape shapes)

3.3.3. The DID model indicated lower values closer to a newly installed powerline. They determined values within 300m of a new powerline to be an average of 10.1% lower than those more than 1.5km away. Homes between 300m and 600m were 3.9% lower, those between 600m and 900m were 6.6% lower, and those between 900m and 1,200m were 4.9% lower, and 0.2% lower for homes 1,200m to 1,500m. There were wide variations around these average values however. These results are shown in **Figure 3.1** below.

Figure 3.1 Cross Sectional and DID Regressions of the effect of Pylons on Housing Values



Source: 'Are Friends Electric? Valuing the social costs of power lines using house prices', Tang and Gibbons, Centre for Economic Performance, 2023

3.3.4. The cross sectional study showed no effect of power lines on values at any distance however. Nor did it find any variation in effect from difference voltages, or whether the pylons were visible or not.

3.3.5. While each study had different results, our view is that the DID model is the more applicable technique used given its comparison of before and after effects and more sophisticated statistical approach, and provides the most relevant results for Dunton Hills.

3.3.6. Both models used statistical methods to attempt to control for various confounding factors. This included locational factors, such as distance to stations, green space and waterways, as well as neighbourhood characteristics including population size and density, tenure breakdowns, number of non-EU residents, unemployment rate and a number of other socio-economic factors. They also controlled for property specific factors, such as home size, number of rooms and built form of property.

3.3.7. As a part of this property specific control they considered whether the property was new build or not. While this new build characterisation was used as a control within the data, the overall dataset would still have been primarily dominated by second hand homes.

3.3.8. The paper provides a robust analysis of the effect of power lines on values on the current UK market. This makes it the most appliable of all the studies considered here.

The Pricing of Power Lines: A Geospatial Approach to Measuring Residential Property Values

3.3.9. This is a 2018 paper by Wyman and Mothorpe in the Journal of Real Estate Research. This paper considered land values for plots in south Carolina, USA. It found that vacant land plots near high-voltage power lines sell for 44.9% less than equivalent lots that are not located near power lines. Lots that were located within 1,000 feet (305m) of transmission lines sell for 17.9% less than those further away on average. The study also found that, consistent with previous studies, the negative pricing impact decays with distance and typically disappears after approximately 1,000 feet (305m).

3.3.10. As the work was done in the USA it may not be directly comparable to Dunton Hills Garden Village. However it does show that land values are affected directly next to the high voltage lines (within 305m) and not further away.

High-Voltage Overhead Power Lines and Property Values: a Residential Study in the UK

3.3.11. This is a 2005 paper by Sims and Dent was published in Urban Studies. It draws on a survey of Chartered Surveyors (RICS) and members of the National Association of Estate Agents (NAEA) perceptions of house prices near high voltage overhead power lines and a case study of achieved values in Scotland. It concludes that RICS members frequently value homes near high voltage overhead power lines at 0-5% or 5-10% less than those further away (50% of those asked falling into each category). The NAEA members perceptions were more mixed with 14% frequently expecting no change in the value of homes near high voltage overhead power lines, 14% up to 5% reduction, 29% a 5-10% reduction and 43% a 10-20% reduction.

3.3.12. The study found that all those surveyed expected homes near high voltage overhead power lines to take longer to sell. The case study of actual values achieved in Scotland showed that the values of homes beyond 250m of the power line or pylon were unaffected, but those within 100m were reduced by 6-17% with the presence of a pylon being more influential at 21% reduction in value.

3.3.13. This study, particularly the case study, is relevant to Dunton Hills although it is only one example. It does show that within 250m of the line and pylons house prices are expected to be affected the most.

The Impact of Transmission Lines on Property Values: Coming to Terms with Stigma

3.3.14. This is a 2002 paper by Elliot and Wadley published in Property Management. It includes a large scale review of international literature on the topic. These are listed in **Table 3.1** below.

3.3.15. It finds that the majority of the research has been done on case studies in the USA with just a few from Canada, New Zealand and the UK. In general the case studies found that negative impacts on property values from high voltage overhead power lines range from 1 to 9 per cent, depending on proximity. However different methods and measurements have been used so need to be treated with caution. This provides an order of magnitude perspective on the impact of power lines on house prices. It is based on historic and non-UK case studies so inferences should be treated with caution.

Table 3.1 High Voltage Overhead Power Line Proximity Studies

Study	Date of publication	Period/date of study	Location and sub market	Summary of effects i.e. percent decrease in price	Distance at which effects observed	Powerline capacity
1. Callanan and Hargreaves	1995	1983-1993	Newlands, Wellington New Zealand residential	27.3 9.1 2.7	10m 30m 100m	110kv
2. Colwell	1990	1968-1978	Illinois, USA residential	6.6 2.0	50ft (15m); 200ft (60m) >200ft insignificant	138KV on steel pylons
3. Colwell and Foley	1979	1963-1978	Illinois, USA residential	8.8 3.6	50ft (15m); 200ft (60m)	138KV on steel pylons
4. Hamilton and Carruthers	1993	1985-1991		5.0	120m	
5. Hamilton and Schwann	1995	1985-1991	Four residential suburbs in Vancouver	6.3 1.1	100m 200m	1-230kv on steel pylons 1 x 60 – 2 areas – 500kv
6. Ignelzi and Thomas	1991	1976-1989		1.0-9.0	300ft	
7. Kinnard	1967	1956-1965	Surburban town/areas in Hartford USA	3.0	200ft	
8. Kinnard *et al.*	1984	1973-1984	Orange county, New York	2.0	200ft	
9. Kinnard	1996	1990-1995		0.3	200ft	
10. Kinnard *et al.*	1997	1990-1996		0.2-4	200ft	

Source: Elliot and Wadley (2002)

4. Research into New Build Values Around Power Lines

4.1. Summary

4.1.1. We have conducted primary research into how new build values vary around power lines. We have taken six recent new build developments that have power lines either running through, or directly adjacent to them. For each site, we have examined how new build values (on a per square foot (psf) basis) have varied by proximity to the power line. The sites considered are Berryfields, Linmere, Marston East, Marston West, New Lubbesthorpe and South Bourne.

4.1.2. Our primary research into the case studies has not found a significant effect of power lines on new build house prices. However the sample size is relatively small (in terms of total transactions analysis) and so may be not as statistically robust as larger studies.

4.1.3. The most relevant evidence for the impact on house prices comes from a 2023 LSE paper entitled *'Are Friends Electric'* with the key finding that on average homes within 300m of the power line have 10% less value, those between 300m and 1.2km have 3.6% less value and there is no impact on those beyond 1.2km.

4.1.4. The conclusion we draw from these two pieces of work is that overall the LSE study is more comprehensive but may not have picked up on a reduced impact of power lines on new build vs. existing development.

4.2. Case Studies

4.2.1. This section contains the six case studies used to examine the effect of power lines on new build values. Each section starts with a brief site description and summary of key findings, followed by a map of values on the site, an overview of median values by various distance bands, and finally a scatter chart that controls for property sizes. This last step is key to determine whether changes in the average values across distance bands is purely a consequence of different property types or not.

4.2.2. These sites have been chosen based on our knowledge and experience of analysing developments. They provide evidence of new build delivery in fairly comparable markets, typically on the edge of towns and mostly in the South East. They were also chosen on having sufficient data (For sales rates, values and property sizes) within the time periods covered by available datasets.

4.2.3. The locations of each site are shown in **Figure 4.1** below.

Figure 4.1 Location of Case Study Sites

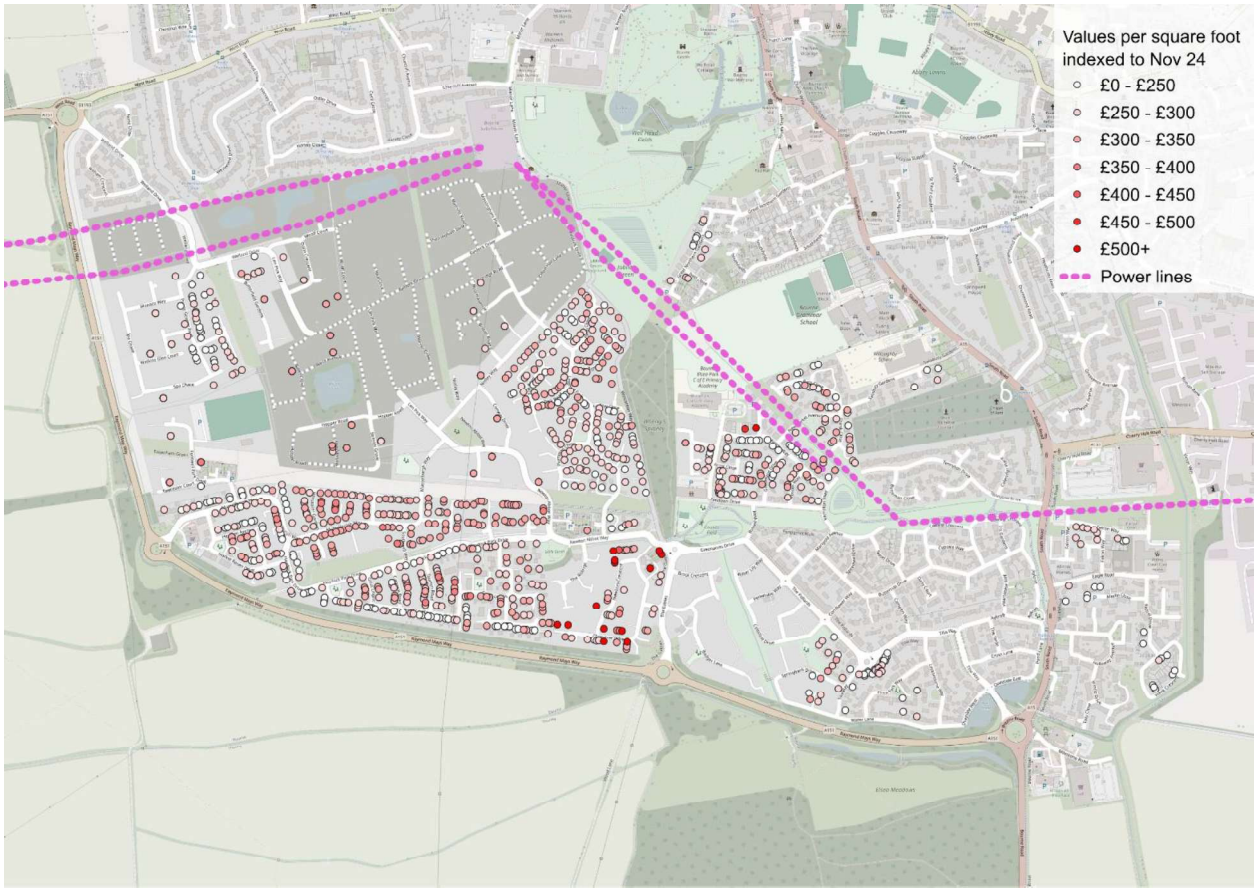


Source: Savills (2025)

South Bourne

4.2.4. South Bourne is a large urban extension to the south of Bourne, in Lincolnshire. Unusually it has two pairs of power lines passing through it, two to the north west, and two to the east. It is the only site considered here that shows consistently lower values of homes of all types closer to the power lines.

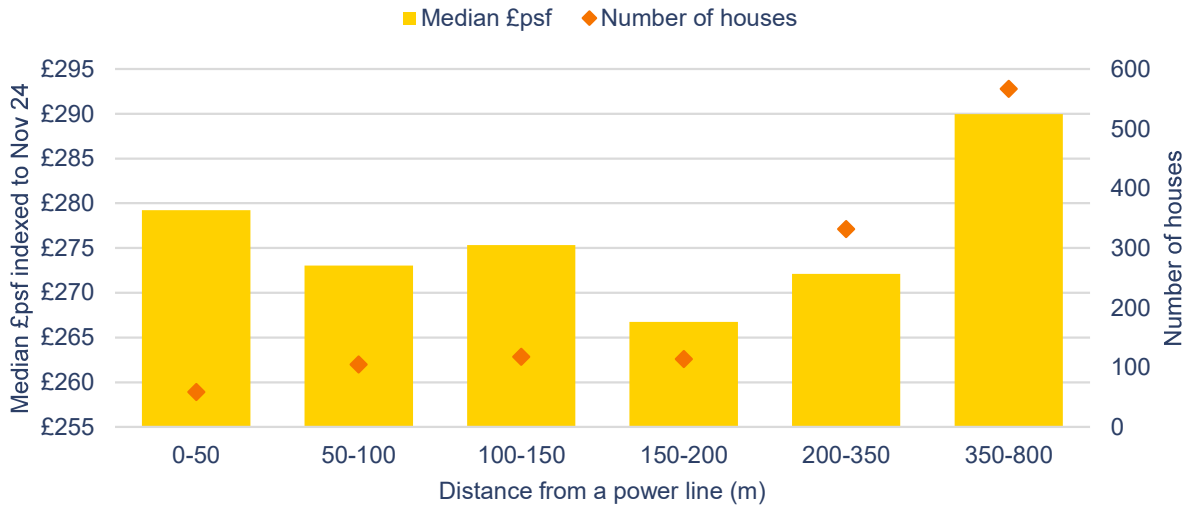
Figure 4.2 New build Sales Prices in South Bourne



Source: Savills using HMLR, EPCs

4.2.5. In South Bourne, the median values per square foot for different distance bands from a power line gradually decrease until the 350m mark, at which point there is an increase in values again. The average median value per square foot for distance bands between 0-350m away from a power line is 5.75% lower than the median value per square foot for houses in the 350-800m distance band.

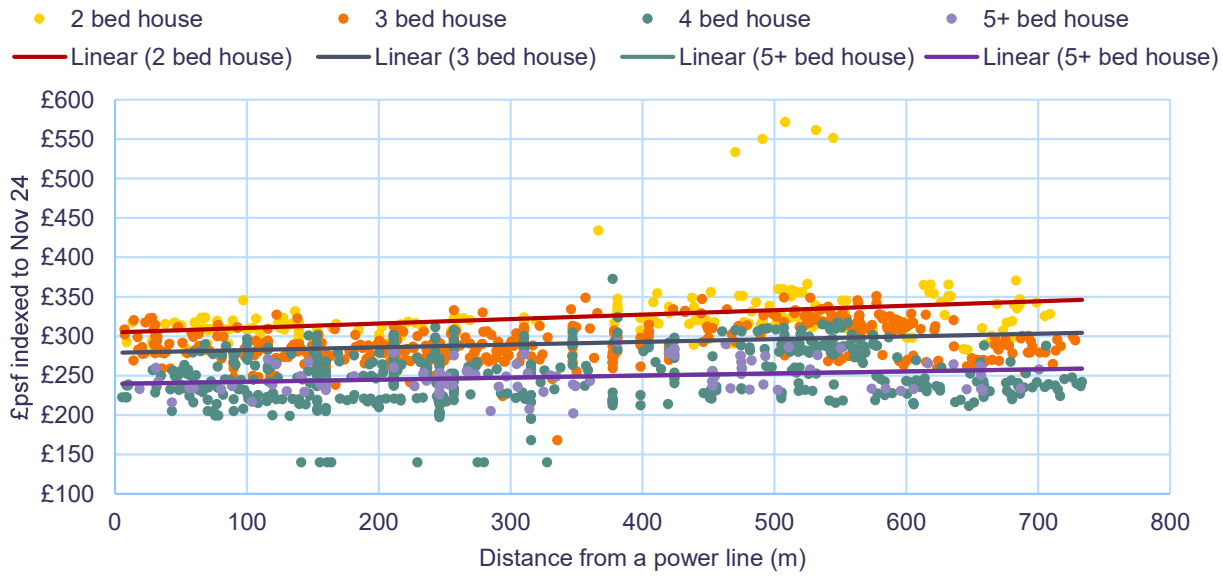
Figure 4.3 Median New Build Values per sq.f for Distance Bands from Power Line in South Bourne



Source: Savills using HMLR, EPCs

4.2.6. All the house sizes have a positive correlation between the values, meaning that house prices tend to increase as distance from a power line increases. However, the low R^2 values for each of these house sizes suggests the relationship is not a statistically significant one. The two beds are also distorted by a cluster of higher value homes at approximately 500m from the power lines.

Figure 4.4 New Build Values per sq.ft Compared to Distance from Power Lines in South Bourne



Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Table 4.1 Correlation and R² Values for the Number of Bedrooms in South Bourne

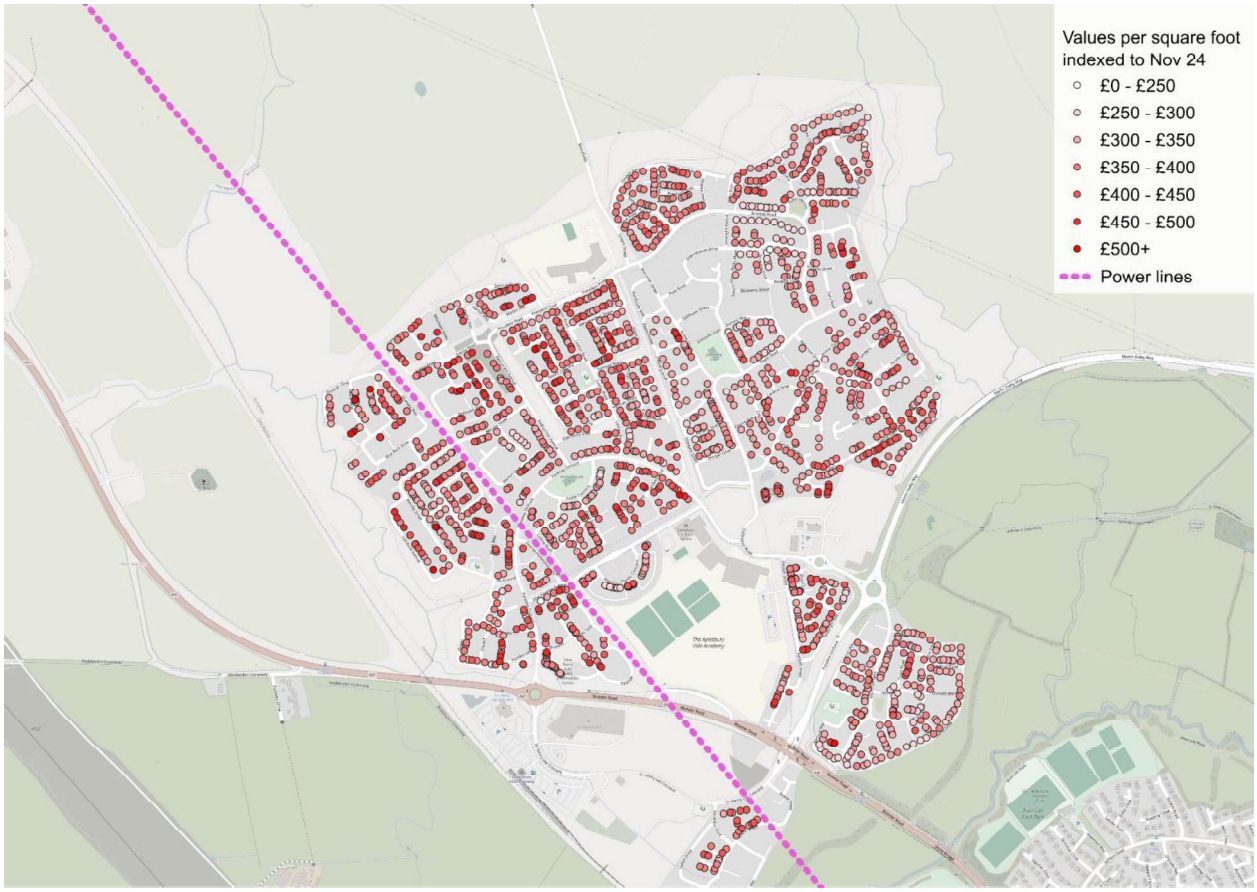
	2 bed house	3 bed house	4 bed house	5+ bed house
Correlation	0.27	0.31	0.22	0.24
R²	0.08	0.09	0.05	0.06

Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Berryfields

4.2.7. Berryfields, near Aylesbury, is another large and establish housing development that provides a robust samples size for analysis. The development has a power line running through the west of the site. There is no evidence of lower values closer to the power lines on the site, and even minor evidence of higher values, although this is likely noise within the data and is not statistically significant, as indicated by low R^2 values.

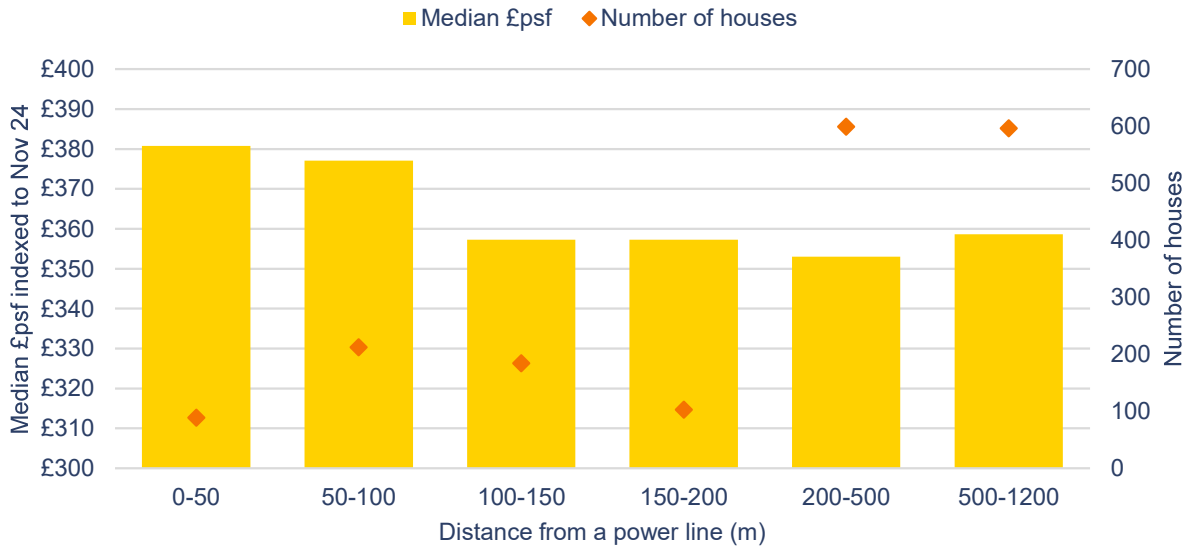
Figure 4.5 New Build Sales Prices in Berryfields



Source: Savills using HMLR, EPCs

4.2.8. Median values per square foot are higher for distance bands closer to the power line. The median value per square foot for the 0-50m and 50-100m distances band are 6.79% and 5.76% higher than the average median value per square foot for distance bands between 100-1,200m, respectively.

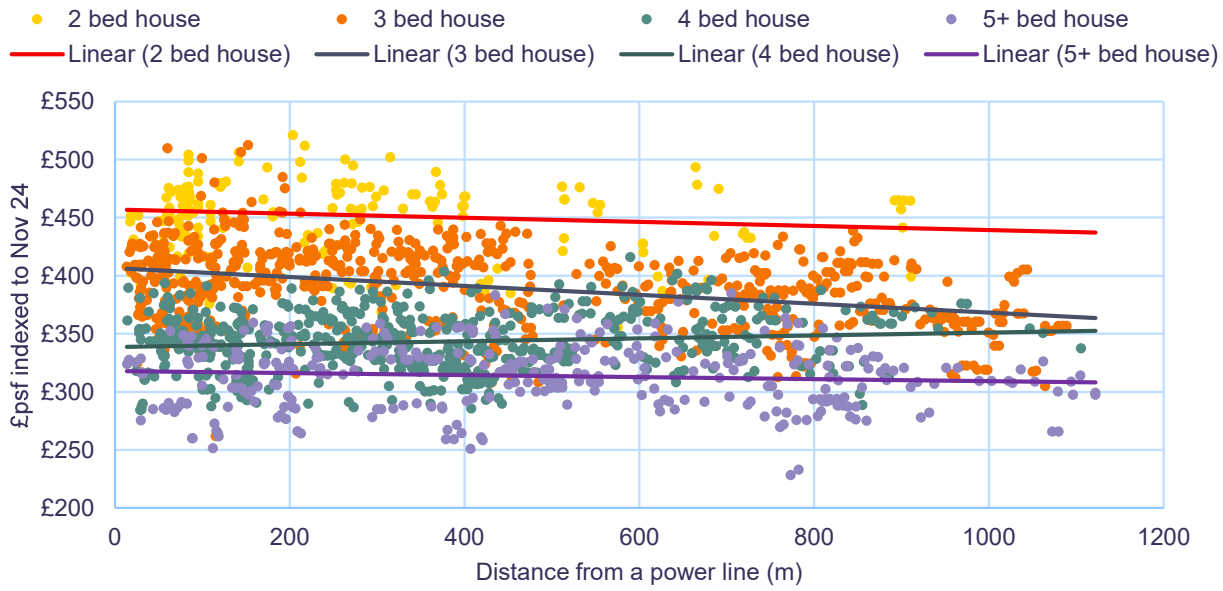
Figure 4.6 Median New Build Values per sq.ft for Distance Bands from Power Line in Berryfields



Source: Savills using HMLR, EPCs

4.2.9. For most home sizes, there is a mild negative relationship between value and distance to a powerline, with 4 bed houses being the exception and showing a weak positive correlation. All trends have low R^2 values however, indicating that the relationships are not significant.

Figure 4.7 New Build Values per sq.ft Compared to Distance from Power Lines in Berryfields



Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Table 4.2 Correlation and R² Values for the Number of Bedrooms in Berryfields

	2 bed house	3 bed house	4 bed house	5+ bed house
Correlation	-0.09	-0.36	0.12	-0.09
R²	0.01	0.13	0.02	0.01

Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Linmere

4.2.10. The site at Linmere, towards to the north of Dunstable, has a power line running to the east of it, not through the site itself. While there is some evidence of lower values closer the powerline, this seems to be an artifact of the distribution of home types, as the relationship does not hold when controlling for property size.

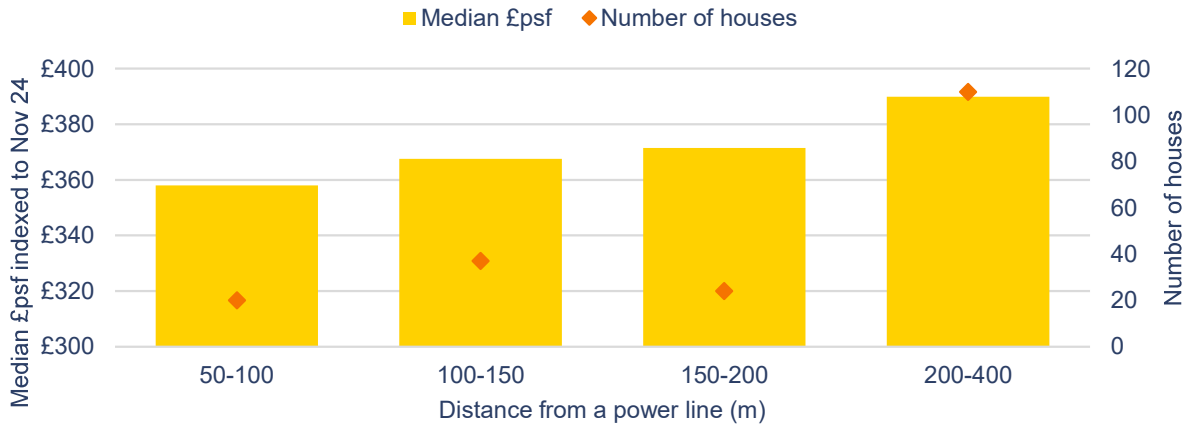
Figure 4.8 New Build Sales Prices in Linmere



Source: Savills using HMLR, EPCs

4.2.11. In Linmere, the median values per square foot increase with increasing distance from a power line. The 50-100m distance band is 2.57%, 3.62% and 8.16% lower than the 100-150, 150-200, 200-400 distance bands, respectively. The closer bands are based on relatively small sample sizes however. Additionally, these lower values closer to the power lines are likely a consequence of the variation of housing stock type, as show below.

Figure 4.9 Median New Build Values per sq.ft for Distance Bands from Power Line in Linmere



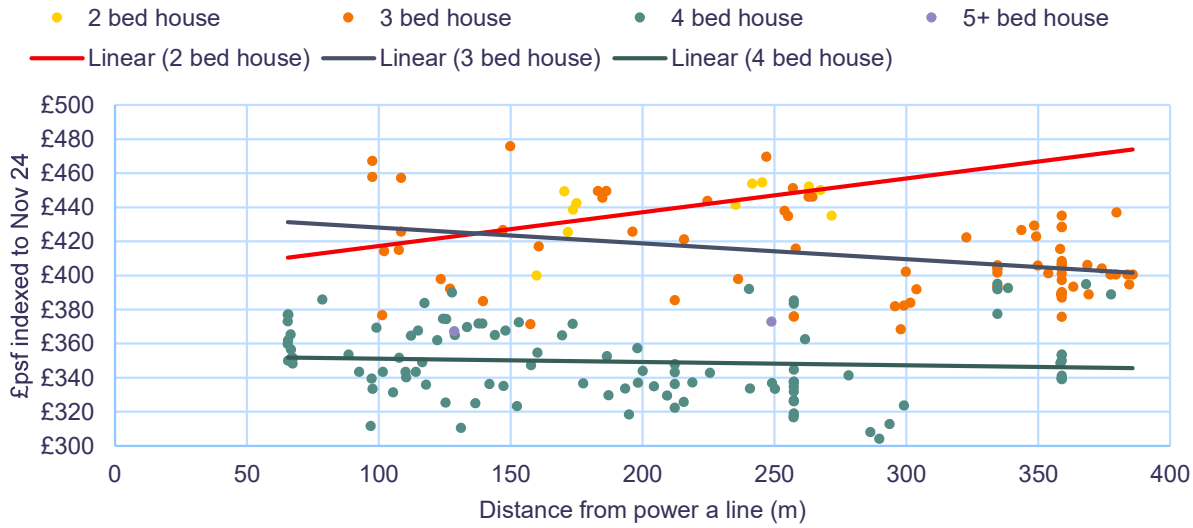
Source: Savills using HMLR, EPCs

4.2.12. When the data is split by property size, there was a positive correlation between distance and value for 2 bed homes, and a negative one for 3 bed homes. Both are based on relatively small sample sizes however.

4.2.13. Also of note is the cluster of lower psf value 4 bed homes closest to the power lines. It's these homes that result in the lower overall average values shown in the above bar chart. But when controlled for property size, we see these pattern fall away, with no effect on distance to the power lines on 4 bed home values.

4.2.14. There were a small number of 5+ bed homes on the site, but not enough to meaningfully analyse.

Figure 4.10 New Build Values per sq.ft Compared to Distance from Power Lines in Linmere



Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Table 4.3 Correlation and R² Values for the Number of Bedrooms in Linmere

	2 bed house	3 bed house	4 bed house	5+ bed house
Correlation	0.56	-0.34	-0.08	-
R²	0.31	0.12	0.01	-

Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

West Marston Moretaine

4.2.15. Marston Moretaine is a village in Bedforshire that has seen recent expansion to both the west and the east, both with power lines adjacent to them. We have split these sites out in to West Marston Moretaine and East Marston Moretaine.

4.2.16. While there is some initial indication that of higher values further from the power lines, this relationship fails to hold when breaking down by property size.

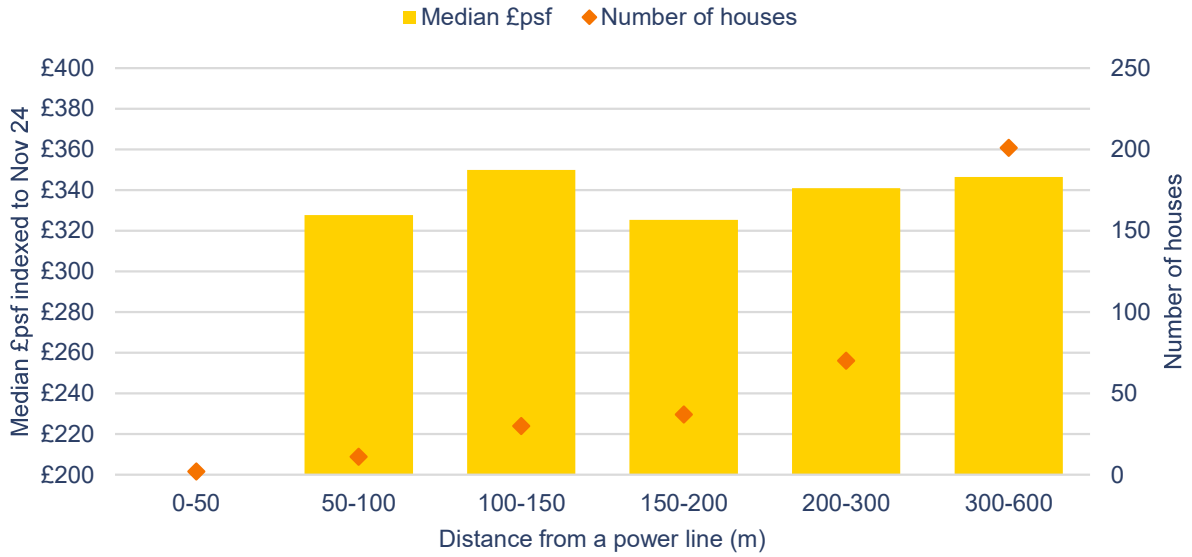
Figure 4.11 New Build Sales prices in West Marston Moretaine



Source: Savills using HMLR, EPCs

4.2.17. In West Marston Moretaine there is some weak evidence of low median values for the homes in distance bands closest to the power lines. Understanding this trend is hampered by small sample sizes however, particularly in bands closest to the power lines.

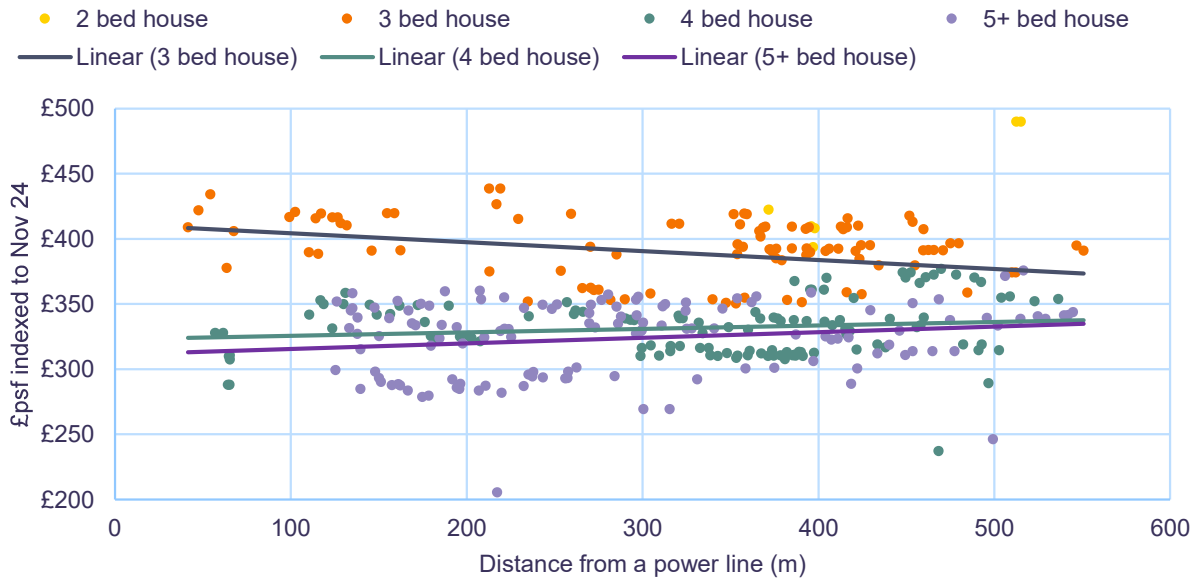
Figure 4.12 Median New Build Values per sq.f for Distance from Power Line West Marston Moretaine



Source: HMLR, EPCs

4.2.18. When split by property sizes, there is a negative relationship between distance and value for 3 bed homes, and a weak positive one for 4 and 5+ bed homes. All of these are based on almost zero R^2 values however, indicating they are not significant trends.

Figure 4.13 New Build Values per sq.ft with Distance from Power Lines in West Marston Moretaine



Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Table 4.4 Correlation and R² Values for the Number of Bedrooms in West Marston Moretaine

	2 bed house	3 bed house	4 bed house	5+ bed house
Correlation	-	-0.21	0.15	0.18
R²	-	0.05	0.02	0.03

Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

East Marston Moretaine

4.2.19. East Marston Moretaine is the other side of Marston Moretaine, but has a powerline running directly through the site.

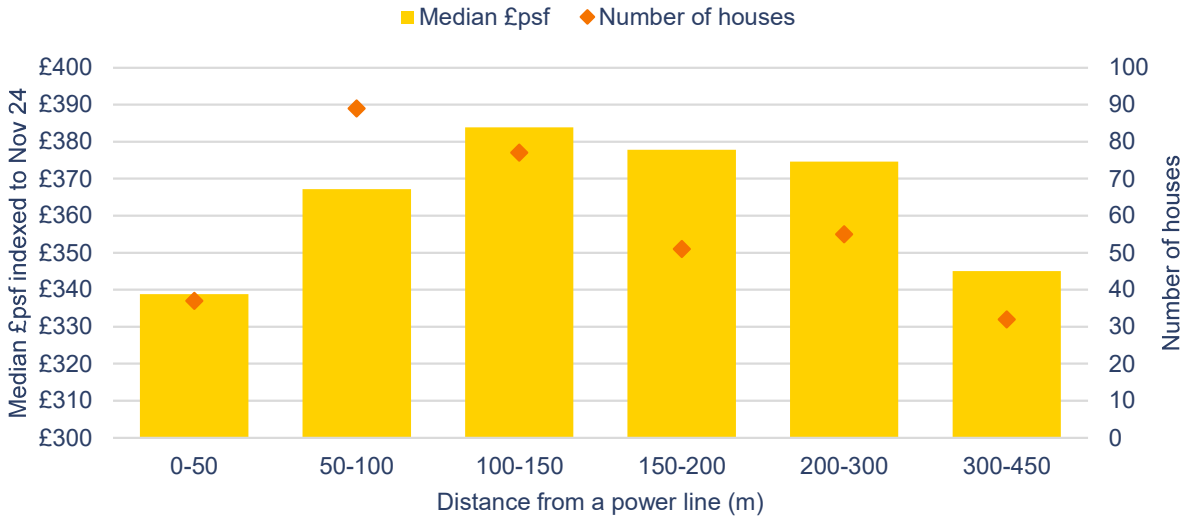
Figure 4.14 New Build Sales Prices in East Marston Moretaine



Source: Savills using HMLR, EPCs

4.2.20. There is some indication that houses in East Marston Moretaine become more expensive as distance increases from a power line but only to a certain extent. The median values per square foot increase as distance from the power line increases until the 100-150m band. Beyond this band, median values per square foot seems to remain stable until they decrease significantly in the 200-450m distance band.

Figure 4.15 Median New Build Values per sq.ft from Power Line East Marston Moretaine

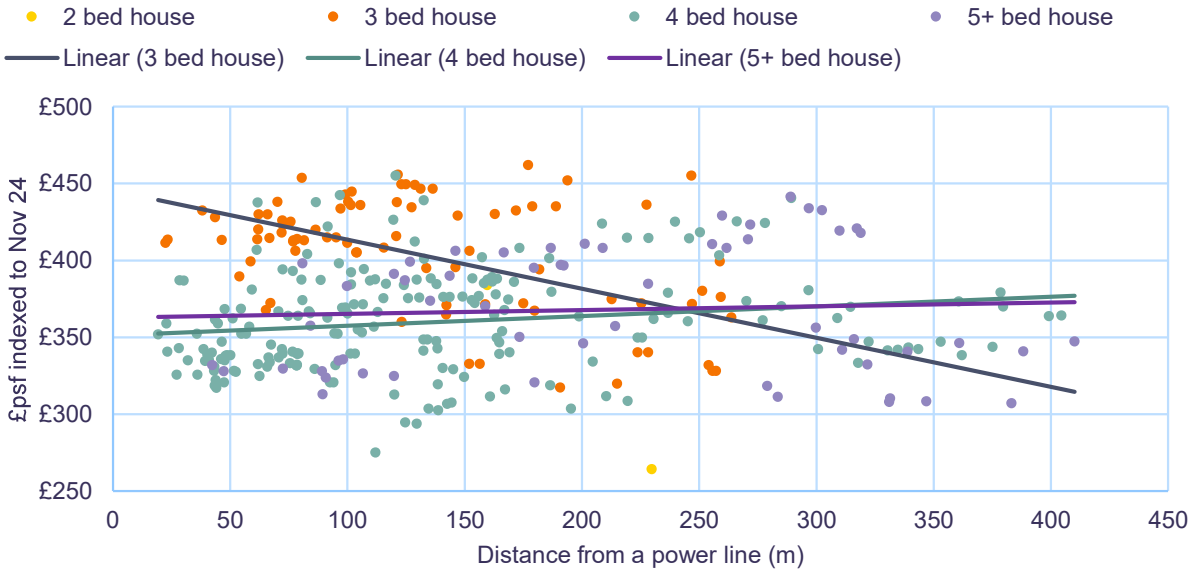


Source: HMLR, EPCs

4.2.21. When houses are split by the number of bedrooms, 3 bed houses have a strong negative correlation and relatively strong R^2 value, indicating that as distance from a power line increases, the value of 3 bed houses decreases. 4 bed and 5+ bed houses show the opposite relationship with a slight positive correlation.

4.2.22. While there were a handful of 2 bed house sales on the site, there were not enough analyse meaningfully.

Figure 4.16 New Build Values per sq.ft and Distance from Power Lines in East Marston Moretaine



Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Table 4.5 Correlation and R² Values for the Number of Bedrooms in East Marston Moretaine

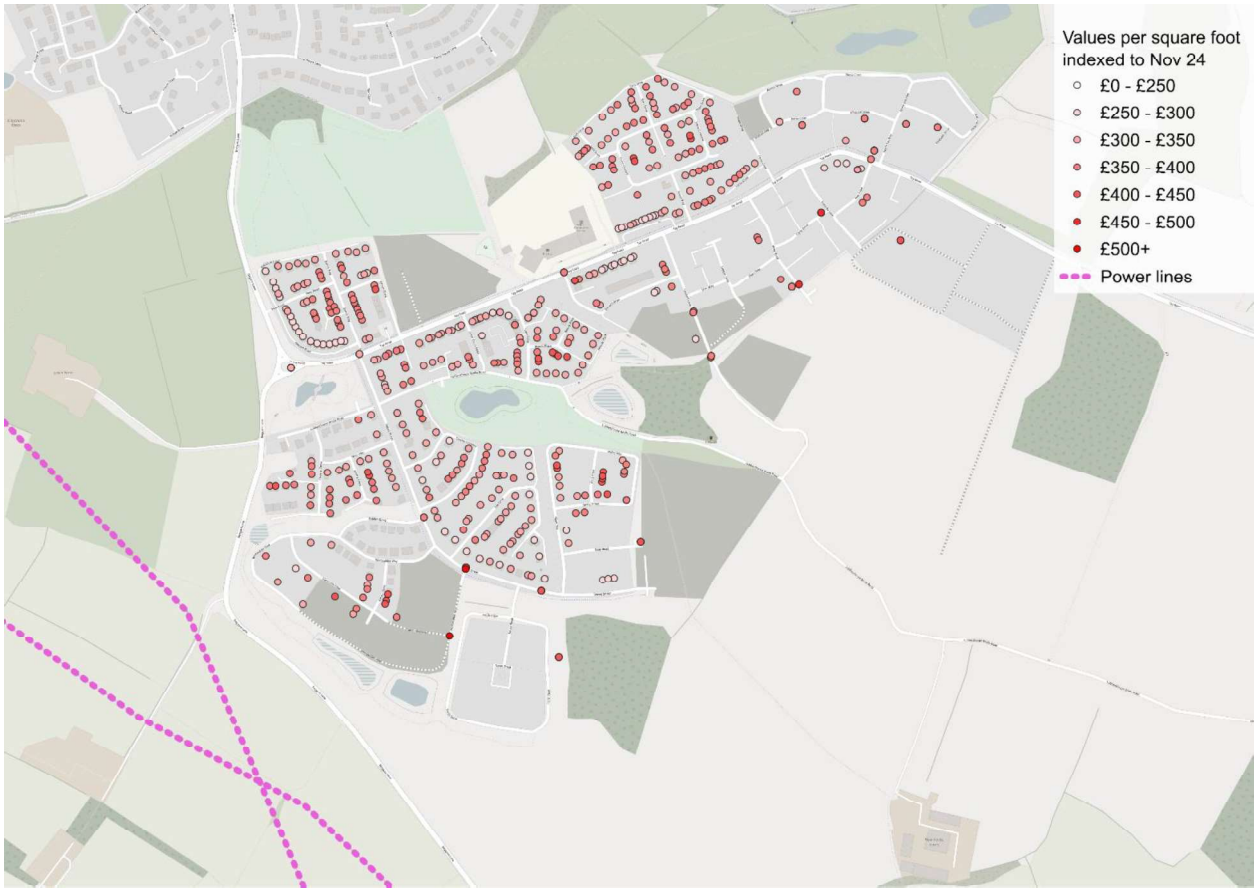
	2 bed house	3 bed house	4 bed house	5+ bed house
Correlation	-	-0.47	0.17	0.06
R²	-	0.22	0.03	0.00

Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

New Lubbesthorpe

4.2.23. New Lubbesthorpe is a new urban extension to the west side of Leicester, and has two power lines running close to the South-East of the site. It is one of the few sites that provides a large range of distances from the power lines, but typically shows a slight fall in values from distance from the powerline, after controlling for property size.

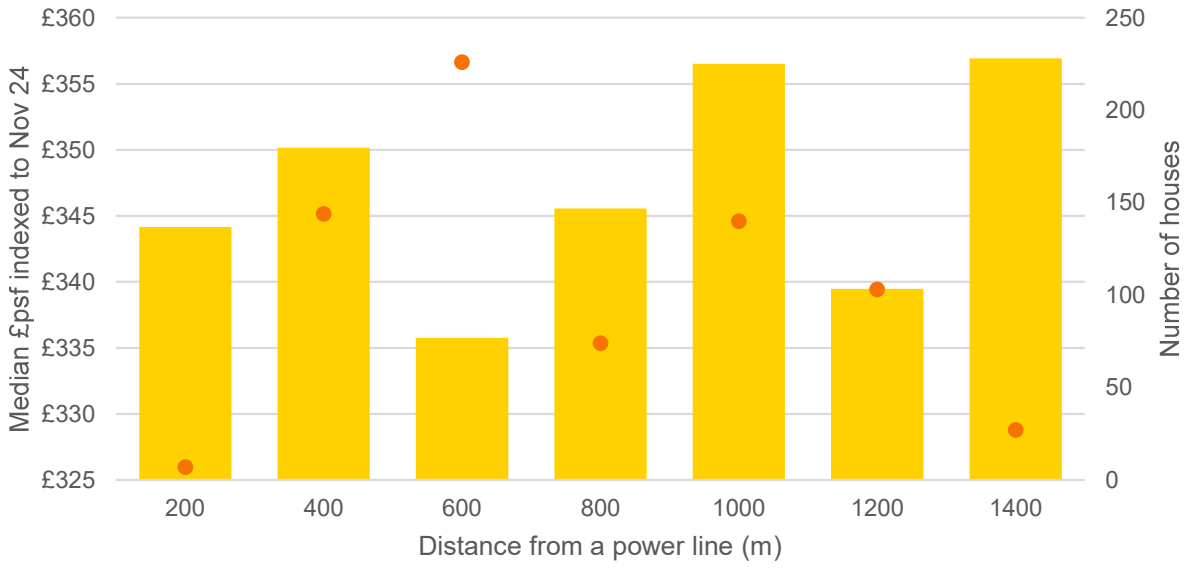
Figure 4.17 New Build Sales Prices in New Lubbesthorpe



Source: Savills using HMLR, EPCs

4.2.24. New Lubberthorpe median values per square foot tend to be slightly lower in the closet band (within 200m) of the power lines, but the pattern is not even, with lower values still in the 400-600m band.

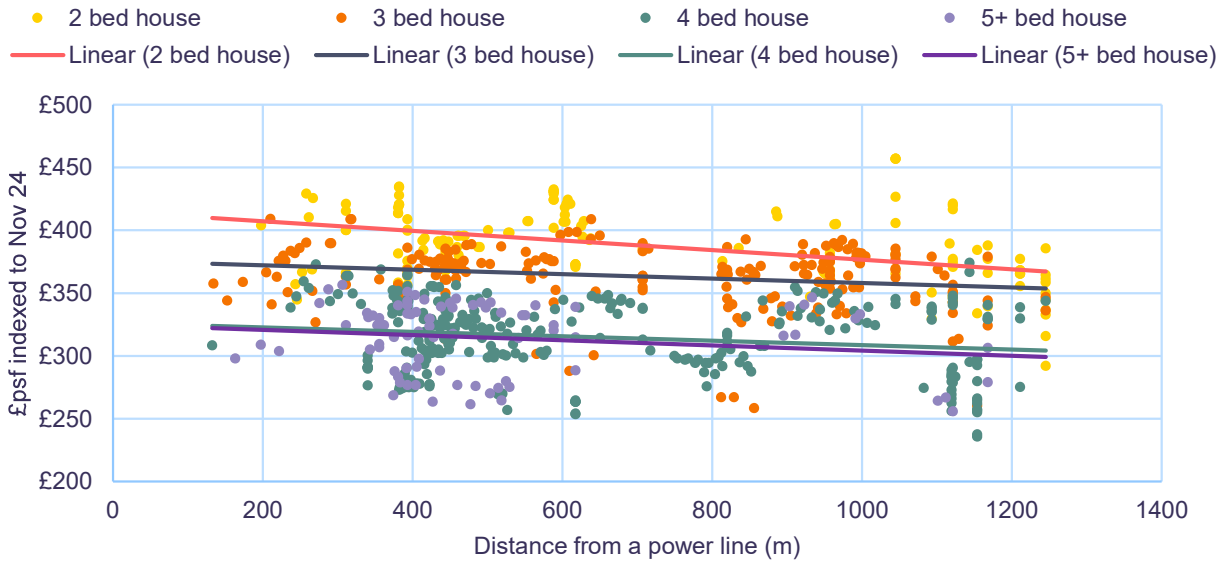
Figure 4.18 Median New Build Values per sq.ft for Distance from Power Line in New Lubbesthorpe



Source: Savills using HMLR, EPCs

4.2.25. All the different house sizes have an inverse relationship between the distance from a power line and the value per square foot, with values decreasing the further from the powerline. although the low R^2 values for 4 and 5+ beds is essentially zero.

Figure 4.19 New Build Values per sq.ft and Distance from Power Lines in New Lubbesthorpe



Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

Table 4.6 Correlation and R² Values for the Number of Bedrooms in New Lubbesthorpe

	2 bed house	3 bed house	4 bed house	5+ bed house
Correlation	-0.37	-0.40	-0.20	-0.17
R²	0.14	0.16	0.04	0.03

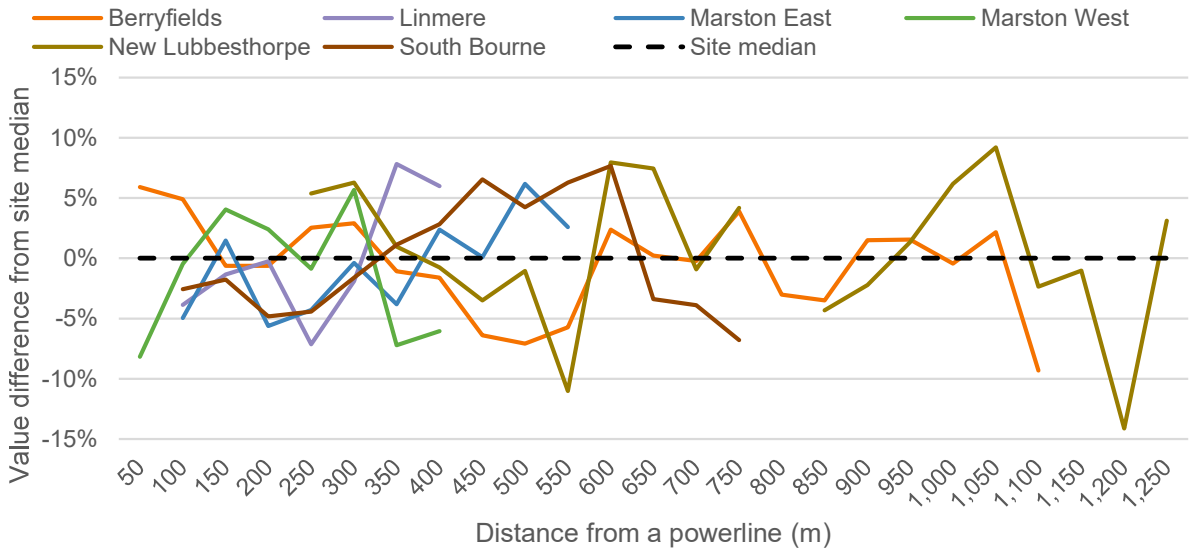
Source: HMLR, EPCs. Note: Number of beds estimated by property floor area.

4.3. Summary

4.3.1. We draw together our analysis of the case studies presented above. **Figure 4.20** below shows the average value of homes compared to the site median value by distance from the powerline. As can be seen, values across most sites tend to range between -5% to +5% of the overall site median, with little effect from proximity to power lines.

4.3.2. When taken as a whole, there is little overall effect of powerline proximity on values, but this does vary by site. The sites at South Bourne both and Linmere all show some evidence of lower values closer to power lines, but the effect is weak and not consistent across all bed types. Both East and West Marston Moretain and new Lubbesthorpe show no discernible pattern, while Berryfields has slightly higher values closer to the power lines.

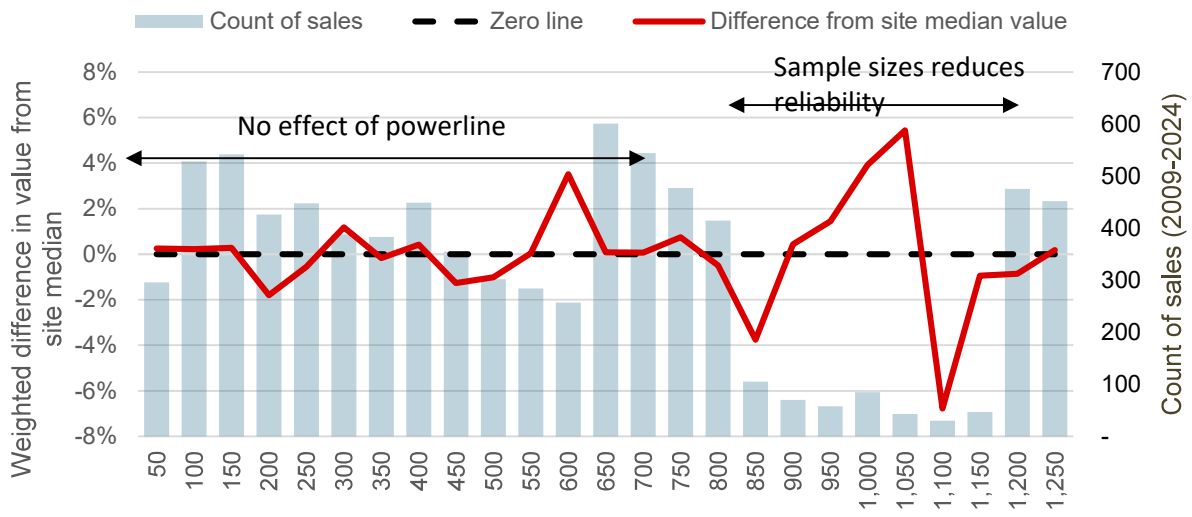
Figure 4.20 Value Variation Across Case Study Sites



Source: Savills using EPCs, HMLR. Values are calculated on a psf basis from sales since 2009 and indexed to Nov-24 using a LA level index.

4.3.3. **Figure 4.21** below shows a simplified of the above, with a single weighted average (weighted by number of sales per site and per distance band) of all sites. On this basis it's clearer to see that there is little variation on value from powerline proximity. There are spikes at the 600m and 850m to 1,150m distance bands, but this is largely a consequence of low sample counts, and reliant only on data from Berryfields and New Lubbesthorpe.

Figure 4.21 Weighted Average of Value Variation Across Sites



Source: Savills using EPCs, HMLR. Values are calculated on a psf basis from sales since 2009 and indexed to Nov-24 using a LA level index.

4.3.4. The above analysis is a simplification as it does not control for property size variation across the sites. When this is taken into account, the data is mixed, but only homes on South Bourne show consistent evidence of lower values closer to power lines across all property types.

4.4. Conclusions

4.4.1. Our primary research into the case studies has not found a significant effect of power lines on new build house prices. However the sample size is relatively small and so is not as statistically robust as larger studies.

4.4.2. The most relevant evidence for the impact on house prices comes from a 2023 LSE paper entitled *'Are Friends Electric'* with the key finding that on average homes within 300m of the power line have 10% less value, those between 300m and 1.2km have 3.6% less value and there is no impact on those beyond 1.2km.

4.4.3. Additionally, our study has focused on new build development sites. This is compared to the LSE paper which took whole market sales, new build and second-hand, whether they were on a development site or not. This difference in age of property, and setting (i.e on a new development or not) may also account for some of the difference.

4.4.4. The conclusion we draw from these two pieces of work is that overall the LSE study is more comprehensive but may not have picked up on a reduced impact of power lines on new build vs. existing development. Consequently, our subsequent analysis considers two scenarios: one based on the pricing impacts directly from the LSE study listed above, and a second blended approach which uses smaller pricing impact, influenced by the findings of our primary research which implies a more modest pricing impact on new build sites. The percentages used here are reduced from those found the LSE study: homes within 300m of the power line have 5% less value, those between 300m and 1.2km have 2% less value, and there is no impact on those beyond 1.2km.

5. Impact of N2T on Dunton Hills

5.1. Introduction

5.1.1. In this chapter we apply the previous chapters' findings and conclusions regarding the impact of power lines on house prices to estimate the Residential Gross Development Value (RGDV) of the proposed DHGV scheme in light of the National Grid's plan for the proposed line of N2T line to run through the DHGV site.

5.1.2. To assess the potential impact of the proposed N2T line on the RGDV of the proposed DHGV scheme we have considered three scenarios. These are:

- **Scenario 1** - The N2T Line is not delivered
- **Scenario 2 –** The N2T Line runs through the subject site, with the cables undergrounded, and
- **Scenario 3 –** The N2T Line runs through the subject site, with the cables running overhead.

5.1.3. For Scenario 3 we have considered two options on how to assess the impact of the N2T line on the value of the development. The first (Option A) uses the conclusions of the LSE DID study presented in Chapter 3. The second (Option B) still draws on the LSE study presented in Chapter 3, but takes a more cautious approach in the light of the Savills research on new build house values near power lines. Savills primary research identified no clear impact on house values as result of distance to a power line. However this is for a more limited sample. Our Option B assumes that the LSE research is the more definitive study but assumes a degree of reduced impact on new development. The two options are:

- **Option A (Higher Impact) –** Considers that properties within 0m to 300m of the N2T line will see a 10% reduction in value; properties within 300m to 1200m of the N2T line will see a 3.6% reduction in value, and properties over 1200m from the N2T line will see no reduction in value.
- **Option B (Lower Impact) –** Considers that properties within 0m to 300m of the N2T line will see an 5% reduction in value; properties within 300m to 1200m of the N2T line will see a 2% reduction in value, and properties over 1200m from the N2T line will see no reduction in value.

5.1.4. For each of the scenarios an estimate of the RGDV is provided along with the series of assumptions that have informed the estimate. **Table 5.1** below details the assumptions which are consistent across the three scenarios. These figures were informed by the 2022 DHGV Viability Assessment[4]

[4] Brentwood Borough Council (2022) Dunton Hills Garden Village Financial Viability Assessment Peer Review, Page 12

Table 5.1 Assumptions Used for our Three Scenarios for the CEG Owned Site

Unit Type	Proportion of Total Units	Price (Per Sq ft)	Average Size (Sq ft)
Market Units	65% (2,405)	£415 (100% of market value)	1,093 Sq ft
Shared Ownership Units	10% (370)	£270 (65% of market value)	842 Sq ft
Affordable Rented Units	25% (925)	£165 (40% of market value)	842 Sq ft
The maximum number of units are delivered in each phasing zone, totalling 3,700			
Affordable housing units are spread equally across the phasing zones			

Source: Savills (2025), Brentwood Borough Council (2022)

5.1.5. **Table 5.2** outlines the assumptions applied to the Crest owned land in the north-east corner of the site. As no planning application has been made for this part of the development, the same proportions of unit type, price and size as applied to the CEG owned portion of the site have been utilised.

Table 5.2 Assumptions Used for our Three Scenarios for the Crest Owned Site

Unit Type	Proportion of Total Units	Price (Per Sq ft)	Average Size (Sq ft)
Market Units	65% (195)	£415 (100% of market value)	1,093 Sq ft
Shared Ownership Units	10% (30)	£270 (65% of market value)	842 Sq ft
Affordable Rented Units	25% (75)	£165 (40% of market value)	842 Sq ft
300 units are delivered in the Crest owned north-east corner of the site.			

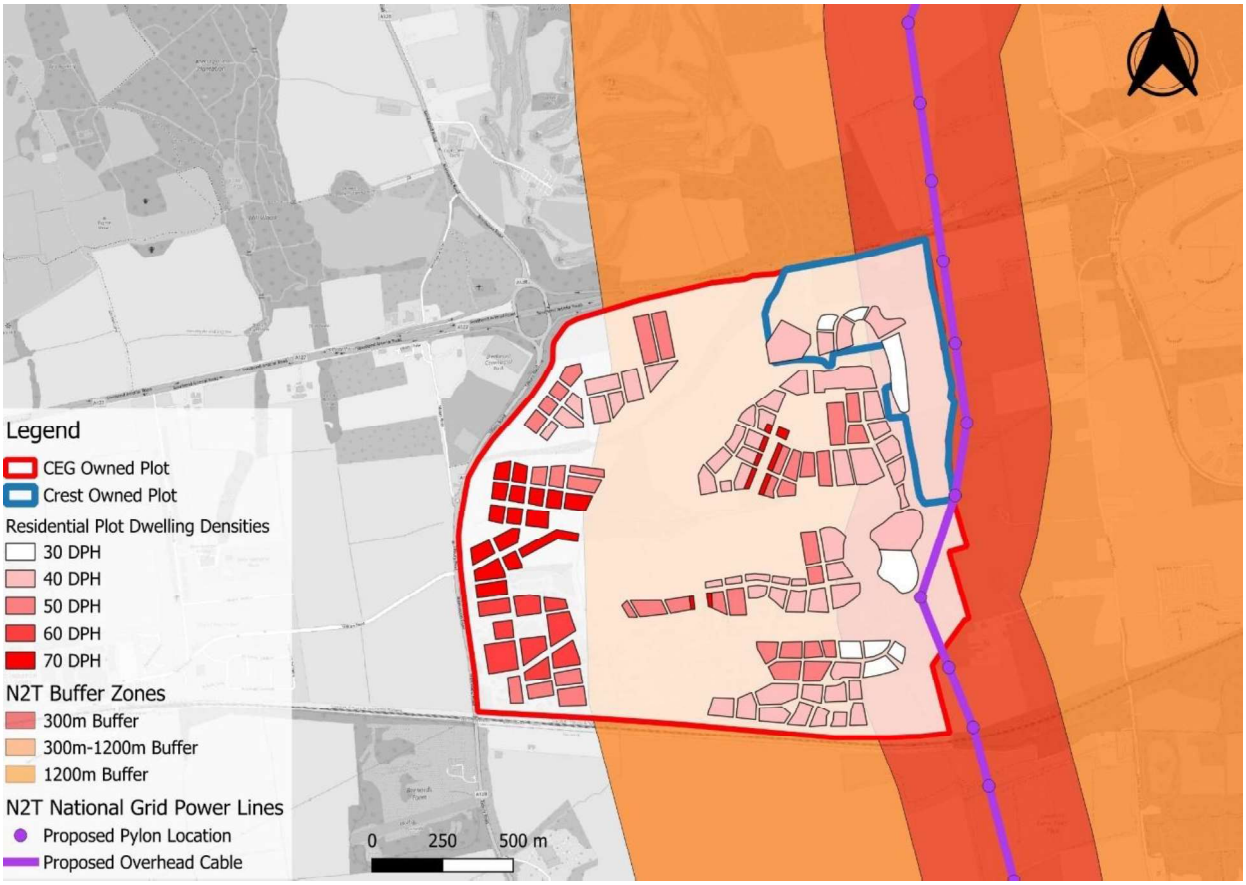
Source: Savills (2025)

5.2. Impact on Scale of Development

5.2.1. Using National Grid guidance (See section 3.2 above) and the published Dunton Hills master plan our assessment is that there is currently enough space between the proposed overhead power line and the planned housing at Dunton Garden Village. Therefore we have assumed the same number of homes can be built on the site whether the overhead power line is built or not. (We are conscious that the developer may want to re-masterplan the site in response to the presence of the overhead power line).

5.2.2. **Figure 5.1** below shows the proposed DHGV residential land plots and how they sit in comparison to the proposed N2T pylons. The parcels of land with the highest proposed residential densities are located over 1,200m from the proposed N2T line with a general gradual decline in density as proximity to the line increases.

Figure 5.1 N2T and Distances from Dunton Hills Proposed Development



Source: Savills (2025), QGIS (2025)

5.3. Scenario 1 – The N2T Line is Not Delivered

5.3.1. The first scenario tested assumes that the N2T line is not delivered and so there is no impact on the value of the proposed 4,000 residential units that will be delivered as part of the DHGV scheme. This also forms the baseline for our consequential analysis.

5.3.2. **Table 5.3** below builds on the assumption's outlined in **Table 5.1** and **Table 5.2** to give an estimate of the RGDV for the DHGV scheme, assuming Scenario 1 occurs and the N2T line is not delivered.

Table 5.3 Scenario 1 Residential Gross Development Value

	CEG Scheme Value	Crest Scheme Value	Total Value
Market Units	£1.091 billion	£88 million	£1.179 billion
Shared Ownership Units	£84 million	£7 million	£91 million
Affordable Rented Units	£129 million	£11 million	£140 million
Total	**£1.304 billion**	**£106 million**	**£1.410 billion**

Source: Savills (2025)

5.4. Scenario 2 – N2T Line Underground Through the Subject Site

5.4.1. The second scenario assumes that the N2T line is delivered, with the cables being undergrounded. As described in chapter 3, it is considered that if the N2T line cables are undergrounded, then there would be no impact on the value of the residential units delivered by the proposed DHGV scheme.

5.4.2. **Table 5.4** below builds on the assumption's outlined in **Table 5.1** and **Table 5.2** to give an estimate of the RGDV for the DHGV, assuming Scenario 2 occurs and the N2T Line is delivered, with the cables undergrounded. As it is considered that undergrounded cable would not affect property values, Scenario 2 mirrors Scenario 1.

Table 5.4 Scenario 2 Residential Gross Development Value

	CEG Scheme Value	Crest Scheme Value	Total Value
Market Units	£1.091 billion	£88 million	£1.179 billion
Shared Ownership Units	£84 million	£7 million	£91 million
Affordable Rented Units	£129 million	£11 million	£140 million
Total	**£1.304 billion**	**£106 million**	**£1.410 billion**

Source: Savills (2025)

5.5. Scenario 3A – N2T Line Above Ground Through the Subject Site: Higher Impact

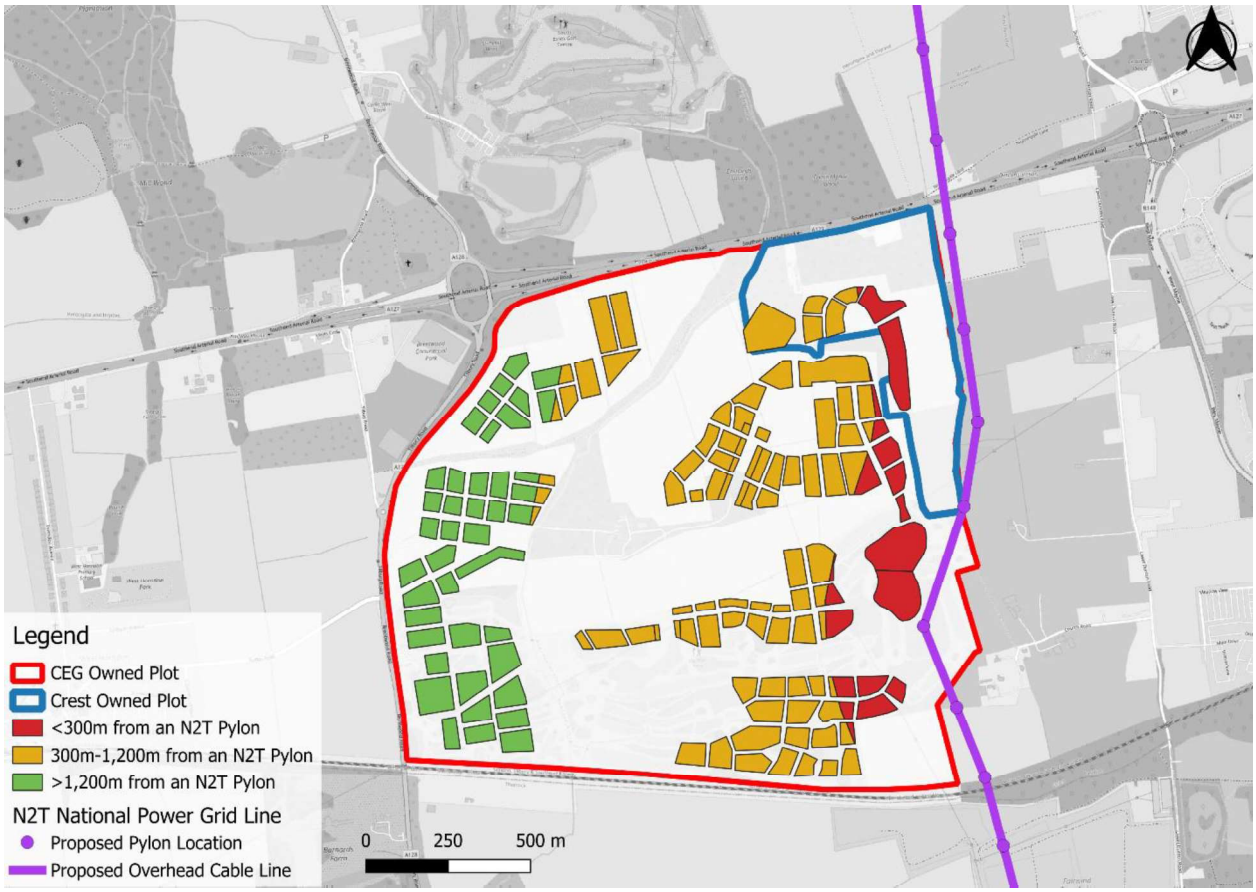
5.5.1. The third scenario assumes that the N2T Line is delivered, with the cables running overhead. As described in Chapter 3, drawing wholly on the LSE study, it is assumed that:

- properties falling within 300m of a pylon would suffer a 10% reduction in value
- properties between 300m and 1,200m from a pylon would suffer a 3.6% reduction, and
- the value of properties located 1,200m or more from a pylon (line) would be unaffected.

5.5.2. We calculated how many of the proposed development's residential units would fall into the three property value impact zones: 0-300m, 300m-1,200m, and 1,200m or more.

5.5.3. **Figure 5.2** below builds on **Figure 5.1** to consider parcels of land which straddle the boundary of two of the zones. Different colours are used to indicate what proportion of plots fall within two zones.

Figure 5.2 Residential Units by Property Value Impact Zone



Source: Savills (2025), QGIS (2025)

5.5.4. The areas of these plots were then measured using QGIS and applied to the density per hectare outlined in Brentwood Borough Council's (BBC) 2022 viability report. This allowed us to estimate how many residential units fell into the three property value impact zones.

5.5.5. **Table 5.5** shows the findings of our analysis:

Table 5.5 Residential Units by Property Value Impact Zone

	CEG Scheme Units	Crest Scheme Units	Total Units
Within 300m of an N2T Pylon (10% Reduction in Value)	301	136	437
300m – 1,200m from an N2T Pylon (3.6% Reduction in Value)	2,104	164	2,268
1,200m + from an N2T Pylon (No Reduction in Value)	1,295	0	1,295
Total	**3,700**	**300**	**4,000**

Source: Savills (2025)

5.5.6. **Table 5.6** below builds on the assumption's outlined in **Table 5.1**, as well as the analysis in **Figure 5.1** and **5.5** to give an estimate of the RGDV for the DHGV scheme, assuming Scenario 3A occurs and the N2T line is delivered, with the cables running overhead.

Table 5.6 Scenario 3A Residential Gross Development Value

	CEG Scheme Value	Crest Scheme Value	Total Value
Market Units	£1.059.7 million	£82.7 million	£1,143 million
Shared Ownership Units	£81.6 million	£6.3 million	£88 million
Affordable Rented Units	£125.6 million	£9.8 million	£135 million
Total	**£1.267 billion**	**£98.9 million**	**£1.366 billion**

Source: Savills (2025)

5.6. Scenario 3B – N2T Line Above Ground Through the Subject Site: Lower Impact

5.6.1. Scenario 3B draws on the analysis conducted for Scenario 3A, but with an assumed smaller reduction magnitude.

5.6.2. Scenario 3B assumes that the N2T Line is delivered, with the cables running overhead. It is assumed that:

- properties falling within 300m of a pylon would suffer an 5% reduction in value
- properties between 300m and 1,200m from a pylon would suffer a 2% reduction, and
- the value of properties located 1,200m or more from a pylon would be unaffected.

5.6.3. **Table 5.7** below builds on the assumption's outlined in **Table 5.1** and **Table 5.2**, as well as the analysis in **Figure 5.1** and **Figure 5.7** to offer an estimate of the RGDV for the DHGV scheme, assuming Scenario 3B occurs and the N2T line is delivered, with the cables running overhead.

Table 5.7 Scenario 3B Residential Gross Development Value

	CEG Scheme Value	Crest Scheme Value	Total Value
Market Units	£1,074.1 million	£85.5 million	£1.152 billion
Shared Ownership Units	£82.7 million	£6.6 million	£88.8 million
Affordable Rented Units	£127.3 million	£10.1 million	£136.6 million
Total	**£1.284 billion**	**£102.2 million**	**£1.386 billion**

Source: Savills (2025)

5.7. Impact on Residential Gross Development Value

5.7.1. **Table 5.8** below compares the estimated RGDV of the four scenarios. Scenario 1, which assumes that the N2T Line is not delivered, is used as the benchmark as it is considered that the maximum RGDV would be achieved in this scenario.

Table 5.8 Difference in Residential Gross Development Value Between Scenarios 1, 3A, and 3B

	Scenario 1 Value	Difference Between Scenario 1 and 3A		Difference Between Scenario 1 and 3B	
		Absolute (£)	Per cent (%)	Absolute (£)	Per cent (%)
CEG Site	£1.304 billion	-£37 million	-2.9%	-£20 million	-1.5%
Crest Site	£106 million	-£7 million	-6.5%	-£4 million	-3.4%
Total	**£1.410 billion**	**-£44 million**	**-3.1%**	**-£24 million**	**-1.7%**

Source Savills (2025)

5.7.2. If Scenario 2 occurs, and the N2T Line is delivered with the cables undergrounded, then we assume there would be no difference in RGDV between Scenario 1 and 2 as undergrounded cables are not thought to impact property values.

5.7.3. If Scenario 3A occurs then we estimate that the RGDV of the CEG owned portion of the DHGV scheme would be reduced by £37 million. This represents a 2.9% fall in RGDV compared to the estimated £1.304 billion if the N2T line is not delivered.

5.7.4. If Scenario 3B occurs then we estimate that the RDGV of the CEG owned portion of the DHGV scheme would be reduced by £20 million. This represents a 1.5% fall in RGDV compared to the estimated £1.304 billion if the N2T line is not delivered.

5.7.5. Assuming that Crest deliver 300 units in the north-east corner of the subject site, we estimated that if Scenario 3A occurs, the RGDV for this portion of the DHGV scheme would be reduced by £7m. This represents a 7% fall in RGDV compared to the estimated £106 million if the N2T line is not delivered.

5.7.6. If Scenario 3B occurs, the RGDV for the Crest portion of the DHGV scheme would be reduced by £4m. This represents a 3.4% fall in RGDV compared to the estimated £106 million if the N2T line is not delivered.

5.7.7. If Scenario 3A occurs the implication for the RGDV of the entire 4,000 unit DHGV scheme, is a reduction of £44 million. This represents a 3.1% fall in the RGDV compared to the estimated £1.410 billion if the N2T line is not delivered.

5.7.8. If Scenario 3B occurs the implication for the RGDV of the entire 4,000 unit DHGV scheme, is a reduction of £24 million. This represents a 1.7% fall in the RGDV compared to the estimated £1.410 billion if the N2T line is not delivered.

5.8. Conclusions

5.8.1. **Table 5.9** shows the estimated RGDV's of the four scenario's tested.

Table 5.9 Residential Gross Development of the Three Scenarios

	Scenario 1 Value	Scenario 2 Value	Scenario 3A Value	Scenario 3B Value
CEG Site	£1.304 billion	£1.304 billion	£1.267 billion	£1.284 billion
Crest Site	£106 million	£106 million	£99 million	£102 million
Total	**£1.410 billion**	**£1.410 billion**	**£1.366 billion**	**£1.386 billion**

Source: Savills (2025)

5.8.2. The Scenario 3 results can be read as a range. Scenario 3A utilises the results of the LSE study described in Chapter 3, which denotes a higher impact scenario and consequently results in a lower RDGV of £1.366 billion. Scenario 3B presents a lower impact scenario which is based on the LSE study presented in Chapter 3, and caveated by the Savills primary research also presented in Chapter 3. It results in a higher RDGV of £1.386 billion as a result of the smaller magnitude of impact.

5.8.3. This is a relatively modest impact on overall scheme value. However there is a ratcheting effect on changes in GDV and impact on land values and viability and we would anticipate a bigger impact on these variables. Together with other viability challenges this would result in the scheme facing increased viability and deliverability challenges. We provide an indicative assessment of the viability of the scheme in Chapter 6.

6. Impact of N2T on the Viability of Dunton Hills

6.1. Introduction

6.1.1. The purpose of this chapter is to consider the impact of the introduction of pylons on scheme viability including the level of planning obligations which the scheme is able to reasonably support.

6.1.2. It is understood that significant planning contributions are expected to be delivered by the scheme in addition to an optimised policy level of on-site affordable housing delivery at 35% of total homes. Alongside a policy level of affordable housing, financial contributions sought are understood to be in the order of £20.9m (£5,650 per plot) plus £242m (£65,450 per plot) of infrastructure/S106 obligated sums. It is understood that such contributions remain subject to viability pending the outcome of ongoing negotiations between the Applicant and Council.

6.1.3. We understand that Carter Jonas were appointed by Brentwood Borough Council in March 2022 as independent advisors to undertake a peer review of the viability assessments prepared by Chesters Harcourt on behalf of the applicant Commercial Estates Group (CEG), and the subsequent review by BPS on behalf of the Council. In undertaking our assessment we have relied upon the Carter Jonas and Chesters Harcourt viability assessments as set out below:

- Chesters Harcourt FVA, dated August 2021; and
- Carter Jonas Independent FVA Review, dated June 2022.

6.1.4. We have not had sight of the viability assessment prepared by BPS on behalf of the Council which is in part referred to within the Carter Jonas report. We further understand that an agreed viability position has not yet been reached with negotiations continuing between the Applicant and Council.

6.1.5. Our reliance upon the assumptions contained within the reports does not infer our agreement and we reserve the right to review our assessment at a later stage where appropriate. Our professional view may differ from time-to-time in accordance with market movements and changes in professional and planning guidance and our position is therefore reserved.

6.1.6. The advice contained herein does not constitute a formal Financial Viability Assessment (FVA) or valuation in accordance with the RICS Valuation – Global Standards 2025 (incorporating the IVSC International Valuation Standards) (the 'Red Book') and should not be treated as such. The content of this chapter should be treated as commercially confidential and not released to any third party without the express prior written consent of Savills.

6.1.7. At this stage we have made no allowance for HPI or build cost inflation beyond the date of the Carter Jonas assessment given negotiations are ongoing between the applicant and Council. No additional infrastructure costs associated with the pylons have been included within our assessment which should be verified and confirmed to Savills for comment.

6.2. Methodology

6.2.1. In accordance with professional and planning guidance financial viability is determined using the Residual Land Valuation (RLV) method of valuation which is then compared to a Site Value Benchmark (SVB) – also known as 'Benchmark Land Value (BLV)', established typically on the basis of Existing Use Value (EUV) plus landowner premium. If the RLV of the proposed scheme falls below SVB the project is not considered to be technically viable in planning.

6.2.2. Given the nature and scale of the subject scheme the financial modelling carried out to support viability negotiations has been based upon a 'master developer' (MD) approach. This assumes a single lead organisation being responsible for strategic investment in site-wide enabling and infrastructure works with the subsequent sale of serviced land parcels (SLPs) to house builders, registered provides of affordable housing (RPs) and/or developers. Strategic infrastructure and S106 costs are set against periodic SLP receipts to determine the overall scheme viability with development timings considered to maximise developer returns.The RLV for the master developer appraisal is then compared to Site Value Benchmark (SVB) to ascertain whether there is a deficit or surplus against SVB.

6.2.3. For the purposes of our assessment we have prepared an assessment of RLV across two scenarios: Scenario 1 assumes the running of pylons overhead whilst Scenario 2 assumes the undergrounding of pylons. For each scenario we have adopted the following 'bookends' in order to fix a range in affordable housing contribution i.e. from a policy quantum through to no affordable being provided:

- Scenario 1A – pylons run overhead at a policy level of affordable housing
- Scenario 1B – pylons run overhead with no affordable housing
- Scenario 2A – pylons undergrounded at a policy level of affordable housing, and
- Scenario 2B – pylons undergrounded with no affordable housing.

6.2.4. With the aim of ensuring consistency with the viability work which has taken place to date by others we have had regard to both the Chesters Harcourt and Carter Jonas viability assessments and our assessment should be read in conjunction with the same. We have not however had sight of the report provided by BPS nor have we been provided with live appraisals for the Chesters Harcourt and Carter Jonas assessments. At this stage we have therefore prepared a replica baseline set of appraisals using proprietary software, ARGUS Developer, adopting identical base assumptions and making reasonable assumptions in respect of timescales with the information available to us.

6.2.5. We have adopted equivalent base revenue and cost assumptions to those set out within the Carter Jonas FVA albeit adjusting for the reduction in residential sales values across scenarios 1A and 1B. As an approximate estimate of the research presented in previous chapters we have included a c.3% reduction to market residential sales values across Scenario 1A and 1B to account for the impact of overhead pylons. (This is for the LSE assessed impacts. Our higher impact scenario results in an average impact of around 3.1% reduction in GDV and our more conservative scenario results in around a 1.7% reduction in GDV). Our work makes no further distinction between unit typologies and applies a blended value reduction which is considered appropriate at this stage.

6.2.6. Site Value Benchmark (SVB) represents a key area of viability assessment particularly for schemes of this scale and nature. The SVB effectively represents the hurdle to which the RLV supporting the proposed development must meet in order to be considered technically viable in planning. Identifying an appropriate SVB requires judgement bearing in mind that national planning guidance indicates that appropriate land for housing should be 'encouraged' to come forward for development. In line with the RICS Guidance Note Assessing viability in planning under the National Planning Policy Framework 2021 for England, 1st Edition (March 2021), RICS Professional Statement 'Financial Viability in Planning: Conduct and Reporting (May 2019), and the latest PPG the Site Value Benchmark should be assessed using the Existing Use Value (EUV) of the Subject, plus a suitable landowner premium. Existing Use Value is sometimes referred to as Current Use Value (CUV), and these two terms are interchangeable when used for financial viability in planning. The latest guidance also requires investigation of the Alternative Use Value (AUV) of the Subject where an existing planning consent may already exist or where the subject may benefit from being converted to an alternative lawful planning use.

6.2.7. As part of the continuing negotiations we understand that there is a difference between the Applicant and Council in respect of Benchmark Land Value (BLV). In this respect Chester Harcourt applied a BLV of £101m (£182,100/acre) which compares with Carter Jonas reduced allowance of £69.3m (£125,000/acre). Within our assessment we have considered the impact of both figures with the results set out below.

6.3. Provisional Results

6.3.1. The results of our assessment are set out below in **Table 6.1** and **Table 6.2**.

Table 6.1 Benchmark to £69.3m

Scenario	Description	Affordable	SLP RLV	MD RLV	SVB	Surplus / (Deficit)
1A	Pylons run overhead	Policy	£11m	£93.8m	£69.3m	£24.5m
1B		Nil Affordable	£13.1m	£139.2m		£69.9m
2A	Pylons undergrounded	Policy	£11.8m	£111.3m		£42.0m
2B		Nil Affordable	£14m	£158.5m		£89.2m

Source: Savills (2025)

Table 6.2 Benchmark to £101m

Scenario	Description	Affordable	SLP RLV	MD RLV	SVB	Surplus / (Deficit)
1A	Pylons run overhead	Policy	£11m	£93.8m	£101m	(£7.2m)
1B		Nil Affordable	£13.1m	£139.2m		£38.2m
2A	Pylons undergrounded	Policy	£11.8m	£111.3m		£10.3m
2B		Nil Affordable	£14m	£158.5m		£57.5m

Source: Savills (2025)

6.4. Conclusions

6.4.1. Based upon the assumptions set out above our provisional assessment suggests that the introduction of overhead pylons has a material impact on residual land value with a reduction in the order of £17.5m to a policy compliant scheme[5]. Despite a reduction in residual land value, the extent to which the scheme is deemed viable whilst supporting a policy level of planning obligations remains dependent upon BLV as shown within **Table 6.1** and **Table 6.2**.

6.4.2. Development of this nature is highly sensitive to movements in both development revenue and/or costs with the impact of recent cost inflation material. Our assessment currently predicates on a set of point-in-time assumptions i.e. at August 2022. Since this date there has been a material level of cost inflation. This is equivalent to c.9.3%[6]. This has greatly exceeded standard House Price Index (HPI) at c.1.9% over the same period[7]. The delta created between HPI and cost inflation will have impacted adversely on the viability carried out most recently in 2022. Pending the outcome of negotiations between the Applicant and Council further sensitivity analysis may be used to review the impact of changes to both development revenue and costs.

6.4.3. At this stage we would advise that viability is held under continuous review to reflect any changes in the underlying assumption base pending the outcome of viability negotiations between the Applicant and Council. The appraisal work carried out is able to form the basis for additional sensitivity in helping to determine scheme viability and the level of planning obligations which may be reasonably supported.

[5] Assumes no additional cost associated with pylon infrastructure.

[6] BCIS All In TPI between Q2 22' – Q1 25'.

[7] Land Registry HPI (Basildon) Jun 22' (95.6) – Jan 25'(97.4) – 1.9% HPI).

7. Suggested Actions

7.1.1. The DHGV scheme may face increased viability and deliverability challenges due to inflation and increased costs, potentially linked to the delivery of the Norwich to Tilbury proposals as currently planned. We recommend that viability reviews, as built into the S106 agreement ad permission, reflect any changes in the underlying assumptions.

7.1.2. The marginal viability of the proposed development of DHGV could impact the provision delivery of affordable housing and necessary infrastructure. We recommend that ECC and local authorities should continue with their pursuit to mitigate the impact of the OHP scheme, to secure an underground solution to minimise the viability and deliverability of, both, DHGV and adjacent Basildon Local Plan housing (H11) site.

7.1.3. We advise ECC to be aware of the potential effect of the OHP outlined in this report on the development of land beyond DHGV. In particular this includes the adjacent Basildon Local Plan housing (H11) site, which is also designed to meet the Garden City standards.

Appendix 1 Abbreviations

AUV	Alternative Use Value
BBC	Brentwood Borough Council
BLV	Benchmark Land Value
CEG	Commercial Estates Group
CUV	Current Use Value
DHGV	Dunton Hills Garden Village
ECC	Essex County Council
EUV	Existing Use Value
FVA	Financial Viability Assessment
GDV	Gross Development Value
HPI	House Price Index
LP	Local Plan
MD	Master developer
N2T	Norwich to Tilbury
NAEA	National Association of Estate Agents
RGDV	Residential Gross Development Value
RICS	Royal Institute of Chartered Surveyors
RLV	Residual Land Value
SLP	Serviced Land Parcels
SVB	Site Value Benchmark

Appendix 2 Note on Savills Research

In accordance with our normal practice, we would state that this report is for general informative purposes only and does not constitute a formal valuation, appraisal or recommendation. It is only for the use of the persons to whom it is addressed and no responsibility can be accepted to any third party for the whole or any part of its contents. It may not be published, reproduced or quoted in part or in whole, nor may it be used as a basis for any contract, prospectus, agreement or other document without prior consent, which will not be unreasonably withheld.

Our findings are based on the assumptions given. As is customary with market studies, our findings should be regarded as valid for a limited period of time and should be subject to examination at regular intervals.

Whilst every effort has been made to ensure that the data contained in it is correct, no responsibility can be taken for omissions or erroneous data provided by a third party or due to information being unavailable or inaccessible during the research period. The estimates and conclusions contained in this report have been conscientiously prepared in the light of our experience in the property market and information that we were able to collect, but their accuracy is in no way guaranteed.

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Appendix E

Lorry Driver Facilities Survey

November 2024



transportfocus



Foreword

Lorry drivers are the backbone of our economy, ensuring that supermarkets remain stocked, hospitals receive essential medical supplies, and businesses across the country stay operational. 81 per cent of freight is moved by road, with heavy goods vehicles (HGVs) making around 160 million journeys in 2023.

The vital role that lorry drivers play comes with significant challenges, particularly the need to adhere to strict driving regulations. These rules, designed to prevent accidents due to fatigue, require drivers to take regular rest breaks, making the availability of good quality rest stops essential for the safety of everyone on the road.

A recognition of the need for better facilities for lorry drivers has driven investment and improvement over the last few years. This new research from Transport Focus (funded by National Highways), taken alongside our recently published Logistics and Coach Survey, shows the scale of the problem that persists.

While drivers in this survey were the ones who managed to find a space, less than four in 10 were satisfied with the number of stopping places available in the UK.

Satisfaction among those who run logistics businesses is even lower. When no services are available, drivers can be forced to park in laybys or industrial estates, which frequently lack basic amenities like toilets and have little to no security. Meeting the demand for parking spaces with adequate provision is an urgent issue to be addressed.

Safety is paramount in this industry, yet many drivers feel that conditions are becoming increasingly unsafe. This survey shows significant variation between sites in terms of how secure drivers feel, with the lowest performers giving real cause for concern. The Logistics and Coach Survey supports these findings with less than two in 10 businesses thinking security at rest stops is good.

It's not just the availability of places to stop, but also the standard of rest stops that matters. Spending long hours on the road makes it a challenge for drivers to access essential facilities when they need them, and nearly half in our survey expressed dissatisfaction with the quality of places available to stop. Most of us take for granted the ability to use a clean toilet or make a hot drink whenever we need to. Lorry drivers, whose 'office' is the road network, don't have this luxury and these basic needs

often go unmet. Additionally, drivers tell us they don't always feel welcome at the places they are stopping.

Nevertheless, there are reasons for optimism, as shown by the 17 sites with satisfaction scores of 95 per cent or above. Two sites had more than 90 per cent of visitors describing themselves as 'very satisfied' - an outstanding achievement in any survey. These examples provide a benchmark for improvement, demonstrating what is possible with the right investment and attention to drivers' needs.

Better, safer facilities will not only help retain existing drivers but also attract new ones to an industry struggling with recruitment. It can't be easy to persuade people to join a profession where the current workforce feels it has become less safe, doesn't feel valued and when proper rest is not guaranteed.

In 2021 the previous government launched initiatives to address these issues, including introducing a package of measures aimed at alleviating the HGV driver shortage and providing funding to improve facilities. There are a large number of sites which have since been awarded investment through the Department for Transport and National Highways grant schemes, and have either completed or are due to complete improvement works this year. However, for these efforts to be truly effective, there must be a renewed focus on enhancing both the quality and capacity of rest stops across the country.
It is time to ensure that lorry drivers, who play a critical role in keeping our country running, are appreciated and receive the support they deserve. And that's why today we're inviting everyone who has an interest in the issue to come together and develop a long-term solution so we can keep our lorries, and the people who drive them, moving safely.

Louise Collins
Director



Executive summary

This is the first set of results of a new survey focussing on lorry drivers' experience of using roadside facilities on roads managed by National Highways. We spoke to more than 7000 lorry drivers about their experience of using roadside facilities across 75 sites.

This report presents the results from year one of the survey and the 75 sites included comprise a third of the total; the remaining sites will be included in the next two waves of the survey.

Capacity is a major issue

In our survey, only 37 per cent of drivers were satisfied with the number of available stopping places in the UK. This reflects a similar view from logistics and coach business of which only 22 per cent were satisfied. The situation is at a near critical level according to the Department for Transport's most recent lorry parking survey, which reveals a growing gap between demand and supply. With an average of 21,234 lorries parking each night - nearly 4500 more than the current capacity of managed sites - urgent action is needed to expand and improve rest stop infrastructure.

Safety remains a key priority

National Vehicle Crime Intelligence Service (NaVCIS) data reveals that more than 5,000 cargo thefts from trucks occurred in the UK in 2023, with an estimated cost price loss value of £68 million. When factoring in hidden costs – such as vehicle damage, penalties for late deliveries and policing and criminal justice costs – the true impact is estimated to be seven times this, making the figure more likely to be £460 million annually.

Our research shows truck stops largely succeed in providing a secure environment. While some motorway service areas (MSAs) and 'A' road sites also do a good job there are many sites where less than half of drivers rated personal and vehicle security as good. The disparity between high and low scores indicates that improvement is possible; indeed, some MSAs score in the 90s for safety. Underperforming sites can learn from their better-performing counterparts.

The UK driver shortage also remains a significant challenge

According to DfT official statistics, the vacancy

gap is currently 24 per cent for the second quarter of 2024 with driver retirement being one of the top reported reasons for this. This issue is likely to worsen as a significant portion of the workforce approaches retirement. Additionally, women are severely underrepresented in the sector, accounting for just two per cent of all drivers, representing an untapped potential workforce. While women in this survey showed a similar level of overall satisfaction to men, their comments – often about toilet and shower facilities – highlight the need for provision that is better suited to their needs.

Getting the basics right is key

Lorry drivers aren't asking for much, they just want somewhere clean, safe and reasonably priced where they can grab something to eat and rest before continuing with their journey. Ensuring drivers have access to basic facilities and making them feel valued is critical for recruitment as well as retention.

While overall satisfaction with rest stops is relatively high at 86 per cent (although low expectations may play a part in this), further analysis reveals significant variations between sites and in underlying factors. This is particularly seen in results for security, parking, food and the ability to rest, which we will explore in more detail through the report.

As we continue into the second year of our research, we will continue comparing the experience of drivers across sites and will be exploring some of the issues impacting drivers in more detail.





What needs to change?

Lorry drivers need good quality, safe, welcoming rest stops so they can stop and take a break in order to do their jobs safely. There need to be enough rest stops and in the right places so they can stop when and where they need to. Current provision of lorry parking and rest stops across the UK is not meeting these needs. With a shortage of drivers and an aging workforce, retaining and attracting drivers to this vital role is key and rest stops play a part.

We are calling for government and industry to work together to put a renewed focus on enhancing both the quality and capacity of rest stops across the country to address these issues. This is a complex issue that requires collaboration from a wide range of stakeholders, including government, planning authorities, freight companies, service operators, and more.

In the new year we will bring together representatives from the Department for Transport, National Highways, the Road Haulage Association, Logistics UK, Formula truck stop, Certas Energy, Welcome Break and Extra services, Unite the Union and others. Working together we will develop a long-term solution so we can keep our lorries, and the people who drive them, moving safely.

Parking capacity that meets demand

Lorry drivers must be able to stop when and where they need, so they can take a break, access essential facilities and comply with driving hours rules. There should be a sustained focus on increasing parking capacity in the right places to ensure that availability meets the growing demand.



Better and consistent quality of services

Lorry drivers deserve good quality facilities that cater to their needs whenever they take a break. This includes eating and drinking, using toilets and showers and resting. Work must be done to drive up standards and ensure consistent quality of facilities across sites.

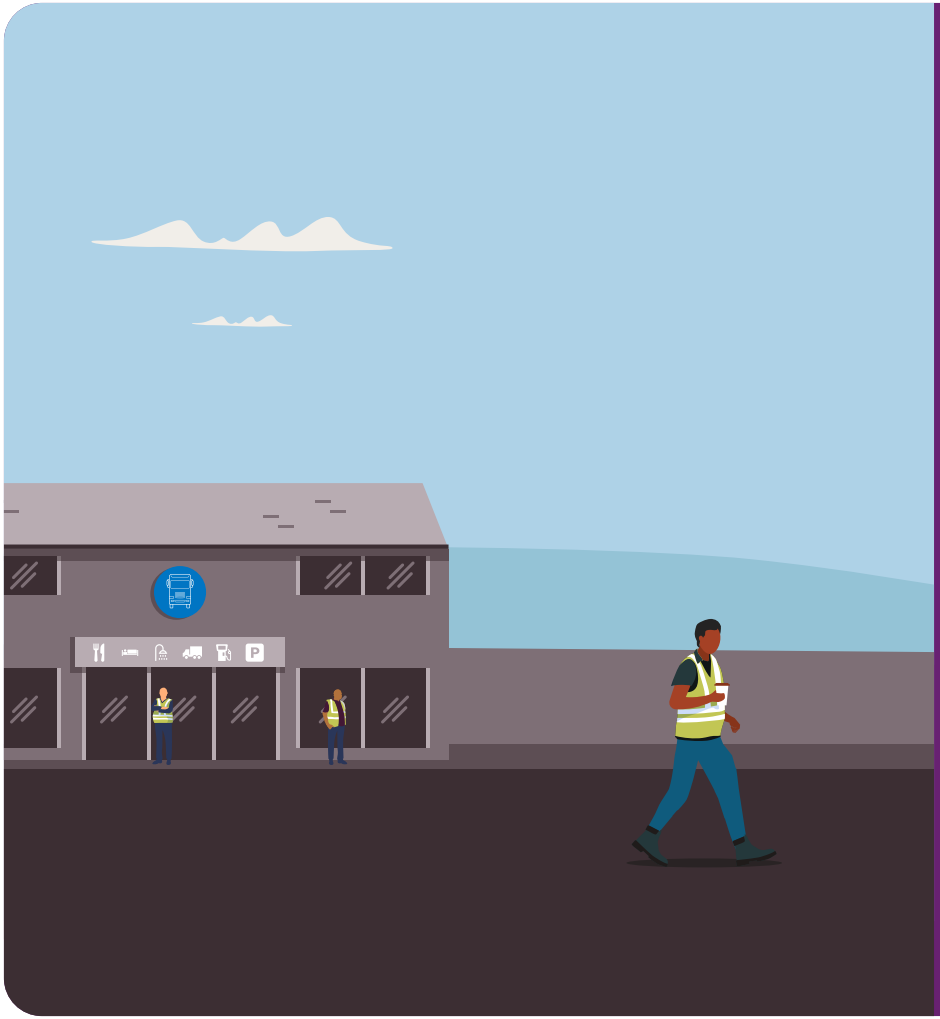
Safety and security for drivers and vehicles

Lorry drivers shouldn't have to worry about their safety or the security of their load when stopping to rest. Security standards must be improved, particularly at sites where perceptions are much lower.

A welcoming environment

Lorry drivers deserve to feel valued and welcome wherever they choose to stop and rest while doing an essential job. The current experience at some services, which leaves lorry drivers feeling less valued than other customers, must be challenged.





The bigger picture

Provision in general is not good enough

When asked about provision of stopping places across the UK, nearly half of drivers tell us they are dissatisfied with the quality and number of suitable places for HGVs to stop.

There is also some indication that the situation is deteriorating with half of drivers saying facilities had become worse in the last 12 months, although we know drivers may not always confine themselves to this timescale when answering the question.

This perception is particularly notable among those with over 20 years' experience. This could indicate that this group is reflecting on 'the good old days' of driving a lorry.

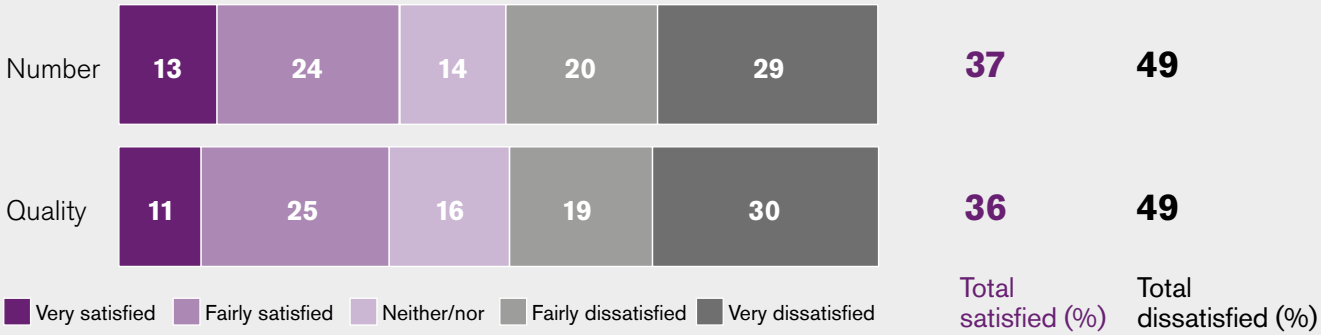
Possible reasons include stricter regulations and less freedom, increased volume of traffic, therefore more competition for space and a decline in appreciation for the profession. It may be that drivers get jaded after a longer time.

Many drivers shared concerns around the number of places that are closing down. This includes services like truck stops but also laybys, leaving them with even fewer options when it comes to parking.

"More and more truck stops are closing down this is not good for UK truckers, where are we supposed to stop/eat/sleep. Laybys are not a replacement for proper services."

"Facilities have steadily got worse as there are more trucks on the road and less safe places to park. It costs a lot of money to stay at the services, and your vehicle isn't safe."

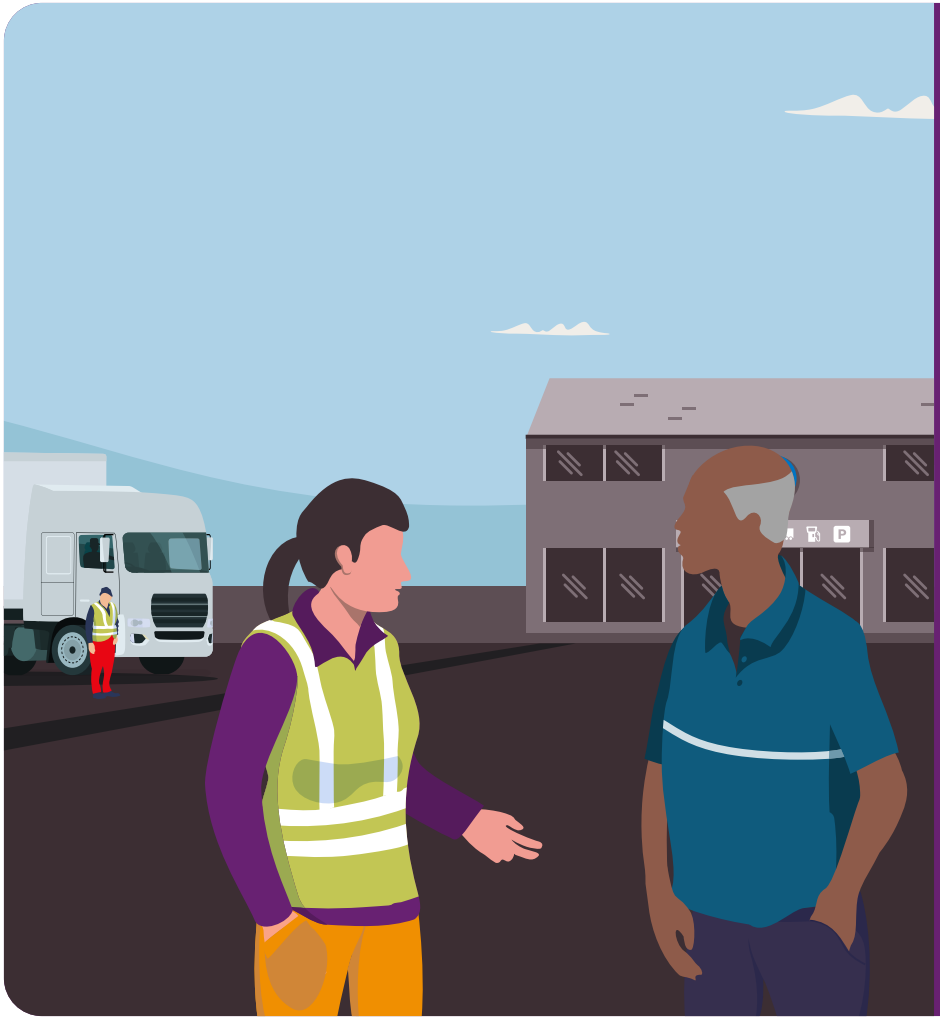
Number and quality of places to stop in the UK (%)



Base: All drivers – Number of suitable places for HGVs to stop (7347) and Quality of places for HGVs to stop (7338)

50% **of drivers think facilities have got worse in the last 12 months**

"There are just not enough places for wagons to park up and facilities are hit and miss throughout the country so the standards need to be improved."



Future needs

Why does it matter what drivers think of overall service provision? Primarily because HGV drivers fulfil an important role in the UK economy, and they deserve to have good working conditions. But also because there is a shortage of HGV drivers, and the workforce is aging, which will only compound this as older drivers retire. The industry needs to encourage new people to join the workforce to help fill this gap and retain them once they have joined.

Drivers who have been in the profession longer tend to be less satisfied with specific visits as well as overall provision. This may partly stem from higher expectations as they compare current conditions to how facilities once were, given their strong view that that facilities have become worse over time.

"Bin for sanitary products in shower important."

Women drivers

Women are heavily underrepresented within the industry, making up around two per cent of the HGV driver workforce according to the 2021 census, having doubled since the previous year. Women made up three per cent per cent of our survey participants, which may be an indication that the number is increasing, however it may be that women drivers are more likely to stop at the types of sites we surveyed or are more likely to participate in surveys. We also found that a larger proportion of the women we surveyed were newer to the profession. 40 per cent of women had less than five years' experience, compared to 16 per cent of men, another sign that increasing numbers of women are becoming lorry drivers.



40% **of women drivers have less than five years' experience**

Base: Male lorry drivers (7155); female lorry drivers (224)

It is encouraging to find that there was no significant difference in overall satisfaction between the women and men we surveyed; 83 per cent were satisfied compared to 86 per cent of men. However, women drivers may be selecting particular sites they know offer certain facilities and therefore rating them relatively highly. Comments indicate that women do have some additional needs that warrant further consideration – in particular easily accessible separate toilets and showers.

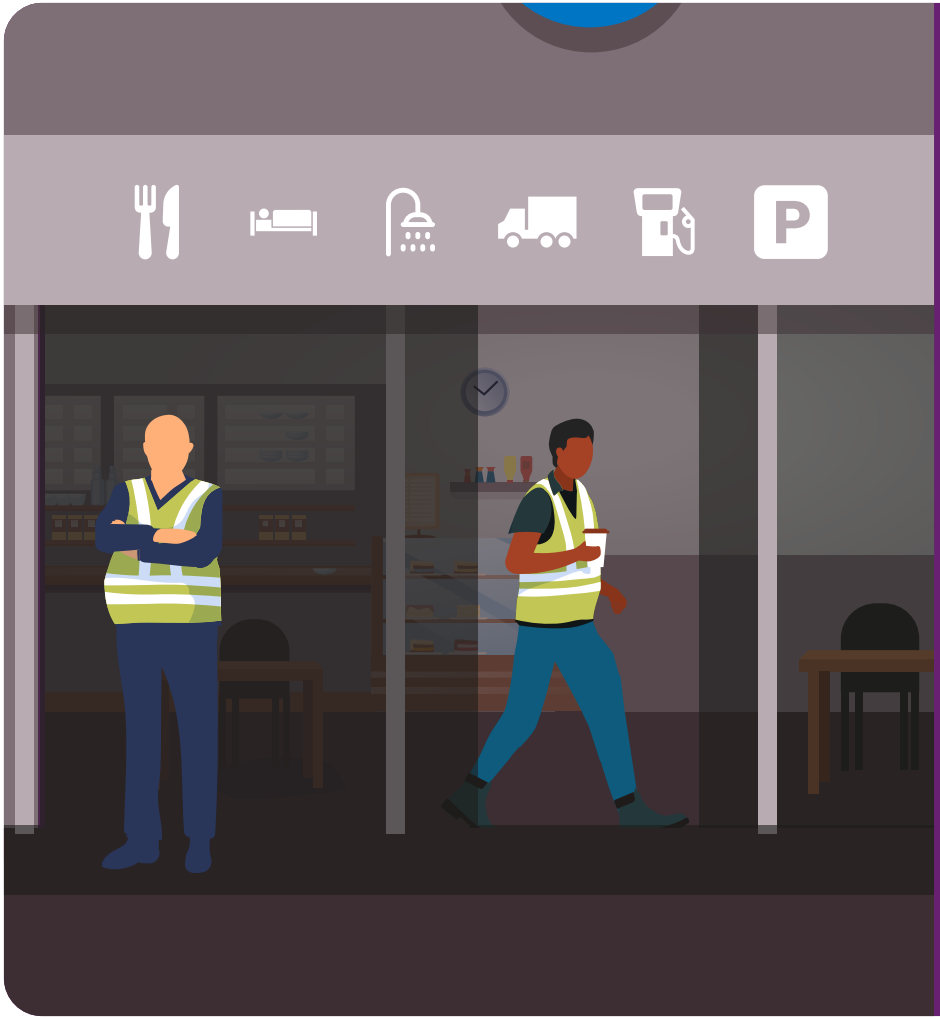
It is reassuring to see through the comments that a number of male drivers also want to see better facilities for women.

Women were also more likely to have dietary requirements, 18 per cent compared with six per cent of men. We found that drivers who have dietary requirements are less likely to be satisfied with their stop overall, and less likely to rate all aspects of food and drink good than those without. The industry needs to consider the changing needs of drivers as well as any current barriers to the profession.

"Not enough showers and none for women."

"The showers have been improved as an extra one was needed and supplied but a shower especially for females should be here too."

"As a female I often rarely come across toilet facilities unless at a services."



How are sites doing overall?

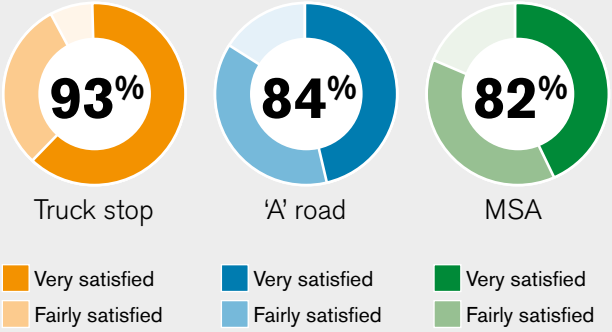
Overall satisfaction is high, with 86 per cent of drivers saying they were very or fairly satisfied with their visit that day. Scores vary significantly between site type, with truck stops scoring highest at 93 per cent.



86 per cent of drivers were satisfied with their visit on the day



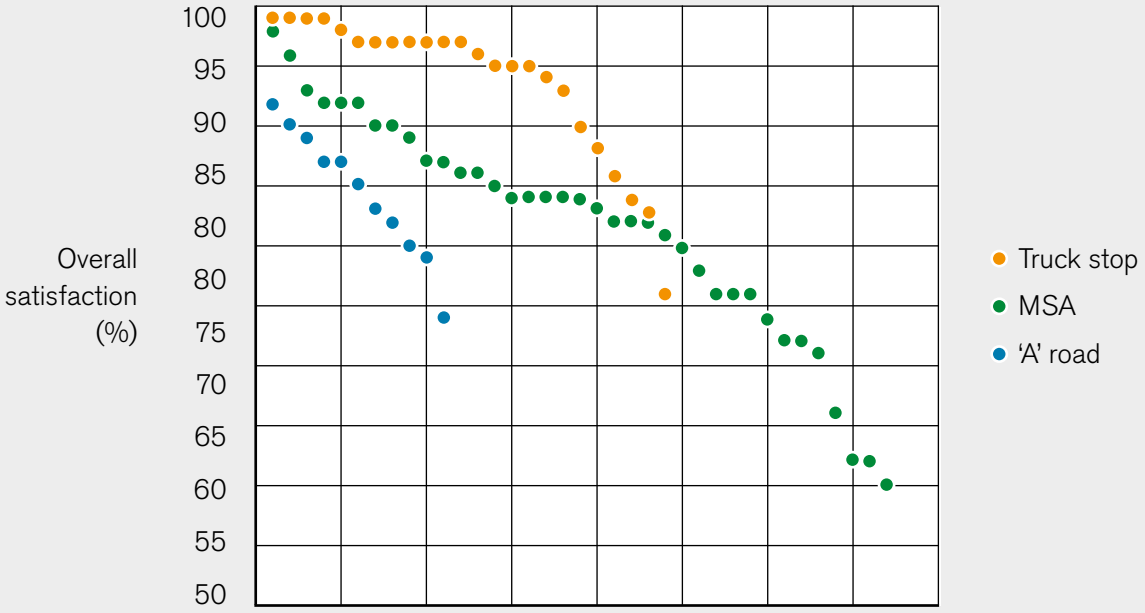
Overall satisfaction



Base: All drivers (Truck stop 2538, 'A' road 1112, MSA 3747).

Once we look at the individual site scores, we see even more variation, and while satisfaction looks pretty good at an overall level, there are a number of sites with room for improvement.

Distribution of individual site scores by site type



Base: All drivers (7265). Excludes sites which had less than 100 interviews). Each dot represents the score of an individual site.

Overall satisfaction by site (%)

Rank	Site	All satisfied	Site type
1	Formula Services	99	Truck stop
2	Skelmersdale Truck Stop	99	Truck stop
3	Sutterton Truckstop	99	Truck stop
4	Junction 23 Lorry Park	99	Truck stop
5	Exelby Services A19 North	98	Truck stop
6	Roadchef Strensham South	98	MSA
7	Hill Top Cafe	97	Truck stop
8	Dover Truckstop	97	Truck stop
9	Ashford International	97	Truck stop
10	Risbys	97	Truck stop
11	Glen Transport Services	97	Truck stop
12	Chirk Truck Stop	97	Truck stop
13	Red Lion Café and Truckstop	97	Truck stop
14	Stop24 Services Folkestone	96	MSA
15	Welford Truck Stop	96	Truck stop
16	Fox Inn	95	Truck stop
17	Lincoln Farm Truckstop	95	Truck stop
18	Stibbington Diner	95	Truck stop
19	Barney's Transport Café	94	Truck stop
20	Riverside Transport Café	93	Truck stop
21	Roadchef Stafford South	93	MSA
22	Redbeck Motel	92	'A' road
23	Moto Reading West	92	MSA
24	Welcome Break Warwick South	92	MSA
25	Welcome Break South Mimms	92	MSA
26	Cartland Truck Stop	90	Truck stop
27	Roadchef Tibshelf South	90	MSA
28	Shell Thurcaston	90	'A' road
29	Welcome Break Corley West	90	MSA
30	Moto Wetherby	89	MSA
31	Purdy Lodge	89	'A' road
32	Immingham Lorry Park	88	'A' road
33	Roadchef Chester	87	MSA
34	Moto Winchester South	87	MSA
35	Moto Lymm	87	'A' road
35	Four Went Ways Services	87	'A' road
37	Scunthorpe Truck Stop	86	Truck stop
38	Welcome Break Hopwood Park	86	MSA
39	Roadchef Maidstone	86	MSA
40	EG Rivington South	85	MSA
41	Cartgate Lodge picnic area	85	'A' road
42	Stainmore Cafe	84	Truck stop
43	Roadchef Durham	84	MSA
44	Welcome Break Gordano	84	MSA
45	Welcome Break Birchanger Green	84	MSA
46	Welcome Break Michaelwood North	84	MSA
47	Welcome Break London Gateway	84	MSA
48	Exelby Services Whitwood	83	Truck stop
49	Moto Cherwell Valley	83	MSA
50	Moto Grantham North	83	'A' road

Base size per individual site ranges from 97-110

Rank	Site	All satisfied	Site type
51	Moto Hilton Park South	82	MSA
51	Extra Cambridge	82	'A' road
53	Moto Leigh Delamere East	82	MSA
54	Roadchef Sandbach South	82	MSA
55	Roadchef Northampton South	81	MSA
56	Moto Leeming Bar	80	'A' road
57	Extra Beaconsfield	80	MSA
58	Roadchef Sutton Scotney North	79	'A' road
59	Moto Bridgwater	78	MSA
60	Welcome Break Hartshead Moor East	76	MSA
61	Extra Cobham	76	MSA
62	J W Cousins & Sons	76	Truck stop
63	Moto Trowell North	76	MSA
64	Brampton Hut Services	74	'A' road
65	Moto Frankley South	74	MSA
66	Welcome Break Sedgemoor North	72	MSA
67	Welcome Break Burtonwood	72	MSA
68	Moto Chieveley	71	MSA
69	Moto Birch East	66	MSA
70	Moto Lancaster South	62	MSA
71	Moto Severn View	62	MSA
72	Moto Woolley Edge North	60	MSA

Drivers tend to be more satisfied at bigger sites, which is likely down to larger sites typically having more to offer. However, smaller sites can perform well. Exelby Services on the A19 is impressive, being a site with fewer than 50 spaces that has managed to gain an overall satisfaction score of 98 per cent. Similarly, despite having fewer than 25 spaces, Four Went Ways is in the top half of sites sampled with an overall satisfaction of 87 per cent.

Satisfaction is also higher amongst drivers who felt they had a choice of where to stop. This isn't surprising, but we need to acknowledge that most drivers don't have the luxury of choice given stopping is largely driven by driving hours rules. The need to stop is critical for safety and well-being and only highlights the need for a positive experience across all stops.

Why is satisfaction high when quality is generally perceived to be poor?

The high overall satisfaction rate of 86 per cent presents a stark contrast to general perceptions where only 36 per cent were satisfied with the quality of sites.

To explore this, part way through the survey period we started to ask drivers who were satisfied with their visit but dissatisfied with the overall quality of sites which types of locations they had in mind. In total 800 drivers were sampled. The majority cited MSAs (65 per cent), along with laybys (46 per cent) and 'A' road services (44 per cent) followed by truck stops (33 per cent) and industrial parks (27 per cent).

It is not clear exactly why there is such a large disparity between satisfaction at a particular site and provision as a whole. One possibility is low expectations; it may be that drivers are exercising some level of choice and going to the stops they prefer; or it may just be that drivers are using prior knowledge of sites to avoid the worse elements – choosing not to use the showers, for example, or bringing their own food. Comments from drivers indicate that some still rate their experience as 'very satisfied' despite having criticisms, suggesting that the bar for satisfaction ratings may be relatively low.

"This site is of a really good standard and drivers can relax here and eat good food. Other sites are not like this, with poor parking areas, toilets and showers are not looked after. Caravans take up space in the lorry park which shouldn't be allowed. They don't have a separate area for drivers to relax."

"Some are decent but others are poor for food choice and cleanliness so there should be a level that we can rely on."





What makes a good or poor site?

Sites need to get the basics right to ensure drivers have a more positive experience. Drivers were more likely to be satisfied if they rated basics such as toilet cleanliness, security and food value for money as good.

When we look at which aspects of the experience have the greatest influence on whether drivers are satisfied, the one factor above all that drives satisfaction regardless of length of stay or type of site is how welcoming the site was.







What makes a good or poor site - in detail

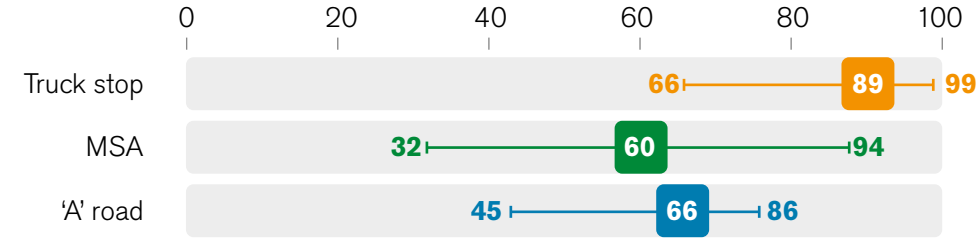
Safety and security

There is a sense among drivers that the profession is becoming increasingly unsafe, with insufficient action to address the rise in crime. This has left many feeling angry and frustrated. Ensuring drivers feel safe is essential for their welfare, but the theft of fuel and goods has large cost implications beyond this. Lorry drivers need to be able to rest without fearing for their safety or that of their vehicle and load.

Truck stops are perceived to be doing a much better job at providing safe and secure parking than 'A' road services and MSAs, with less than half of drivers rating vehicle security as good at eight of the MSAs sampled.

Improvements to things such as CCTV and security patrols can make a difference here, but this issue will also require collaboration across the industry to address, particularly at sites which are being targeted by organised crime.

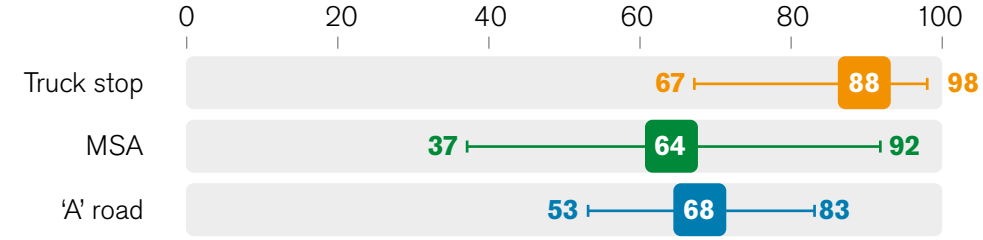
Vehicle security, including the load (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (2409); MSAs (3480); 'A' road (980)

Personal security (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (2397); MSAs (3473); 'A' road (977)

"We need more safe and secure parking. There is a massive shortage of available parking and certainly secure parking. Load and fuel thefts are at an all-time high and nothing seems to be getting done about it."

"Better safety for lorry drivers and female drivers in particular."

The importance of rest

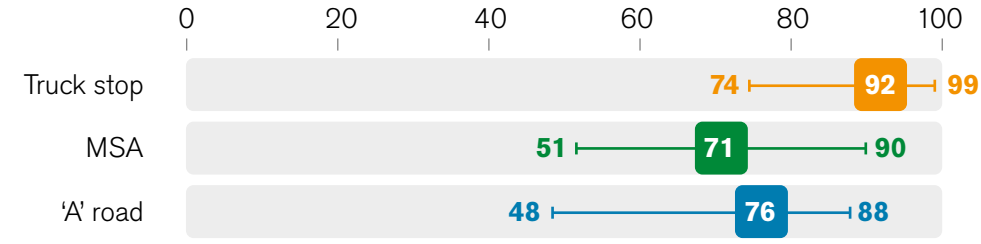
Roadside facilities play a crucial role in ensuring drivers are well rested, no matter the length of stop, so drivers can continue their journey driving safely.

Driving a HGV is a safety-critical job, and it's vital that drivers are not stressed or fatigued while on the road. Strict regulations around working hours and rest breaks exist for this very reason.

This is especially important for overnight stays, where poor sleep not only has implications for safety but also health and well-being. Many complained about the noise from refrigerated vehicles and the need for a quiet area to help them sleep.

It is therefore concerning that many MSAs and 'A' road services are not enabling drivers to properly relax and recharge. All but three truck stops exceeded 85 per cent for ability to have a good rest, while only one MSA and three 'A' road sites exceeded that figure.

Ability to have a good rest (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (2159); MSAs (2815); 'A' road (792)

What makes a good or poor site - in detail



"I drive about 4000 miles per week. I'm shattered when I get to truck stops and want a nice shower, healthy food and good sleep. Some truck stops offer only unhealthy food and the showers and toilets are dirty so it's just making my life so upsetting and stressful and I end up not getting any sleep and I feel terrible."

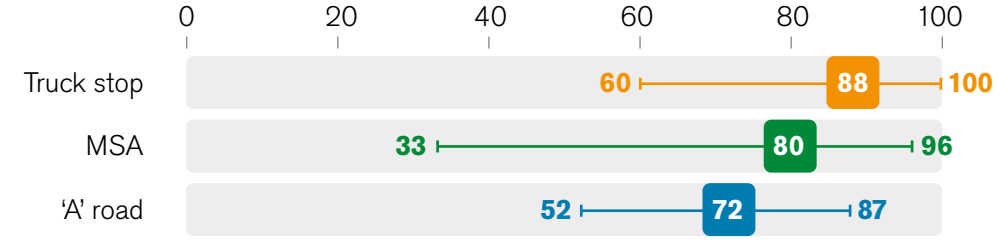
"Would rather have designated sections for fridge trucks to be kept separated from other freight for the sake of a good rest overall for all drivers."

Toilets and showers

Toilets are by some distance the most widely used part of any facility. 71 per cent of drivers used the toilets during their visit. However, comments indicate that not all drivers are using the facilities to go to the toilet when they want to, which may be due to the lack of convenient toilets near the lorry parking area. Drivers are often short of time, and the HGV parking is often further away from the main building. Usage might be higher if these issues, along with better availability, were resolved.

Among those using the toilets on their visit, just over eight out of 10 rated them either very or fairly good on availability and cleanliness. However, the range in scores at site level shows that this experience is not the same everywhere, with both Formula Services and Skelmersdale Truck Stop scoring 100 per cent for the number of available toilets while Moto Severn View (the lowest rated) scored 33 per cent. Similarly, truck stops outperformed both MSAs and 'A' road services for toilet cleanliness with an overall score of 87 per cent, compared to 80 per cent for the other site types.

Number of available toilets (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (1775); MSAs (2735); 'A' road (727)

"Toilets either end of truck parking. Even if its portable toilets. I don't want to get up at 3am on a freezing wet windy night and walk 500 yards plus for a wee."



Showers were almost as widely used as toilets – but only by those staying overnight – 63 per cent of drivers. Again, better availability at MSAs and 'A' road sites may increase use, and it may be that some drivers are not even attempting to use them based on existing expectations. There were lots of comments from drivers asking for both more and cleaner shower facilities. Sometimes little things can make a difference, with drivers asking for hooks to hang clothes and places to put toiletries.

"Still too many sites without shower facilities and still have sites with showers that are dirty."

"The general smell of urine in the coach parking area is getting worse."

Food and drink

Purchasing food and drink was the second most common thing lorry drivers do when stopping after using the toilet facilities.

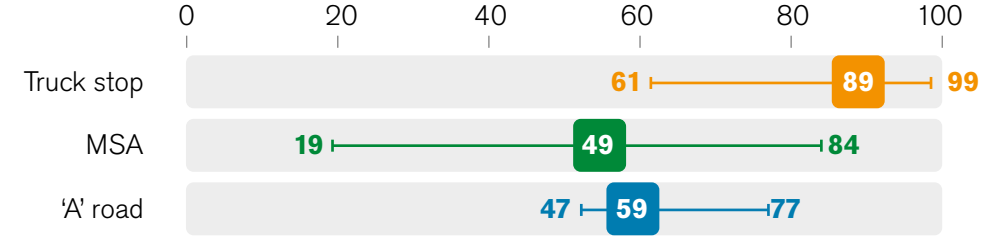
But despite the importance of this aspect of service, ratings are comparatively low. Once again, truck stops score significantly higher than MSAs for all aspects of food and drink service: speed of service, choice, quality and value for money. Value for money is rated particularly poorly at MSAs, with less than half of drivers (49 per cent) rating it as good compared to 89 per cent at truck stops. There are many sites that offer a meal voucher at a discounted rate for drivers also paying for parking, but this isn't available everywhere and only for those who are stopping for longer.

Lorry drivers tell us they feel that food and drink is too expensive at MSAs and 'A' road services, which is reflected in the poor ratings of value for money. Infrequent users of services are more likely to accept paying a bit more as a 'one off' than they might elsewhere, but for lorry drivers out on the road all day with little choice about where to purchase the perceived 'services premium' mounts up. Many want to see healthier options than the fast-food outlets MSAs typically offer.



"I'm vegan and there is no healthier food here, just fatty fast food rubbish. If I was to live off the food in these services it would take 30 years off my life and I'd be really unhealthy. Coffee shops don't stay open all night for when night driving."

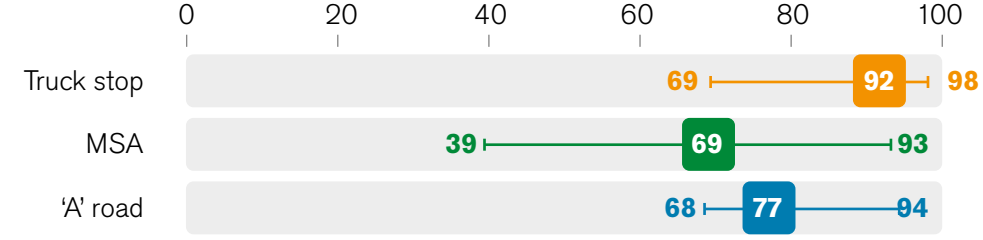
Value for money of food and drink (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (1649); MSAs (2415); 'A' road (733)

Quality of food and drink (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (1636); MSAs (2413); 'A' road (734)

Parking

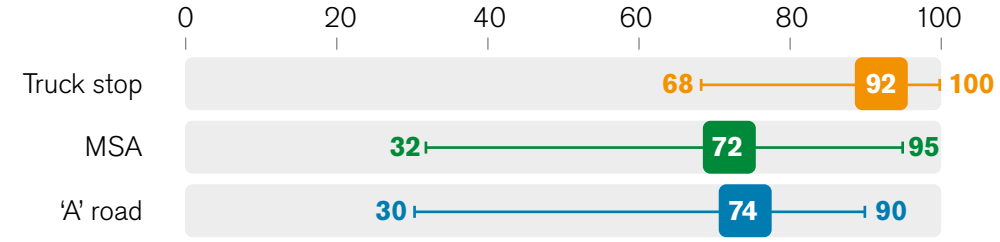
Lorry drivers must stop regularly in line with strict driving hours rules and if there isn't a space at services, then they will have to stop somewhere else, like a layby where there are no facilities or security. Nearly half of drivers told us they were dissatisfied with the number of suitable places for HGVs to stop in the UK and their comments highlight these wider issues.

When asked to rate parking availability at the sites they visited, it's important to recognise that this feedback comes from those who had already secured a space.

"More sites need to be available and big enough to cope with the volume of trucks."

"Improve HGV access to parking bays. Very tight when cars are parked in bays opposite."

P Availability of parking spaces (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (2520); MSAs (3735); 'A' road (1098)

Despite this, just under three-quarters of those at MSAs and 'A' road sites rated the availability as good.

Most drivers found paying for parking easy, with many sites offering payment via SNAP, which allows employers to pay for parking directly. The comments suggest drivers tend to prefer this as it makes the payment process simple, eliminating the need for them to pay upfront and reclaim the expenses.

Drivers were also asked about the surface quality of the parking area. This is clearly an issue requiring widespread improvement, with scores at individual sites as low as 14 per cent. Overall, truck stops are still doing better (71 per cent) compared with MSAs (63 per cent) and 'A' road services (58 per cent).

Many complaints centred around potholes, while other issues include where the parking area is in relation to facilities and the layout of the parking area.

Drivers making short stops are often pressed for time, and therefore the distance from facilities eats into their break. This also causes problems for those needing to use the toilet overnight, leading some to avoid the facilities altogether.

When it comes to how well the parking is managed, MSAs (52 per cent) and 'A' road sites (56 per cent), perform poorly compared with truck stops (84 per cent).

"Parking for lorry drivers is generally terrible, and you really need to be parked by 6pm if you have any hope of finding a space. The quality of facilities varies such a lot."

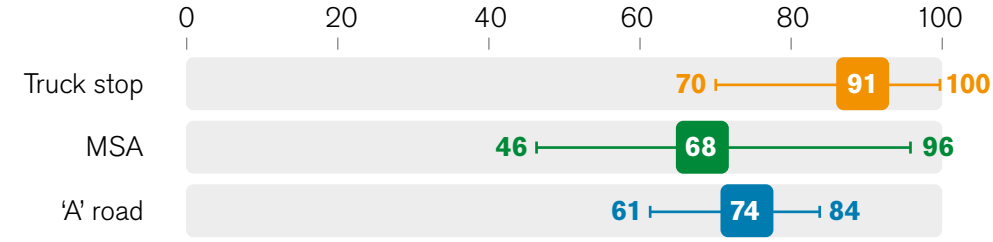
Feeling welcome

The one factor above all that drives satisfaction regardless of length of stay or site type is how welcoming the site is. Unfortunately, many lorry drivers report feeling unwelcome and poorly treated, particularly at sites they don't feel cater for them.

Truck stops are doing well at this, with all but one site scoring above 80 per cent for making drivers feel welcome. MSAs and 'A' road services, on the other hand, have some work to do with scores of 68 per cent and 74 per cent respectively. Unlike truck stops, we know these types of sites have the challenge of catering to other types of road users, but individual site scores show that some sites are doing much better than others, indicating that it *can* be done.

> *"Treat us a bit better, we're just like everyone else."*

How welcoming the site is to lorry drivers (% 'good')



Range of individual site scores by site types overlayed with overall satisfaction score for each site type.

Base: Truck stops (2510); MSAs (3711); 'A' road (1101)

What makes a site welcoming?

As well as providing amenities that meet their needs, a site that is well maintained and managed helps make lorry drivers feel valued and, therefore, welcome. But over and above this, it's the staff that can make all the difference to whether a driver feels welcome – and here, truck stops outshine MSAs and 'A' road services too. Over a quarter of drivers (27 per cent) said that they chose a particular truck stop because 'the staff are great', higher than the 10 per cent at 'A' road services and eight per cent at MSAs.

"A lot of sites don't care about lorry drivers. Always put us farthest away. Cars, caravans etc get treated better."





What do lorry drivers want improving?

Across all sites – the need for more parking was the top suggested improvement.

Key areas to improve:



Parking availability, management and surface quality



Security for HGV vehicles and their load



Better choice and value of food/drink options



The availability and cleanliness of toilet and shower facilities



Site access, including signage

About this survey

Lorry drivers were approached at services and invited to complete a survey about their visit, along with questions about their perceptions of facilities more generally.

Our Lorry Driver Facilities Survey runs as a three-year programme where we visit a representative third of qualifying sites each year.

Fieldwork runs between September and January each year.

Qualifying sites included all Motorway Service Areas, 'A' road services and truck stops with 50 or more lorry parking spaces located within five kilometres of the motorways and major 'A' roads in England. Sites with 12 to 49 spaces were also included in the sample if their utilisation was 33 per cent or higher. Sites with less than 12 lorry parking spaces were excluded from the sampling process.

Fieldwork was completed between 21 September 2023 and 1 February 2024.

The number of interviews at each site ranged from 97 to 110 except for three truck stops falling below 50 due to low footfall. The responses received at these sites are included in the overall figures for site type, but not for site level reporting.

For further information on how we carried out this survey, please see the agency technical report.

Throughout this report we make comparisons by the type of site and look at how individual sites perform within these categories. This is because the site types





vary considerably in business model. Motorway services consistently receive lower scores throughout – but this may be in part because they are set up to serve a wide range of customers with widely differing needs.

The same goes for 'A' road services, of which there is less consistency in provision and they tend to be much smaller in size. In comparison, at truck stops, drivers typically don't have to compete with cars, commuters, families, caravans and all sorts of other road users with different needs. Truck stops operators are more likely to understand what drivers want and also more likely to welcome them as their primary source of business.

In this report, lorry drivers' feedback on the individual facilities at stopping sites is presented and is reported using the measurement percentage 'good' (indicated by the shorthand % 'good'). This measurement reflects the total share of lorry drivers (excluding those who answered, 'not applicable' or 'did not use') who selected 'fairly good' or 'very good' to a particular prompt (e.g. the availability of toilets).

All scores, including by site, are available to view on our data hub.

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Appendix F

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Mineral Planning Factsheet

Silica sand

This factsheet provides an overview of **silica sand** *supply in the UK. It is one of a series on economically important minerals that are extracted in Britain and is primarily intended to inform the land-use planning process. It is not a statement of planning policy or guidance; nor does it imply Government approval of any existing or potential planning application in the UK administration.*

January 2020

Silica (industrial) sands contain a high proportion of **silica** (normally, but not exclusively, more than 95% SiO_2) and are used for applications other than as construction aggregates. They are produced from both loosely consolidated sand deposits and by crushing weakly cemented sandstones. Unlike construction sands, which are used for their physical properties alone, silica sands are valued for a combination of chemical and physical properties. These include a high silica content in the form of quartz and, more importantly, very low levels of deleterious impurities, particularly clay, iron oxides and refractory minerals, such as chromite. They typically have a narrow grain-size distribution (generally in the range 0.1 to 2 mm). For most applications, silica sands have to conform to very closely defined specifications, and consistency in quality is of critical importance. Particular uses routinely require different combinations of properties and attributes. Consequently, different grades of silica sand are usually not interchangeable in use. Silica sands command higher prices than construction sands and serve a wider geographical market, including exports.

Markets

Silica sands are essential raw materials for glassmaking and a wide range of other industrial and specialist horticultural applications (Figure 1). Historically an important market for silica sand was in foundry casting. However, the progressive decline in UK heavy manufacturing, and notably the foundry industry, resulted in a steady reduction in the demand for foundry sand (Figure 2). Over 4000 foundries were operational in the UK in the 1970s, this has now reduced to several hundred. This decline appears to have stabilised and there is a requirement for foundry sand to be of higher quality due to the more demanding applications now being served by UK foundries, (such as aerospace, military and precision automotive parts). Since 2006 there has been a decline in demand for glass sand which has been overtaken as the dominant use of silica sand by other industrial uses. In 2018 glass sand accounted for 29% of total sales of silica sand, foundry sand 5%, sand for other industrial uses 36% and sand for horticultural, sport and leisure uses 30% (Figure 2).



Glass bottle manufacture at Beatson Clarks's Rotherham plant. © Beatson Clark Ltd.

There are many different types of glass with different chemical and physical properties. Most of the commercial glasses in everyday use, such as bottles and jars (containers), and flat glass (windows, mirrors and vehicle glazing), are soda-lime-silica glasses. These products contain between 70–74% silica (SiO_2), the ultimate source of which is silica sand, although increasing amounts of silica are being recovered in the form of recycled glass (known as cullet). Although the silicon and oxygen content of glass is expressed as SiO_2, glass is a single non crystalline, vitreous substance which does not contain crystalline silica. The manufacture of glass also requires a number of other industrial minerals including limestone, dolomite, feldspar and salts such as sodium sulphate.

The principal glass products using silica sand include colourless and coloured containers (bottles and jars), flat glass, and glass fibre (for reinforcement and glass wool insulation). Glass manufacturers are principally concerned

Silica sand

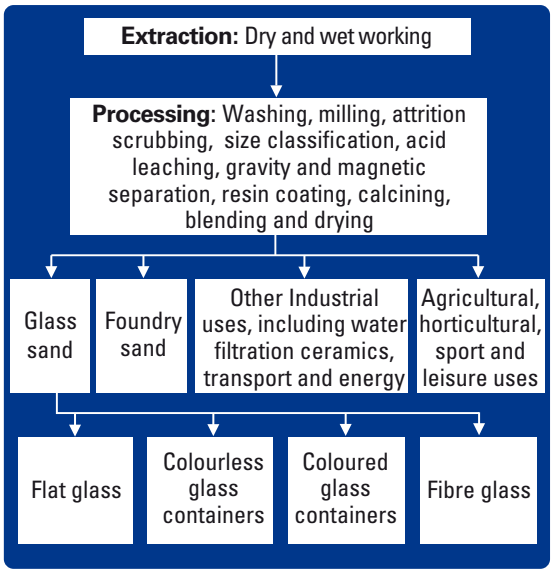


Figure 1 GB: Silica sand supply chain in 2020.

with the chemical composition of silica sands and particularly iron content, which affects the bulk glass colour and composition. They are also concerned with particulate contaminants of refractory minerals such as chromite, zircon, ilmenite and rutile which can give rise to glass defects. Quality requirements depend on the type of glass being manufactured (principally whether it is colourless or coloured) and to some extent on the requirements of the individual glass manufacturer. Glass sand for colourless glass containers generally has an iron content of <0.035% Fe_2O_3, (ferric iron oxide), for flat glass in the range 0.01 to 0.1% Fe_2O_3, and for coloured containers 0.25%–0.4% Fe_2O_3. However, it is the overall composition of the glass batch that is important and lower levels of iron in one component may be offset by higher levels in another. For example, the generally lower quality (i.e. higher iron content) of colourless glass cullet has to be balanced by lower iron content in the colourless glass sand.

In the foundry industry, silica sand is used as the main mould and coremaking material for both ferrous and non-ferrous castings. The physical and chemical properties of the sand are important and depend on a number of factors, such as the metal and product being cast and the type of binder used. In the past naturally-bonded moulding sands were widely used. These contained sufficient clay to give the mould strength without the addition of a bonding agent. Today, there is little demand for such sands and the requirement is principally for clay-free (washed) sands, which are high in silica. They should also have a uniform (narrow) size distribution, and grains with a generally high sphericity. A binding agent, either clay (usually bentonite) or a chemical, such as resin, is added to the sand.

Low iron silica sands, some of which are calcined (heat treated) to convert the quartz to cristobalite (a high temperature form of silica), are also ingredients of clay-based whiteware ceramic bodies, such as tableware, sanitary-ware, and wall and floor tiles. They are also a component of ceramic glazes and enamels. Silica sand is the starting point for the manufacture of water-soluble sodium silicates, and other downstream silicon chemicals, such as silica gels, silicones, silanes and zeolites, which have a wide range of applications such as additives to paints and coatings, water purification and cosmetics. In addition to a low iron content, a sand with a very low alumina content is also required for sodium silicates manufacture.

Other uses of silica sands include the production of silica flour for use as fillers in plastics, paints, glass fibre manufacture and rubber sealants where colour is important to maintain a consistent product. Sand is also used as a filler in tile adhesives and grouts where grain shape, size and colour are important to create the correct product. Silica sand can be a component of autoclaved aerated concrete (aircrete). Here it is included as a fine milled powder as an alternative to Pulverised Fuel Ash (PFA) to supply density and strength to the blocks. This application of silica sand may increase in the future due to the reduction in supply of PFA as coal fired power generation decreases. A specialist use that is seeing an increase in demand, caused by a rise in biomass energy generation, is fluidised bed boiler sands where silica sand acts as inert particles in which fuel is combusted. Silica sand is also used as proppants to enhance the production of oilfield reservoirs where the

Silica sand

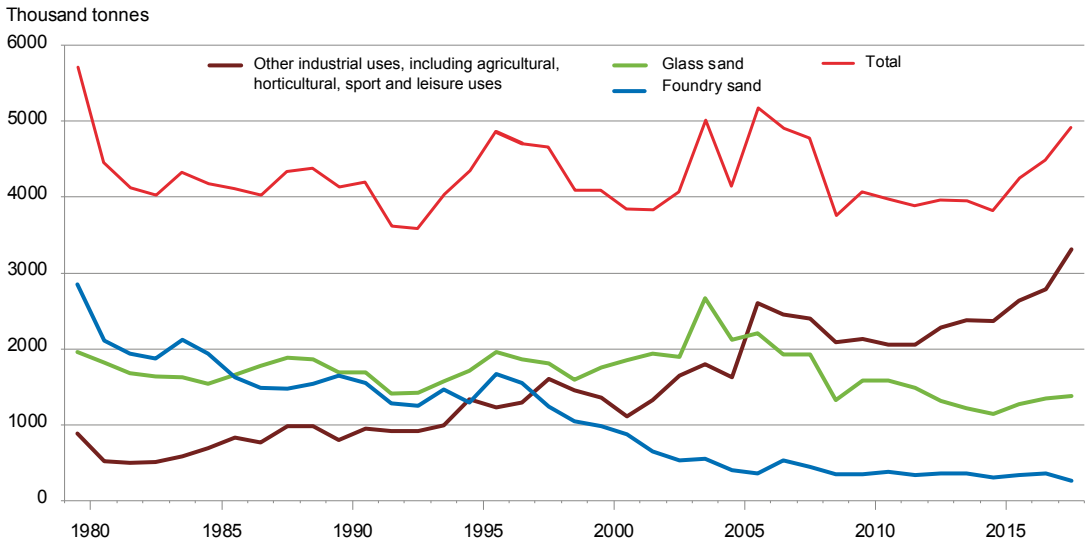


Figure 2 Great Britain: Production of silica sand 1980–2018. Source United Kingdom Minerals Yearbook, BGS.

Year	Glass sand	Foundry sand	Other industrial (a)	Total
2009	*1 321*	350	2 084	3 755
2010	1 582	353	2 135	4 070
2011	1 582	382	2 060	3 969
2012	1 489	340	2 059	3 888
2013	*1 320*	*356*	2 285	3 961
2014	*1 217*	*355*	2 376	3 948
2015	*1 147*	*306*	*2 370*	3 822
2016	*1 275*	*340*	*2 636*	4 251
2017	*1 347*	*359*	*2 784*	4 490
2018	1 379	263	3 317	4 914

Table 1 Great Britain, production of silica sand 2009–2018.

Figures in (thousand tonnes) italics have been estimated
Source: United Kingdom Minerals Yearbook
(a) Including agricultural, horticultural, sport and leisure uses

specification requires close control of grain size, shape and impurities. Another small, but important and safety critical use of silica sand is for use in rail braking systems and traction gels, where sand is used to increase grip when braking. All new trains are required to have sand braking systems fitted and much of the UK's rolling stock has been retrofitted with them. Closely-sized grades of silica sand are the principal filtration medium used by the water and food industries to extract solids from water. In contrast to other grades of silica sand, the particle sizes required are coarser, with 0.5 to 1.2 mm being a popular grading. In applications such as these, they form a vital part of industrial processes. Silica sand is critical to the clay brick, roof tile and pipe manufacturing process, where it is used for facing and demoulding, to ensure both a smooth finish and to prevent adhesion to moulds. It is valued for its technical and aesthetic properties, with products having different requirements. As a result, the sands used for manufacturing clay construction products are sourced from around 40 sites across the UK.

An increasingly important market for silica sand is specialist sports and leisure applications. Closely graded silica sand, in many cases mixed with organic matter, is used in top dressings, root zones and drainage channels for sports surface construction, for example for football and hockey pitches and golf course tees and greens. An 18 hole golf course may require 100 tonnes of sand per year for top dressing purposes. Other uses of silica sand in sports and leisure applications include eques-

Silica sand

trian surfaces, golf course bunkers, synthetic soccer pitches, as play sands and in horticultural applications. 3G sports pitches are a rapidly growing market where coarse sand is required to weigh the artificial carpet down and act as a filler. Aside from requiring a low carbonate content there are no chemical constraints on these uses but they demand quality as well as consistency in grain size and colour. For example, tight controls on angularity and sphericity are required for golf bunkers and equestrian surfaces. These sands are often subject to value added processing, such as the addition of synthetic fibres to reinforce sands to increase durability for sports surfaces.

Supply

GB silica sand output was around 5 million tonnes in 2018 (there is no production in Northern Ireland). Peak production of silica sand in Great Britain was some 6.8 million tonnes in the mid-1970s, but following a decline in the early 1980s production steadied to between 4 and 5 million tonnes per year for a number of years (Figure 2 and Table 1). Of total output in 2018, just under 90% was produced in England, with the remainder from Scotland. This ratio has not significantly changed over the last 10 years due to rising production in England alongside development of silica sand resources in Scotland. With significant identified resources, Scotland is likely to continue to increase levels of supply in the future, subject to planning, production capacity, infrastructure investment and other economic constraints.

Output reflects activity in many different sectors of the economy. The decline in the total quantity of metals being cast, as the manufacturing sector of the UK economy has declined has resulted in a continued gradual decrease in the production of foundry sand (Figure 2). Production of glass sand mainly reflects production of glass containers and

Silica Sand Production	Tonnes		
	England	Scotland	Great Britain
Glass sand			
Flat glass	Confidential	Confidential	400 448
Colourless containers	624 175	251 460	875 635
Coloured containers	Confidential	Confidential	Confidential
Fibre glass	Confidential	Confidential	Confidential
Total glass sand production	**1 014 048**	**366 279**	**1 380 327**
Foundry and moulding sand (a)	**262 566**	**0**	**262 566**
Industrial uses			
Water filtration	30 945	0	30 945
Ceramics (including bricks, tiles and sanitaryware)	Confidential	Confidential	318 834
Agriculture & horticulture	Confidential	Confidential	159 833
Sports and leisure	1 099 884	97 943	1 197 827
Other industrial uses (b)	Confidential	Confidential	1 540 158
Total industrial uses	**3 221 059**	**289 104**	**3 510 163**
Total production	**4 235 207**	**655 383**	**4 890 490**

Table 2 Production of silica sand in Great Britain in 2018 by end use.

(a) Silica, resin-coated and naturally bonded.

(b) Includes use in transport, energy, silica flour and cristobalite, sodium silicates/chemicals, adhesives, abrasives, paints, grouts and other prescribed industrial processes set out in the Aggregates Excise Notice.

Silica sand

Region	Tonnes
South East England	723 583
East of England	1 121 476
East Midlands, West Midlands and Yorkshire and the Humber (a)	545 543
North West England	1 844 505
England Total	**4 235 107**
Scotland	**655 383**
Great Britain Total	**4 890 490**

Table 3 Production of silica sand in Great Britain in 2018 by region.
(a) Regions merged to preserve confidentiality.

flat (float) glass. Other sectors, such as special and technical glasses, including domestic and cosmetic glassware, glass wool insulation and glass fibre, are also significant consumers of silica sand. Consumption of silica sand for other industrial uses has significantly increased in recent years. Much of this is for specialist sports, leisure and horticultural uses but significant amounts also feed into industrial products and processes, as discussed in the Markets section.

Between 2005 and 2014, overall glass sand production decreased, this coincided with the closure of two float glass plants in St Helens and a general decline in UK manufacturing. However, production has been gradually increasing since 2014 driven by container glass production. It is possible that due to the reduction of single use plastics in the UK, container glass use may continue to drive demand.

A survey of silica sand production in Great Britain in 2018 was conducted by the BGS (Table 2 and Table 3). The survey received a response rate of over 90%. Informed estimates have been used for missing sites. It is possible that some sites producing silica sand were not included in the survey but the volumes are believed to be small. The Office for National Statistics also conduct a survey of a sample of sites and use this to estimate a total (PRODCOM data). This gives a slightly lower, but similar figure of 4 791 313 tonnes for 2018.

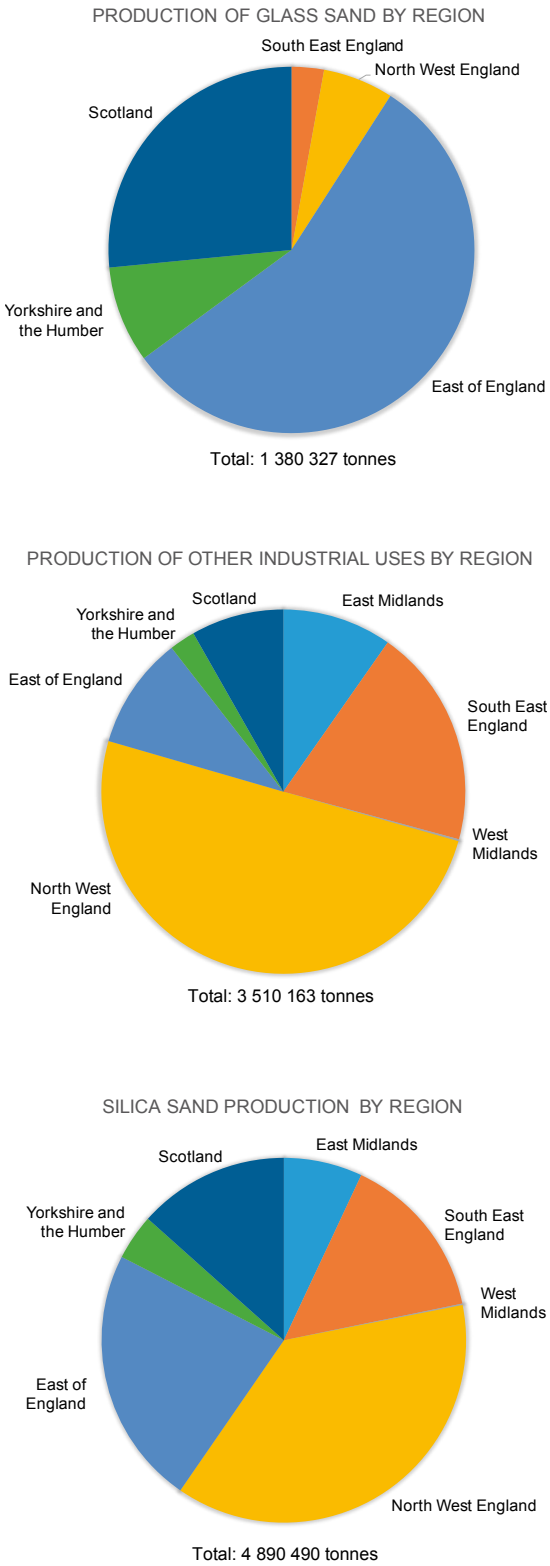


Figure 3 Production of silica sand in Great Britain in 2018 by region.

Silica sand

The survey results are also broken down by region, showing the North West to be the largest producing region with 38% of the total (Table 3).

Consumption

The UK is essentially self-sufficient in silica sand with a total consumption of between 4 and 5 million tonnes per annum. However, there are a decreasing number of sites producing the most specialist grades, and as a result, long-term supply of these is less certain.

Trade

International trade in silica sand is relatively small. Data for UK imports and exports are shown in Table 4.

Exports have gradually decreased over the last 11 years but, conversely, imports have risen over the same time period (with an unexplained spike in 2011). Data is not available for the end use of these imports and the cause of the increase is unknown. Imports are principally from the EU, with Belgium, the Netherlands and Portugal being the largest suppliers. There are also small volumes imported from elsewhere, the largest being from the USA. The vast majority of exports go to Ireland although smaller amounts are exported globally to over 30 countries.

Value

The value of UK silica sand sales was estimated at £82 million in 2017 up from £67 million in 2016 (PRODCOM data, ONS 2018). The official figure for employment in the silica sand industry in Great Britain in 2014 (the last year data were available) was 266, this has declined from around 500 in the early 2000s. However, these figures only includes employees working directly at extraction sites. The numbers employed by the industry as a whole, including other permanent employees at quarry sites and head office staff, is significantly greater.

The glass industry is an important consumer of silica sand, although the mineral is consumed in many other sectors of the economy. In 2017 the UK produced around 3 million tonnes of glass, UK sales of container glass were valued at £894 million, most of which was sold in the home market. The container glass industry employs around 5000 people and production has been increasing in terms of both value and tonnage in recent years.

	Imports		Exports	
Year	tonnes	£000s	tonnes	£000s
2008	48 112	8 045	156 451	4 614
2009	79 629	8 076	115 746	4 794
2010	148 619	10 603	100 773	4 325
2011	310 715	17 191	64 924	4 069
2012	137 761	10 188	88 376	4 013
2013	100 057	9 854	87 289	3 569
2014	139 874	15 682	93 849	5 039
2015	140 865	9 002	61 234	5 638
2016	111 060	9 900	63 227	4 222
2017	154 051	11 974	91 001	4 012
2018	139 980	10 545	83 315	3 948

Table 4 UK imports and exports of silica sand, 2012–2018. Source: HM Revenue and Customs.

The sales of flat glass in the UK in 2017 were valued at about £192 million, glass fibres at £435 million and technical glass products at £172 million. Sales for these products have followed a trend of either being level or gradually increasing over the last five years.

Value data for other industrial uses are not publicly available. However, the value that industrial sand provides to many downstream industries such as ensuring clean water supply, chemicals and ceramics manufacturing, safety critical systems in transport, as well as leisure uses, such as premium sports facilities, is significant.

Structure of the industry

There are a number of long standing silica sand producers in the UK, many of which have been in production for many decades. The largest is Sibelco UK Ltd, which accounts for over 46% of total production and an even greater proportion of production of colourless glass sand. Sibelco UK has silica sand operations in Cheshire, Surrey, Norfolk and North Lincolnshire.

Silica sand

Other important producers in England are:

- Tarmac, Cheshire and Hampshire
- Bathgate Silica Sands Ltd, Cheshire
- Garside Sands (part of Aggregate Industries), Bedfordshire
- Grundon Sand & Gravel Ltd, Bedfordshire
- Mansfield Sand Company Ltd, Nottinghamshire
- Yorkshire Minerals Company Ltd, North Yorkshire
- Ferns Group Ltd, Kent
- L.B. Silica Sand Ltd (part of M O'Brien Group), Bedfordshire
- SRC, Essex
- Wildmoor Quarry Products Ltd, Worcestershire

The main silica sand producers in Scotland are:

- Aggregate industries, West Lothian
- Patersons Quarries Ltd, Fife
- O-I, Devilla Forest Quarry, Fife
- Hugh King Ltd, North Ayrshire
- Lochaline Quartz Sand Ltd, Morvern, Highland

A number of other companies supply small amounts of silica sand.

The Silica and Moulding Sands Association (SAMSA), part of the Mineral Products Association, is the trade association for the silica sand industry. It was originally established in 1941 to ensure security of supply of silica sand for industrial processes.

The glass container industry is mainly located in Yorkshire and central Scotland and the flat glass industry in St Helens and South Yorkshire/North Lincolnshire. With the exception of the O-I operation at Devilla Forest in Fife, glass manufacturers are not directly involved in the production of glass sand in the UK, although NSG (Nippon Sheet Glass Ltd) has a share in the LQS (Lochaline Quartz Sand Ltd) operation at Lochaline.

Foundries are widely distributed but with a marked concentration in the West Midlands, Yorkshire and the East Midlands. End users for other industrial uses are widespread throughout the country.



Silica sand used in horticulture applications as a growing medium. © Aggregate Industries.

Resources

Silica sands are produced from loosely consolidated sands and weakly cemented sandstones ranging from Recent to Carboniferous in age. Although sand and sandstone deposits are widely distributed in the UK, only a small proportion of these possess the necessary physical and chemical properties to be considered as potential sources of silica sand. These, in turn, will differ appreciably in purity, particle size and thickness. Sands that have the correct specifications for specific end uses (such as glass manufacture) are very restricted as the deposits that contain them are often heterogeneous. All of the sand resources will require some form of processing to upgrade them into marketable form. A critical factor, therefore, in defining a sand or sandstone deposit as a silica sand resource is its inherent particle size and the ease with which impurities can be removed, together with the level of losses incurred in this process. The special characteristics of the markets for silica sand and the costs of processing, means that silica sand resources have a restricted distribution.

Silica sand

In addition, resources that are suitable for one market may not be suitable for another. For example, sands suitable for the manufacture of colourless glass containers are only produced at six locations in the UK.

Carboniferous sandstones

Important silica sand resources occur in central Scotland associated with medium to coarse-grained sandstones of the Carboniferous Passage Formation. The Passage Formation comprises a cyclic sequence dominated by coarse-grained sandstones, which are white, grey and pale yellow in colour, but also includes interbedded mudstones, siltstones, seatearths and thin coals. The sandstones were deposited and then exposed to weathering in a humid tropical environment, which resulted in the decomposition of less stable minerals to produce softer, friable sandstones composed mainly of quartz. The main silica sand sites are now located on the eastern side of the Central Basin, with workings at Burrowine Moor and Devilla Forest in Fife, and Levenseat in West Lothian. The sands have a range of industrial and construction applications. The sandstones are also capable of being processed to produce sand with less than 0.035% Fe_2O_3 for colourless glass manufacture. The operations in Fife supply container glass manufacturers in Scotland and Yorkshire. The sandstone resources of the Passage Formation are extensive and may become of increasing importance as a source of glass sand for the wider UK market in the future. Small quantities of silica sand are produced from a 10 m thick sequence of white sandstone occurring within the Carboniferous Upper Limestone Group at Hullerhill in North Ayrshire.

Some sandstones within the Carboniferous Millstone Grit Group have been important resources of silica sand in England in the past. They were previously worked in Staffordshire at Oakamoor (Moneystone Quarry) and from County Durham as a naturally bonded foundry sand as well as a glass sand and other industrial application such as for the manufacture of cristobalite and silica flours. A sandstone deposit of Carboniferous age was worked in the early 1990s at Blubberhouses, near Harrogate, North Yorkshire for the production of colourless glass sand. The operation at Blubberhouses is currently mothballed.



Silica sand grains. © Aggregate Industries.

There are limited resources of silica sand from Carboniferous sandstones in Wales. These are found on the northern flank of the South Wales Coalfield and in North Wales. They have relatively high silica contents and were worked for silica rock for refractory use in the past. However, they are hard, quartzitic sandstones which may be difficult to process to sand grades. Locally the sandstones have weathered to produce unconsolidated sand deposits. One such deposit near Llanarmon in Denbighshire was worked for silica sand but is currently inactive.

Triassic sandstones

Sands of Triassic age are worked in Nottinghamshire from the Chester Formation (part of the Sherwood Sandstone Group). The sandstone is friable and easily worked to produce sports sands, foundry sand and construction sand.

Jurassic sandstones

Resin-coated sands are produced from sandstones of Jurassic age at Burythorpe in North Yorkshire. Here the Scalby Formation consists

Silica sand

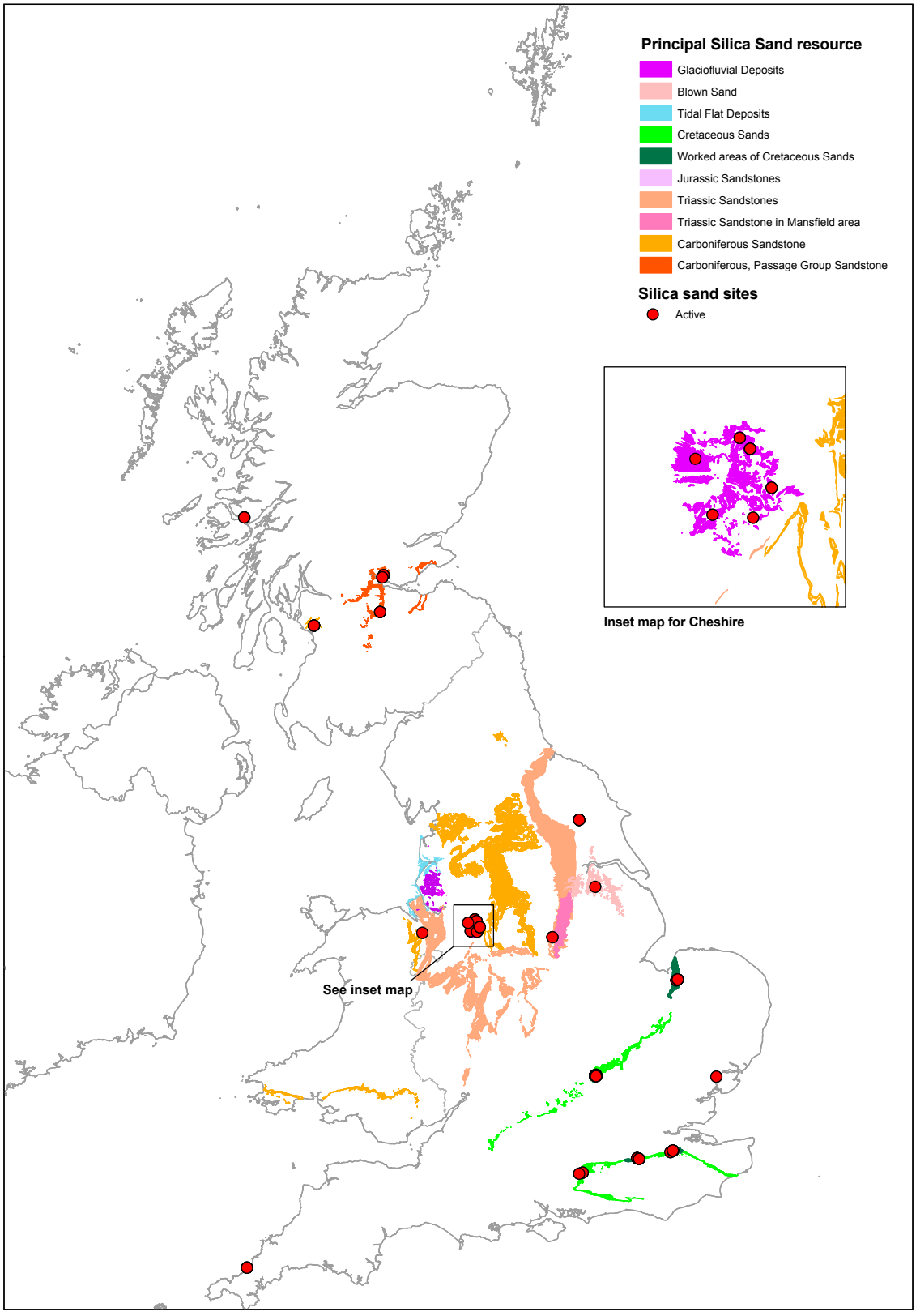


Figure 5 Principal silica sand resources.

Silica sand

of a grey to white, fine-grained, friable, pure quartz sandstone.

Cretaceous sands

In terms of current levels of production, sands of Lower Cretaceous age in eastern and southern England are some of the most important, accounting for around 40% of total output in Great Britain.

Silica sand is produced from deposits of Lower Cretaceous age at several locations in England. The Leziate member, near King's Lynn in Norfolk, is used in the manufacture of colourless glass containers, flat glass and for foundry sand. The Leziate Member is up to 30 m in thickness and consists of pale grey, fine- to medium-grained quartz sand with subordinate bands of silt or clay and pyrite nodules. It is one of the very few deposits where there is no associated production of construction sand. In contrast, the Folkestone Formation of the Lower Greensand Group of the Weald is a regionally important source of construction sand. However, between Buckland and Godstone in Surrey and Maidstone and Borough Green in Kent, it is also an important source of silica sand. The Surrey deposits in particular have low iron contents making them suitable for the production of colourless glass sand. These sands are also unusual in having a low alumina content (<0.1% Al_2O_3) making then suitable for the manufacture of sodium silicates. Although, no sites in the Folkestone Formation in West Sussex and the South Downs National Park have produced material for such end uses to date, recent studies show that, although variable, some parts of the formation have iron and aluminium contents in the range that are suitable as feedstocks for colourless glass sand and sodium silicates.

The upper part of the Woburn Sands Formation of the Lower Greensand in Bedfordshire and Cambridgeshire between Leighton Buzzard and Cambridge is a source of sand for foundry, rail braking, horticultural applications and water filtration. The formation is typically 30 to 60 m thick and mostly consists of fine to medium grained, yellowish, iron-rich and glauconitic quartz sandstone or loose sand. In a small area near Leighton Buzzard, there is a layer, up to 20 m thick known as the 'Upper Woburn Sands' or the 'Silver Sands'. This consists of white, well-sorted and well-rounded, medium- to coarse-grained quartz sand. Coarse-grained, well-rounded quartz sands are particularly suitable for water treatment and are produced by the selective screening of sands from a number of quarries. Construction and silica sands are normally derived from the same quarry and their production is interdependent.

The highest purity silica sand in Britain occurs in the Cretaceous-age Lochaline White Sandstone Formation in the Morvern peninsula and on the Isle of Mull on the west coast of Scotland. This typically has Fe_2O_3 contents of less than 0.0085%. The underground mine at Lochaline has worked the deposit since the 1940s save for a period from 2008 to 2012 when it closed.

Tidal flat deposits

Sand has been worked previously around the Ribble Estuary, from an area known as Horse Bank, which consists of a wide intertidal expanse of sandbanks and flats. Working took place during periods of low tides when sand was exposed and the sand was used for grinding and polishing sands as well as foundry, sports and horticultural applications. This operation has now ceased production.

Blown sands

Sand for coloured glass containers is extracted from thin, wind-blown deposits of Recent age in the Messingham area of North Lincolnshire.

Glaciofluvial deposits

In terms of current levels of production silica sand resources of Pleistocene age in Cheshire are some of the most important, accounting for around 40% of total output in Great Britain.

The Congleton and Chelford sands in Cheshire are unusual for glacial deposits in having a uniform particle size and being largely free of impurities. Glacial deposits generally tend to be very heterogeneous in character and are not normally suitable for silica sand applications. The Cheshire deposits occur as irregular sheets, which infill into troughs in the underlying clays and mudstones. They are themselves cut into by overlying boulder clay and impure

Silica sand

sands that are only suitable for construction use. Despite their close association with glacial deposits, the roundness and sphericity of the sand grains is more consistent with an aeolian ('wind-blown') origin. The Congleton Sand is highly valued as a source of foundry sand. The Chelford Sand is purer and coarser and formerly was the most important source of sand for flat glass manufacture in the UK. It is now mostly exhausted and supplies only limited amounts of flat glass sand.

Other resources

Sands of the Tertiary age Poole Formation in Dorset have been used in the past for glass fibre manufacture.

Closely sized water filtration sands are produced from the Pleistocene Kesgrave Group of Essex, which is a regionally important resource of sand and gravel.

There are no significant silica sand resources in Northern Ireland.

Reserves

In land use planning, the term 'reserves' or 'mineral reserves' refers to material that has a valid planning permission for mineral extraction. Without a valid planning permission no mineral working can legally take place.

A survey of permitted reserves of silica sand at operational sites in the UK at 31st December 2018 was undertaken. The results are presented in Tables 5 and 6.

Over the last 10 years, 12 new permissions for extensions and new sites have been granted. An analysis of these newly permitted reserves shows that on average for this period the quantity of additional silica sand reserves has exceeded production. This analysis, however, does not take into account the wide variety of different specifications of products that individual sites are able to produce. Despite the healthy replenishment over this limited period, it is evident that future supply issues may occur

Permitted reserves 31st December 2018	Tonnes
Colourless glass sand	21 102 517
Other glass sand (coloured and fibre)	1 155 100
Foundry sand, sand for other industrial uses and for agricultural, horticultural & leisure uses	40 400 008
Total	**62 657 625**

Table 5 Permitted reserves of silica sand, 2018, by end use.

Region	Glass sand tonnes	Other industrial uses tonnes	Total tonnes
South East England (a)			5 089 537
East of England			9 540 000
East Midlands, West Midlands and Yorkshire and the Humber (b)		Confidential	12 585 146
North West England	646 288	11 734 154	12 380 442
England Total	**1 787 617**	**37 807 508**	**39 595 125**
Scotland	**20 470 000**	**2 592 500**	**23 062 500**
Great Britain total	**22 257 617**	**40 400 008**	**62 657 625**

Table 6 Permitted reserves of silica sand, 2018, by region.

a) includes small amounts from the South West

b) Regions merged to preserve confidentiality

Silica sand

for some key end uses that have narrow grade specifications, for example colourless glass sand. A recent survey also showed that new reserves are concentrated in a small number of sites which are not evenly distributed across the country. This could also lead to future supply issues.

Relationship to environmental designations

One site in Bedfordshire works the Cretaceous Woburn Sands within a SSSI (designated for geological conservation) and two sites working the Folkestone Formation in Surrey and Kent respectively lie partly within the Surrey Hills and Kent Downs AONBs. The former Blubberhouses site lies within the Nidderdale Moors AONB. A number of other sites are in close proximity to AONBs.

The Cretaceous Folkestone Formation extends into the South Downs National Park. Whilst there are no active silica sand sites, there is a dormant planning permission at Coates Pit and two sites, Kingsley and Frith End, are adjacent to the Park boundary.

A number of sites have adjacent nature conservation designations, some of which have been created by the restoration of former silica sand workings. Examples include former operations at Messingham Quarry in North Lincolnshire (SSSI) and Wicken North in Norfolk (County Wildlife Site).

Extraction and processing

The extraction of silica sand is almost exclusively by surface quarrying, by both dry working and suction dredging (the exception to this being the mining operation at Lochaline). Harder sandstone deposits are, wherever possible, now worked by ripping rather than by drilling and blasting. Loosely consolidated sands, where the sand is either unconsolidated or forms weakly cemented sandstones, can be extracted using front end loaders, bulldozers equipped with rippers or specially designed self-elevating scrapers. At some workings the extraction takes place underwater by suction dredging equipment mounted on pontoons floating on a lagoon. The raw sand is transferred via conveyors or slurry pipes to the processing plant. Worked



Silica sand quarrying from the Carboniferous Passage Formation. © BGS.

thicknesses range from over 30 m for some glacial and sandstone deposits to less than 2 m for wind blown sands. Silica sand deposits lie beneath variable thicknesses of overburden.

Silica sand processing typically requires a high capital investment in plant and is of varying degrees of complexity, depending on the end use of the sand. Processing is aimed at improving both the physical and chemical properties of the sand to meet strict user specifications. Typically several grades of sand are produced from one site either by selective extraction and/or processing. At most operations processing involves washing, attrition scrubbing and size-classification such as hydrocycloning and elutriation to remove the coarse and very fine fractions and to obtain a clean sand with the desired particle size distribution. Blending of lower and higher quality material is undertaken to optimise the use of the reserves.

For the production of colourless glass sand, more sophisticated processing is required to remove contaminating impurities such as heavy iron-bearing minerals and chromite, either from the sand and/or from the surfaces of the individual sand grains. Additional processing may be used such as gravity separation to remove heavy iron-bearing minerals and chromite, froth flotation to remove mica and feldspar and high intensity magnetic separation which is being

Silica sand

increasingly used to remove iron-bearing impurities. Hot sulphuric acid leaching is used at Devilla Forest in Scotland, to remove iron oxide and other minerals coating the individual sand grains. A cold acid leach is also used at King's Lynn for the production of sand for flat glass and container glass. Techniques such as hot acid leaching and froth flotation in an acid environment (previously used at Reigate in Surrey) to remove heavy minerals and iron coating of sand grains are energy intensive, have potential environmental impacts and require complex processing facilities on site. As a result, operations using these techniques have decreased in recent years, which limits the range of applications for higher iron sands. Most foundry sands have to be supplied dried and drying facilities are a substantial capital investment.

For foundry use selected grades of silica sand are also coated with resin binders producing a high value-added product. Silica sand proppants are also coated with resin to increase their compressive strength for use in secondary hydrocarbon recovery at greater depths. A wide range of grades are produced based on different particle sizes and resin types.

Some silica sand is calcined to convert quartz to cristobalite, which is a higher temperature form of silica more suitable for use in ceramics. Both cristobalite and dried silica sand are finely milled to produce various grades of silica flour.

The extraction and processing of silica sand generally involves the production of less than 10% waste. Yields of saleable product (including by-products — see below) are on average about 90%, excluding overburden removal, which is usually used in site restoration.

The sand products are either stored in open air stockpiles or they may be dried in kilns and stored in silos or undercover to keep the sand dry. Sand is sold as bulk loads, this can be loose, in tankers or tippers, or in 'bulk bags' and for certain applications in smaller 12–25 kg bags.

By-products

Due to the complex sedimentary environments in which they were formed silica sand deposits are very likely to contain sands with different physical and chemical properties with variations both laterally and vertically, sometimes over small distances.

Maximising extraction from any permitted site (while ensuring the restoration of an appropriate landform with long-term afteruse provision) is likely to be the best environmental option. This may mean that defined areas of inferior quality are worked, processed and sold, usually as construction sand.

Of equal importance are co-products. These are derived when the mineral operator is required to process the raw sand to customer specifications which results in the coarser and finer ends of the grain-size distribution being removed (this is particularly true for glass sands of all types). These coarse and fine fractions are sold, if markets exist, possibly for an industrial end use. This is generally the most sustainable use of the reserve (subject to site restoration considerations).

Although the silica sand deposits are, by definition, of relatively uniform grain size and have low levels of colouring impurities, it is unlikely that more than 65 to 70% of the raw feed will report to finished product for a glass sand, although dependent on the geological properties, this can be higher.

Alternatives/Recycling

Glass is a permanent material which can be recycled indefinitely without any loss of quality. Recycled glass (cullet) from containers is increasingly used to make new glass. In 2016 (the most current data), UK- manufactured glass containers contained an average 38.5% recycled content, a figure that has gradually increased from 35.5% in 2009.

Increasing the use of cullet forms a key part of the glass sector decarbonisation plan. Every tonne of cullet recycled saves 250kg of CO_2 during the manufacturing process. This is because cullet replaces carbonate minerals which decompose during the melting process to form CO_2 and cullet takes less energy to melt therefore reducing fossil fuel use. Using cullet reduces the demand for raw materials and

every tonne of cullet saves 1.2 tonnes of raw materials. When the whole life cycle is taken into account 580kg of CO_2 are saved for every tonne of cullet used in container glass manufacture.

Only good quality, colour sorted cullet with low levels of contamination is suitable for glass manufacture. Developments in colour sorting technologies and removal of contaminants in recent years have increased the amount of cullet suitable for glass manufacture.

The other main market for cullet is aggregates, in materials such as asphalt, although this has a much lower environmental benefit compared with closed loop glass recycling. A small volume of cullet is also used for other applications such as water filtration, abrasives, kitchen worktops and top dressing.

Flat glass is recycled into glass containers, glass fibre and rolled plate glass. Flat glass manufactured by the float glass process is highly sensitive to impurities, in particular refractory materials that do not melt. For this reason window glass is not taken from demolition sites because of the risk of contamination, although the potential for recovery of this type of glass is being considered. The industry does however, utilise flat glass cullet recovered from downstream fabricators, such as the automobile industry and double-glazing manufacturers, where better quality control is feasible.

In the foundry industry, metal is cast in 'greensand' moulds in which a mixture of silica sand and bentonite is mixed with water to give sufficient plasticity for the mould to be formed. Alternatively sand is mixed with a chemical binder to give rigidity. Volume producers of castings use automatic systems in which the used mould is disaggregated and the sand recycled with a small addition of new bentonite binder to make good that destroyed in the casting process. Foundry sand used with chemical binders is also reclaimed using attrition and thermal processing and most is re-used with the addition of some new sand. Spent foundry sand is increasingly used for alternative applications including as asphalt filler, in cement manufacture and in building blocks. Sand in artificial sports pitches can be re-used

Effects of economic instruments

Silica sand that is used in prescribed industrial and agricultural processes, is not subject to the Aggregates Levy. Sands that are unsuitable for these applications are produced as ancillary products at many silica sand sites. Sands sold for construction use are, therefore, subject to the Aggregates Levy.

Spent foundry sand is subject to the Landfill Tax, if it is disposed of at a landfill site, although a high proportion of this material is now recycled for use as aggregate.

Transport

Most silica sand is transported by lorry and bulk tanker. The only silica sand operation with a dedicated rail link is Leziate quarry near King's Lynn in Norfolk. Here rail is used to transport sand to glass manufacturers in Yorkshire and the North West of England. Lochaline Mine uses a dedicated ship loading facility to fill vessels which transport sand cargoes to a number of ports in Great Britain and Europe.

Unlike sand used for construction purposes, silica sand can travel long distances due to demand for specific characteristics and the restricted distribution of resources.

Transport costs can still form a significant proportion of the final product price, the majority of glass plants are in close proximity to areas of silica sand resources.

Planning issues

Compared to construction sand, silica sand has a number of distinctive characteristics which are relevant to land-use planning:

- **Economic importance** — Silica sand is recognised in the National Planning Policy Framework as a mineral of national importance, necessary to meet society's needs. The importance of silica sand as a raw material is recognised in the UK Mineral Strategy, pub-

Silica sand

lished in July 2018 by the UK minerals and mineral products industry;

- **Economic value** — silica sands have a range of applications with many different specifications. They are important for a broad range of downstream, value-added manufacturing industries. Individual grades are often not interchangeable in use and tonnages produced tend to be relatively low;
- **Alternatives** — other than glass cullet, there are no alternative raw materials for glass manufacture;
- **Processing plants** — the processing of silica sand is complex requiring a high level of capital investment. In many cases processing plants operate on a continuous (24 hours) basis, which means that the siting of such plants has to take account of the impact on local residential amenity;
- **Length of planning permissions** — individual sites may have long lives, and therefore have to be subject to regular reviews of conditions;
- **Impact on designated areas** — some silica sand resources may coincide with sensitive environments and habitats, such as heathland. Government policy permits the working of silica sand in some designated areas in exceptional circumstances;
- **Stocks of permitted reserves** — Government policy, as stated in the National Planning Policy Framework (2019) specifically requires that permitted reserves of silica sand of at least 10 years are maintained for individual sites and at least 15 years for sites where significant new capital is required;
- **Transport** — there is pressure to establish greener transport alternatives to road at well-established sites with a long term future;
- **Ancillary products** such as construction sand are often an important element of the economic and environmental consideration of a site, influencing quarry design and restoration. Utilisation of sands, which fall outside industrial sand specifications, is the most sustainable use of the total mineral reserve;



Silica sand extraction. © Aggregate Industries.

- **Mineral safeguarding** — Silica sand is a scarce resource. The National Planning Policy Framework states that planning policies should define Minerals Safeguarding Areas and adopt appropriate policies so that known locations of specific mineral resources of local and national importance (which include silica sand) are not sterilised by non-mineral development where this should be avoided. Planning policy also requires the safeguarding of existing, planned and potential sites for bulk transport, handling and processing of minerals.

Further information

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It was updated by Tom Bide from an original compiled by David Highley, Andrew Bloodworth (British Geological Survey) and Richard Bate (Green Balance Planning and Environmental Services), with the assistance of Clive Mitchell, Don Cameron and Deborah Rayner (BGS).

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Mineral Planning Factsheets for a range of other minerals produced in Britain are available for free download from www.mineralsUK.com

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Appendix G

Greater Essex Local Skills Improvement Plan (LSIP) Progress Report

(Essex, Southend and Thurrock)

June 2025

Essex Chambers of Commerce

Funded by UK Government

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1. Purpose of the Report

Welcome to this report to share the progress of the Essex LSIP. This updates the information shared in our last progress report, published in June 2024. You can view the original LSIP (which these progress reports update on) here.

"It's a pleasure to introduce this report which sets out the progress we continue to make with the Essex LSIP for employers and stakeholders. Once again, our business led approach and focus on delivery is clear. It's exciting to be able to showcase the wide range of work underway and delivering locally.

Throughout our Progress Report we'll set out key aspects of work to date and the accompanying action plan will provide additional information on what we plan for the future. Some of the highlights include our amazing Festival of Skills in November, our Employer Guide simplifying the skills landscape for employers, and our Sector Insights which include data dashboards. It has also been great to see the newly created college facilities through the Local Skills Improvement Fund (LSIF) which help us to ensure that state of the art training facilities are available to the residents of Greater Essex – look out for photos later in the report. What an amazing legacy for the LSIP which will last well into the future.

Our regular LSIP bulletin is always packed full of news, information and activity which regularly brings to life the work we're doing.

The work truly continues to go from strength to strength, and it wouldn't be possible without the support of a range of stakeholders and most importantly the county's employers. We're very proud to be working with you all and to make a positive difference. A big thank you to everyone involved – together we're having a significant impact".

Denise Rossiter, Chief Executive,
Essex Chambers of Commerce



"Together we're having a significant impact"

— Denise Rossiter

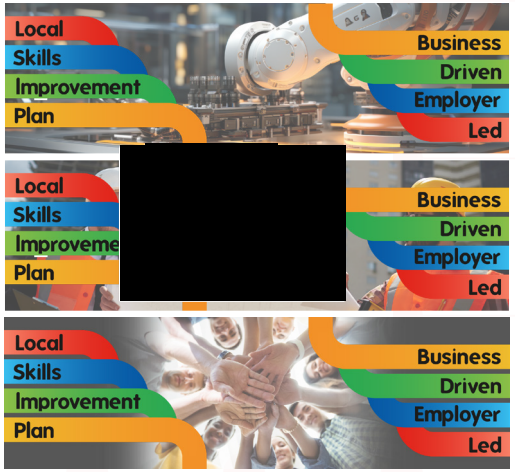
2. Summary of the LSIP

The original LSIP was published in 2023, further to Essex Chambers of Commerce being chosen by the Department for Education (DfE) as lead for the LSIP in Essex. Following extensive engagement with employers and stakeholders, as well as evidence gathering, the report captured the skills and skills system priorities, as well as key sectors for focus. As per the Skills for Jobs White Paper and current reforms to post-16 technical education and training, 38 LSIP plans are now in place across England with the Further Education Sector legally required to respond to them.

The LSIP covers Essex, Southend and Thurrock and is one of the largest LSIPs nationally. All references to Essex in the report cover this whole area, also known as 'Greater Essex'. The geography has a population of nearly 1.9 million (1,863,314) and is home to nearly 81,000 businesses (80,800). Skills and recruitment needs remain a key priority for businesses locally and are a key focus of the Essex LSIP.

The LSIP is overseen by the LSIP Employment and Skills Board and with key contributions from sector groups undertaking a range of activity to drive delivery. You can also get involved in the work and learn more here.

The original LSIP identified priorities, as set out below and which it continues to deliver against. The last progress report captured work in developments such as employer and Apprenticeship Toolkits, Sector Insights and sector groups. Aspects such as the LSIP webpages, newsletter and events were also still in development at the time of the last Progress Report and are now fully up and running (and continue to expand). The Annual Progress Report Action Plan (Annex A) covers these in detail and this report will also explore these further with the progress being made against the LSIP priorities:



Skills System Priorities

- Skills planning system for Essex
- System access and flexibility
- Information, Careers Advice & Guidance
- Tutor shortages & capacity of providers to respond
- Inclusive employment
- Barriers to engagement

Skills Priorities

- Soft skills and behaviours
- Basic English, Maths and ESOL (English for Speakers of Other Languages)
- Digital skills and 'Digitech'
- Green skills
- Leadership and Management skills

Essex Sectors & Technical Skills

- Advanced Manufacturing, Engineering & Aviation
- AgriTech & Food Tech
- Community & Voluntary
- Construction & the Built Environment
- Creative & Cultural
- DigiTech
- Education
- Health, Social Care & Med Tech
- Professional Services
- Transport & Logistics

3. Strategic and Economic Context Update

The previous LSIP progress report included headline information on the local economy, with updated information included here to provide a snapshot of the current picture. As was set out in 2024, Essex is one of the largest areas in England, with a population of 1,863,314 of which 62.2% are of working age. It is diverse, with one of the longest coastlines, rural and urban areas and some of the wealthiest and the most deprived parts of the country. Proximity to London is significant to the labour market, with high levels of commuting into the capital and other areas. There are significant numbers of large infrastructure projects and housing developments taking place across the area, which will have a big impact on the skills needed. Proximity to neighbouring counties such as Suffolk also means that large developments such as Sizewell C will impact locally. See the labour market dashboard and sector insights for more detailed and latest information.



At a glance – key facts and figures - updated

	Essex	Southend	Thurrock	UK
Skills Level 4+ (2024)*	40.6%	42.7%	36.7%	47.6%
Skills Level 3+ (2024)*	65.1%	59.5%	56.2%	67.9%
Skills Level 2+ (2024)*	90.8%	86.2%	82%	86.7%
Skills Level 1+ (2024)*	92.5%	89.1%	85.2%	89.1%
No qualifications (2024)*	4.6%	5.9%	9.7%	6.7%
Weekly earnings (residence based) (2024)	£784.2	£828.90	£798.8	£729.8
Weekly earnings (workplace based) (2024)	£728.3	£663.60	£699.4	£729.6
Out of work benefit claimants (2025)	30,175	5,215	5,305	NA
Total employee jobs (2023)	601,000	63,000	76,000	NA
Number of businesses (2024)	66,880	6,915	7,005	NA
Proportion of businesses which are SMEs (2024)	99.7%	99.7%	99.7%	NA

* % is a proportion of resident population of area aged 16-64

Since publication of the last progress report and original LSIP, the strategic landscape has also changed significantly:

The South East Local Enterprise Partnership (SELEP) has now closed. Further to a government review of LEPs nationally and agreement of the LEP Board a swift and effective transition of work to local authorities has taken place. SELEP covered Essex, Southend, Thurrock, Kent, Medway and East Sussex and therefore work has moved to the relevant local authorities in those areas.

Some work continues to happen across the broader geography, such as the **Major Projects Skills Group**, now led by the Construction and Industry Training Board (CITB) and with involvement of Essex LSIP to help ensure effective join up across the region. This group brings together large infrastructure and housing projects across the south and including the Lower Thames Crossing, Longfield Solar Farm and Thames Freeport. **Significantly, in March 2025, the Lower Thames Crossing plans were approved by the government.** This will be a 14.5-mile (23km) road linking Essex and Kent

3. Strategic and Economic Context Update (continued)

by two tunnels running underneath the River Thames. It will be the largest road tunnel in the UK when constructed at a cost of up to £10 billion. Work is due to begin in 2026 and be completed by 2032. There is already strong engagement through the LSIP with the Lower Thames Crossing team to deliver against significant skills needs.

Greater Essex Business Board (GEBB) – the previous report set out that as part of the transition of work to local authorities it was expected that a board for Greater Essex would be developed and that it would link to the LSIP Board. GEBB is now established as a strategic advisory board. Further information is provided about GEBB on Essex County Council's website which outlines that 'GEBB exists to influence economic growth policies at the local and national level. This includes providing strategic advice to political decision-makers. It will have the freedom and autonomy to set its own agenda, using evidence to develop its own positions on key issues. The board's advice will help in setting the strategic direction for local economic policy. This includes producing and updating an Economic Strategy for Greater Essex'. Responsibilities for GEBB are set out as the following on the website and with a clear reference to Essex Chambers of Commerce and its role as the ERB in the third bullet point:

- informing economic strategy and shaping economic development priorities
- making Greater Essex stand out, compete and attract investment
- shaping the Essex skills programme, collaborating with the Essex Chambers of Commerce
- convening stakeholders from key growth sectors to influence investment and support job growth
- shaping and overseeing the provision of future Government programmes

The Board is chaired by Julia Gregory who has held various executive, chairperson, and non-executive director roles. Other board members include DP World, Teledyne, MAG / Stansted Airport, Freeport East, Leonardo and Industrial Chemicals. Essex Chambers of Commerce Chief Executive, Denise Rossiter is a member. This also helps to ensure strong links to the LSIP Employment and Skills Board. Further information on members is available here.

Groups have been established to lead on different areas of work. To ensure alignment and input to the LSIP, the Essex LSIP Executive Director, Jo Giles is leading on the skills area and aligning to the work of the LSIP board. This maximises the work already underway as well as leveraging new input from businesses on LSIP priorities.

Devolution and Local Government Reorganisation (LGR)– the previous report set out that devolution had been paused until after the general election by the then Minister for Levelling Up, Housing and Communities. Following the general election in July 2024, the Labour government continued plans for devolution in 2025, alongside Local Government Reorganisation (LGR). Devolution is the transfer of powers and funding from UK government to local government. LGR is about how local government powers and funding are organised between councils. The government invited local authorities to put in proposals to be part of the devolution priority programme. Essex County Council alongside Thurrock and Southend Councils wrote to the government to request inclusion. This was confirmed in February 2025 and the government also confirmed that elections originally scheduled for May 2025 for Essex County Council and Thurrock Council would be suspended.

Responses have now been submitted to the government's proposals, following a consultation period (in April 2025). This includes the proposed creation of a Mayoral Combined County Authority (MCCA) for Greater Essex which would bring decisions closer to local people, including a more skilled workforce and improved infrastructure and more joined-up transport

3. Strategic and Economic Context Update (continued)

systems. The Devolution Priority Programme aims to see a new wave of Mayors elected in May 2026.

Alongside this, the government commenced Local Government Reorganisation (LGR) in areas that still have a two-tier system of local government. This means that a county council operates as well as district, borough and city councils. In Greater Essex, there are currently twelve districts, two unitaries and a county council. The Government have set out plans to move away from the two-tier system, with all fifteen councils in Essex being replaced with a number of unitary councils. The white paper has stipulated that the government thinks the optimum size for new unitary councils to be at least 500,000 people. However, there may be some flexibility on this, and each case will be considered on its own merits. Greater Essex has a population of around 1.9 million, meaning three or four unitary councils is the most likely outcome of the reorganisation.

As Essex is on the Devolution Priority Programme (DPP) proposals will be submitted by 26 September 2025, then working towards mayoral elections in 2026 for DPP areas alongside other scheduled local elections. There will be shadow unitary elections in May 2027 and new unitary councils going live in 2028. After LGR has taken place, the new unitary councils will work with the new mayoral combined authority to use the powers and funding they received from devolution. Further information is available from Essex, Southend and Thurrock Councils.

The Essex LSIP also continues to align strategically with government priorities such as **Skills England's 10 priority sectors** (made up of the 8 growth driving sectors in the industrial strategy plus construction, and health and social care). A wealth of work is underway through sector groups and through colleges aligning their provision to priority sectors and the LSIP sector insights enable a more detailed look at sectors. Further information is included in Annex A supporting this report, with an overview of work here:

Skills England Priority Sector	Essex LSIP Alignment - Headlines
Advanced manufacturing	Sector insights produced, lsip sector group, engagement with sector, alignment in local curriculum
Clean energy industries	Work underway with companies such as Longfield Solar Farm. Range of new courses delivering against green and clean energy
Creative industries	Sector insights produced, lsIP Sector group, engagement with sector, alignment in local curriculum
Defence	Some links to advanced manufacturing sector in Essex – some prominent companies locally including Raytheon, Leonardo and BAE Systems.
Digital and technologies	Sector insights produced, LSIP Sector group, engagement with sector, alignment in local curriculum
Financial services	Not a priority sector for the Essex LSIP but some links to professional services and delivery of financial services locally
Life sciences	Med-tech sector insight alongside health and care, potential plans for UK Health Security Agency labs in Harlow (under review by government)
Professional and business services	Sector insights produced, continued engagement with the sector to inform delivery
Construction	Sector insights produced, essex Construction Alliance continuing to grow, key link with major projects work and CITB
Health and social care	Sector insights produced, engagement with sector and alignment of curriculum to skills needs

4. What has been achieved so far?

The Essex LSIP has continued to have a galvanising effect on local partners, including the key role played by employers, local authorities, providers and key stakeholders such as DWP and the Careers Hub, and sector bodies continue to be central to the work. More detail of this work is contained within the accompanying Annex A to this report.

Some key headlines (explored further below with information on alignment to LSIP priorities) include:

- ✓ New buildings and facilities completed
- ✓ Employer Toolkit published
- ✓ Sector Insights developed and sector groups established
- ✓ 'Essex Connector' development and procurement imminent
- ✓ Range of courses delivering against the LSIP priorities
- ✓ LSIP newsletter developed and circulation increasing
- ✓ LSIP web pages revamped with high visit numbers
- ✓ Successful Essex Festival of Skills
- ✓ Joined-up approach in place with new Greater Essex Business Board

Further Education Colleges are required to respond to the LSIP and its recommendations. **Colleges across Essex have continued to work collaboratively to ensure a joined-up approach** and have reaffirmed their commitment statement:

Federation of Essex Colleges (FEDEC) Local Skills Improvement Plan Commitment Statement:

FEDEC is a well-established group of education and training providers in Essex. We work collectively for the benefit of our Essex geography to support high quality education, training and skills provision that meet the needs of our economy. Our mission is to support the region's economy and drive up the prosperity of all people in Greater Essex through the transformational power of learning and skills development. Our partnership approach delivers relevant post-16 learning and skills for individuals and businesses. The Local Skills Improvement Fund has allowed the FEDEC members to take a systems approach through:

- Speaking as one voice to promote and raise the profile of further education and skills, including apprenticeships, adult education and higher education, to influence change for the benefit of our learners, communities, region and members.
- Collaborative planning and delivery of a cohesive regional skills offer, building on our successful models from the Strategic Development Fund and the current Local Skills Improvement Fund.
- Collaboration and sharing of experience, expertise and resources at all levels within providers, as well as growth and efficiency opportunities.
- Strategic partnerships with key stakeholders in business and government.
- Working collaboratively with the Essex Provider Network (EPN) towards these common goals

David Warnes, Chair, Federation of Essex Colleges (FEDEC)

4. What has been achieved so far? (continued)

Both FEDEC and EPN also reaffirmed their commitment to the LSIP at an event on Thursday 8th May, bringing together Principals, Governors and EPN. This event included an update from the Essex LSIP Team.

Essex Provider Network Statement:

The Essex Provider Network (EPN) is representative of the majority of local and national Independent Training Providers (ITP's) operating in Essex, all Essex FE/Adult learning colleges, Higher Education Institutes (HEI's), plus a variety of awarding bodies and influential associate organisations, all of which contribute to a collaborative approach towards the development of a cohesive skills delivery objective for Greater Essex.

The EPN is fortunate to have in place strong strategic partnerships pan Essex, allowing its members to capitalise on the uniquely progressive collaborative approach across the skills delivery sector. Strong trusted working relationships, built between the Federation of Essex Colleges (FEDEC) the Local Skills Improvement planning team led by the Essex Chamber of Commerce and the three local authorities within Greater Essex, has over the past few years ensured that the Independent Training Sector are fully immersed in skills delivery planning. The Independent Training Sector interests are represented at Essex Skills & Business Board (ESBB) level, as well as LSIP sector skills groups, each one of these sector specific groups report directly into the (ESBB) and contribute towards intelligence submitted to Skills England.

Work undertaken alongside LSIP leads, has facilitated introduction to teams working towards the various large infrastructure projects planned for the county. The EPN has facilitated member inclusion in a series of Education & Provider roundtables – the key purpose, to share high-level skills demand data, key supply chain roles, and indicative dates supportive of skills delivery planning towards peak demand. At a regional level EPN represent our membership on the East of England Skills Delivery Group, tasked with reporting to the Skills All Political Party Group (APPG), towards a strategic framework for levelling up skills in the East of England. Meetings take place termly, offering insight into employers' requirements across neighbouring counties.

The EPN membership is fully committed to the anticipated advent of a Greater Essex Mayoral Combined Authority, with the ability to make local strategic decisions, further joining the public and private sectors together around a unified vision for skills and economic growth. Building on existing collaborative working across skills delivery partnerships, the EPN in representing our wider membership is committed to fully engage in decisions of strategic significance reflective of the needs of Essex businesses now and for the future, with the ultimate objective of maximising the growth potential of the Essex economy and that of the wider East of England.

4. What has been achieved so far? (continued)

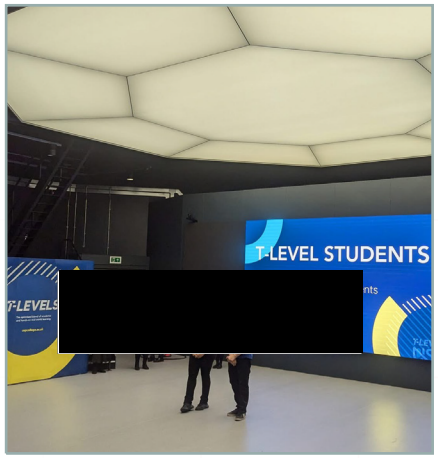
New buildings and facilities funded by the Local Skills Improvement Fund

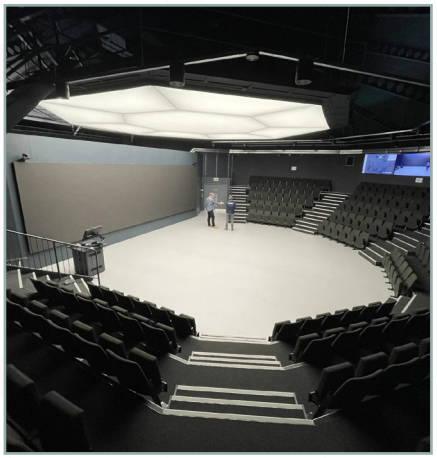
In the previous report, it was outlined that there were a range of facilities to be created by March 2025 and supported by the Local Skills Improvement Fund (LSIF). These are delivering against the priorities set out to improve the Essex Skills System and the focus on key sectors. They will provide students with up to date, relevant skills and tutors with state-of-the-art facilities to do so. These are helping to ensure that employers get the skills they need. Facilities are now in place across Essex as follows:



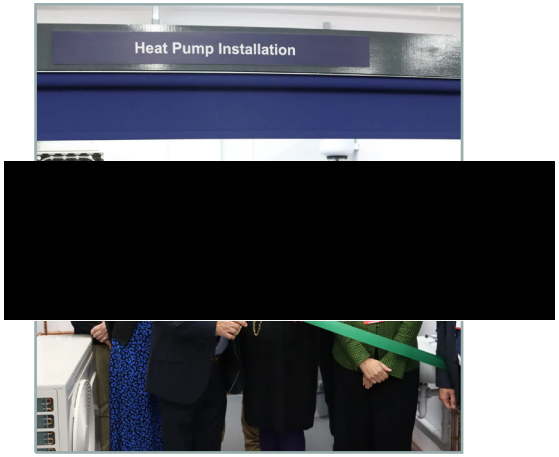
Chelmsford College Repurposed their Learning & Resource Centre into a Digital & Employability Hub aligned to the sector and skills priorities. This provides new student facilities to deliver the wider essential skills sought after by employers in one dedicated space with new equipment. This also included the relocation of the Careers Advice Centre.

USP College - completed its LSIF funded project in October 2024 and launched in November. **A theatre has been repurposed creating a multi-use, adaptive digital learning and immersive technology space** with multimedia content and high-tech lecture style learning. The repurposing of the theatre has been well received by students, staff and external visitors. The aim is to utilise this space to help address staffing challenges and has been successful along with the aim to expand the reach of digital experts across a broad range of learner groups. The Immersive Theatre seamlessly blends physical and virtual experiences, accommodating over 200 in-person attendees while connecting with unlimited virtual participants—all enjoying equal opportunities to engage, collaborate and interact in real-time. This adaptability addresses staffing challenges by extending the reach of digital experts across diverse learner groups while maintaining educational quality.





4. What has been achieved so far? (continued)



Colchester Institute - launched its **state-of-the-art Net Zero Centre** in September 2024. Comprising 12 bays supporting various renewable technologies including Heat Pumps, Hybrid Systems, Solar PV, Solar Thermal, Battery Storage and EV Charging following a partnership investment from Samsung UK and Worcester Bosch. The Centre also features outdoor working units as well as demonstration models. A classroom adjacent to the centre is in use for commercial delegates as well as supporting college learners including apprentices.

New City College (Epping) has completed the conversion of 120 sqm of existing storage space within the College's campus buildings into a low carbon laboratory space. This development enables the introduction of low carbon technologies and practices at the New City College Epping Forest Campus. The project's aim to provide a high-quality teaching environment aligned with industry standards has been achieved. In line with LSIP priorities, the college has enhanced the quality of provision, strengthened employer engagement, and supported the continuous professional development of teaching staff across the partnership.





Harlow College has used their LSIF funding to **repurpose teaching spaces into state-of-the-art digital learning areas to deliver for the digital, creative and health science sectors**, including an immersive operating theatre.

South Essex College - repurposed space for new music technology provision – this is linked electronically to the Backstage Centre, High House Production Park and new Purfleet Studios. It includes practice rooms, a live room, control room suite and post-production facility.

4. What has been achieved so far? (continued)

In addition to these capital projects that were funded through the LSIF, **there was a range of other activity across colleges delivering against the LSIP through LSIF funding**. This included CPD for teachers to support retention and the creation of an interactive virtual environment for young people and adults across Greater Essex to better understand the pathways to careers in the LSIP priority sectors. Some headlines are captured below and this illustrates that many of the targets have been exceeded.

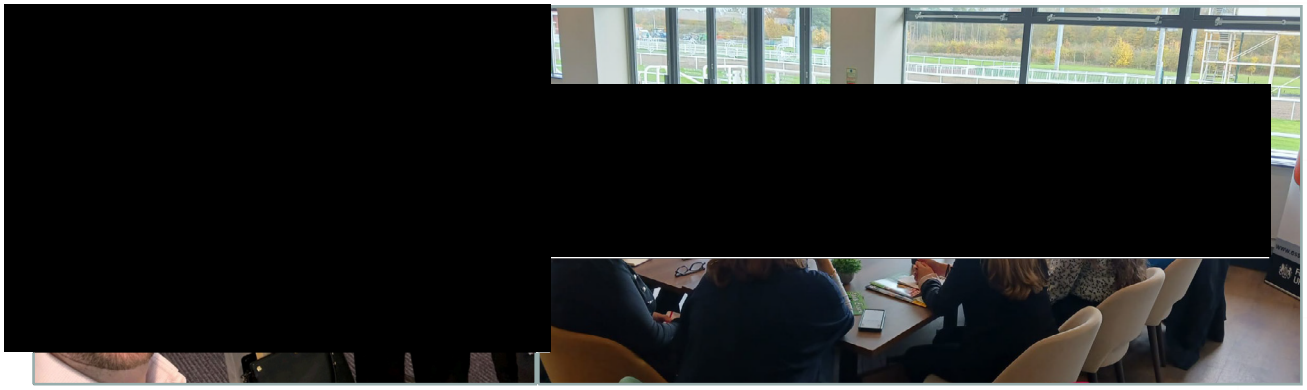
	Target	Actual
Number of new Level 3 courses aligned to LSIP priorities	12	13
Number of new Level 4 courses aligned to LSIP priorities	6	8
Forecast learner starts on new Level 3 courses	120	128
Forecast learner starts on new Level 4 courses	60	84
Number of learners forecast to undertake learning using new facilities/ equipment created under the LSIF.	200	2,213
Number of employers releasing / loaning staff to help develop or teach new provision	24	26
Number of employers reporting that training is giving learners the skills needed	50	64
Number of employers providing industry placements to FE teaching staff.	35	40
Training and support to improve capability of teaching staff: Number of teaching staff undertaking industry placements.	50	61
Number of teaching staff undertaking CPD or benefitting from cascade training	500	500
College leadership: Number of college leaders / governors supported through training or other support to build leadership and management capability	0	28
Number of new teaching facilities created (e.g. number of workshops / classrooms refurbished / fitted out with new industry standard equipment)	9	100



Employer Toolkit for Essex

The Employer Guide was produced in February 2025 in response to business feedback that the skills landscape can be difficult to navigate. This directly responds to the LSIP priority around improving the skills system and having a more coordinated approach. This utilised an existing national guide produced by Gatsby and partners and localised the information for Essex, including case studies of Essex employers engaging in aspects such as T Levels, apprenticeships and being a Governor. The guide also links to further information and resources and has been published on the LSIP web pages. The guide has been well received and is a valuable resource for the area. Gatsby fed back that ***'This is truly excellent – and one of the best examples of adaptions we have seen.'*** The guide will be updated as and when there are any changes to the skills landscape.

4. What has been achieved so far? (continued)



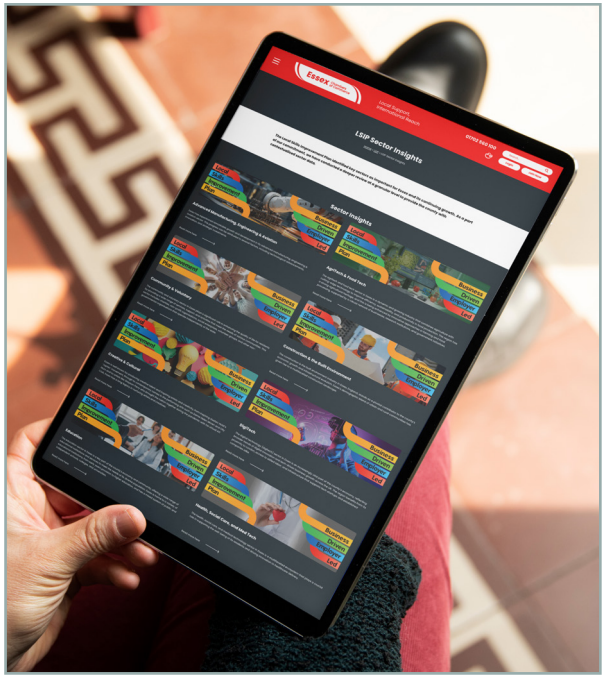


Festival of Business and Business Time Essex Supplement

The Festival of Business was held in November 2025 at Chelmsford City Racecourse with over 700 attendees and 100 exhibitors. The event also included a showcase of talent and skills in the county and was attended by Mel Collins of the national LSIP team. As part of the event, an Essex Skills brochure was also produced and funded by Essex County Council. This showcases the skills provision in Essex, featuring facilities and courses delivered as well as related work such as the Essex Careers magazine. As well as being distributed at the event, this was circulated to 8,000 employers and the digital version is available as a resource on the LSIP web pages. On the day, there was also a skills roundtable, attended by Mel and colleagues from local colleges, providers and Essex County Council. This enabled feedback and discussion on issues such as the defunding of Level 7 qualifications. Both the event and publication responded to LSIP priorities around skills system planning for Essex and ensured a joined-up approach. It also responded to sector priorities in showcasing the support available to employers across the key sectors.



4. What has been achieved so far? (continued)



Sector Insights and Dashboard

To ensure that up to date and detailed information is available and accessible, Sector Insights were produced in January 2025. This helps to ensure that information is available to the provider landscape and local stakeholders also. They include information such as key facts and figures, employer feedback, skills supply and provider information. The dashboard has been produced in collaboration with Lightcast and provides labour market and vacancy information, sourced from a variety of government databases. This is interactive and users are able to see key labour market trends, employment counts, top employers and specialised skills. It can also be filtered by area and sector. This directly responds to the LSIP priorities around strengthening skills in priority sectors.

Tackling Essential Skills – Deep Dive with Colleges

To respond to the LSIP priority regarding essential skills and including soft skills and behaviours, Essex colleges commissioned a report in December 2024 to explore what is already being done and areas of best practice as well as tools being utilised. This has highlighted the range of terminology used and approaches as well as good practice. This will help to inform a shared approach across colleges as part of the next phase and also links to related areas of work such as Aspirational Essex (see below).

Stakeholder Contributions – Essex County Council

Essex County Council has a range of work which is aligning to the LSIP and delivering against it. The LSIP has been helping to drive the focus for this work. This also illustrates the wider reach and impact it is having on the skills landscape. These include:

- The Essex Careers magazine, showcasing key sectors and the provider landscape to individuals and employers – responding to LSIP sector priorities
- The development of Skills Bootcamps for Essex, aligning to LSIP sector priorities
- The development of the 'Essex Connector' tool which enables further join up of skills work and helps to address the LSIP skills system priorities
- The launch of Aspirational Essex, offering accreditation to providers, employers and residents - supporting the LSIP essential and sector skills priorities
- The launch of the Lasting Legacy programme to support the construction sector – supporting the LSIP priority focus on construction as a key sector
- The launch of an Apprenticeship toolkit to complement the Essex Employer Guide, supporting the LSIP priority to improve the skills system and have a more coordinated approach
- A Green Workforce event with Chelmsford College and stakeholders responding to the LSIP priority regarding essential skills and including green skills to support sustainability
- The Bridge project connecting employers to inclusive talent and which has already provided over 1500 careers and workplace opportunities, responding to the LSIP priority to support inclusive employment and remove barriers to learning

5. What still needs to be achieved?

This report has set out a wide range of work that is underway and delivering against the LSIP priorities. This also illustrates that the LSIP is firmly established in the local landscape and well positioned for future developments such as local government reorganisation and devolution. It is vital to maintain the momentum and continue with what is working well as well as focus on new areas of development. This will also help to inform the next round of LSIP development which is due to commence in Autumn 2025. The Action Plan (Annex A) accompanying this report goes into further detail on ongoing and future work, with key areas including:

- **Launching the Essex Connector Tool** – this is an ambitious project being led by Essex County Council in collaboration with Essex Chambers of Commerce to directly respond to the LSIP priority around improving the skills system and achieving greater join up. This will use AI to utilise trusted sources and information to help employers and individuals to navigate the local skills system and find the right support for them. It will also be a tool for careers advisors and tutors. This will deliver against the LSIP priorities for essential skills and sector skills in helping to join everything up. It will also evolve and update as information online updates so will not be static. This will be commissioned in Autumn 2025.
- **Next phase of 'Essential Skills' project** developing a shared approach across Essex and responding to the LSIP priority on Essential Skills – this will provide a joined-up approach across Essex to ensure consistent terminology and understanding for employers and individuals. It is likely to include shared resources and tools such as case studies to bring the topic to life and explore aspects such as mental health and resilience. Next steps will be agreed in the Summer with the first phase to be underway by Autumn 2025.
- **Informing the roll out of Skills Bootcamps in Essex** - directly responding to the LSIP priority sectors and helping to ensure that employers and individuals are benefiting from Bootcamps which are flexible courses of up to 16 weeks to build up sector specific skills and fast tracking to an interview with a local employer. These are currently rolling out so we will continue working with Essex County Council to ensure Bootcamps are responding to LSIP priority sectors.
- **Continuing to drive forward the work of the Sector Groups and related work (such as curriculum alignment to sectors)** - a lot of curriculum alignment has already been achieved to respond to LSIP sector priorities. We will continue to work with sectors to respond to their needs and will also take this into account for developing the next LSIP later in the year.
- **Continuing to collaborate on system barriers**, such as tutor shortages and assessing the effectiveness of the approach to date in terms of aspects such as utilising digital technology to reach greater numbers.
- **Mapping of existing provision through ILR** (Individualised Learner Record) data and working with colleges and local authorities to review current and future funding to ensure alignment – preliminary data is being analysed and we will work with partners to ensure a consistent understanding and overview of delivery, to be provided on an annual basis.
- **Working with major projects such as the Lower Thames Crossing** to ensure a joined-up approach to addressing skills needs and that employers and individuals are benefitting from this.
- **Continuing to engage employers** through events, sector groups and digital engagement.
- **Continuing to share progress** through the LSIP Bulletin, events and web pages.
- **Commencing preparation** for the new Essex LSIP later this year.

You can still get involved! We hope this report has once again showcased the wealth of work underway and the impact the LSIP is already having. We'd like to thank everyone involved and highlight that none of this would be possible without everyone working together. If you're not already, there are a range of ways to get involved and make a difference to the local skills landscape. This could include working with schools and colleges, sharing your expertise, offering an apprenticeship or feeding back to us via events and sector conversations. Contact us if you'd like to know more.

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Appendix H

Technical Guidance Note | 02/21

Assessing landscape value outside national designations



Landscape Institute
Inspiring great places

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Acknowledgements

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A draft was produced in January 2021 for consultation via the Landscape Institute's website.

The co-authors of this TGN are very appreciative of the many thoughtful comments provided by the working group and the constructive responses received from the wider LI membership during the consultation period, all of which have informed this version of the TGN.

Photo acknowledgements:

- Font cover: Pensford Viaduct viewed across the rural landscape of Bath and North East Somerset, credit LUC.
- Appendices cover: River Findhorn, Strathdearn, credit LUC.

1 Introduction

1.1 Purpose, aims and objectives

1.1.1 This technical guidance note (TGN) provides information and guidance[1] to landscape professionals and others who need to make judgments about the value of a landscape (outside national landscape designations[2]) in the context of the UK Town and Country Planning system. It is also intended to be of assistance to those who review these judgements, so that there is a common understanding of the approach.

1.1.2 Although the discussion that led to the drafting of this document was prompted by a need to interpret the (England) National Planning Policy Framework February 2019 (NPPF) term 'valued landscape', the main body of this TGN is intended to be independent of national policy, which differs across the four nations of the UK.

1.2 Structure

1.2.1 In Part 2, this TGN:

- *identifies the stages in the planning process at which landscape value might be assessed;*
- *reviews the tools available to enable practitioners to assess landscape value; and*
- *presents a list of factors that could be considered when identifying landscape value.*

1.2.2 Appendices provide:

- *a summary of historical background and context;*
- *a summary of the evolution of factors used to describe landscape value;*
- *a summary of policies and guidance relating to designated landscapes in the four nations of the UK;*
- *the Landscape Institute's understanding of the term 'valued landscape' as it is used in the context of the (England) NPPF; and*
- *an analysis of planning decisions and judgements concerned with the [England] NPPF term 'valued landscape'.*

1.3 Context and relationship to existing UK guidance

1.3.1 The TGN does not seek to provide an evaluative methodology that would replace those provided by other established advisory documents. It is intended to supplement existing advice to practitioners, such as guidance on Landscape Character Assessment and Landscape Sensitivity Assessment (Natural England, NatureScot, Natural Resources Wales, Marine Management Organisation), Local Landscape Designation (NatureScot, Natural Resources Wales) and Landscape and Visual Impact Assessment (the Landscape Institute and Institute of Environmental Management and Assessment). The TGN acknowledges and reflects all these important sources of guidance.

1.3.2 Although the history of how we value landscape is closely related to the concept of 'natural beauty' (summarised in **Appendix A2**), it is not the purpose of this document to define the expression 'natural beauty' and this TGN does not apply to national landscape designations.

[1] Some parts of the note are for information, some parts supplement existing guidance and other parts (e.g. **Appendix A4**) provide new guidance.
[2] Designation of nationally important landscapes is a matter for government and its agencies, some of whom have prepared technical guidance.

1.3.3 There is a difference between landscape value and the wider topic of environment value. For example, the assessment of Ecosystem Services (which combines quantitative and qualitative information) and Natural Capital Accounting (a quantitative approach) are two approaches to valuing the environment, of which landscape forms an important part. More information about these approaches can be found in the following LI Technical Information Notes (TIN):

- *TIN 02/2016 - Ecosystem Services;*
- *TIN 02/2018 - Natural Capital Accounting.*

1.4 Potential future revisions

1.4.1 Landscape offers multiple values, benefits and services and the way in which landscapes are valued by people is a dynamic process that can change over time. The landscape profession's understanding of landscape value is still evolving, particularly in light of the nature and climate emergency. This TGN is the Landscape Institute's current reflection on the subject of landscape value.

1.4.2 The wide range of comments on the consultation draft document suggested that further guidance would be welcome, including:

- *how the landscape design process can respond to value assessments;*
- *how value can be expressed in local plan policy;*
- *how the increased emphasis on 'beauty' in Government papers (in England) relates to landscape value; and*
- *how to interpret value in relation to other aspects of England's NPPF such as Local Green Spaces.*

1.4.3 It has not been possible to address all these as part of this TGN, although they could form topics for future TGNs.

1.4.4 This TGN is written in the context of current policy guidance and evaluation factors that have evolved since 1945 (see **Appendices A1** and **A2)**. The LI is committed to equity, diversity and inclusion within the landscape profession and emerging sources of 'evidence' of value, for example from social data, will feed into future revisions to this TGN.

.

2 Tools to enable practitioners to assess landscape value

This TGN uses the following definitions:

Landscape qualities = characteristics/ features of a landscape that are valued

This term is being used to distinguish landscape qualities from landscape characteristics which are elements, or combinations of elements, which make a particular contribution to landscape character. Landscape qualities (in the sense meant in this TGN) are usually referred to as 'special qualities' or 'special landscape qualities' in relation to nationally designated landscapes. For example, 'special qualities' is a statutory expression used in relation to National Parks, in policy for Scotland's local landscape designations, and is a term used informally to describe components of natural beauty set out in AONB Management Plans[3].

Landscape value = the relative value or importance attached to different landscapes by society on account of their landscape qualities (see Table 1).

The definition of landscape value used in this TGN draws on, and is compatible with, the GLVIA3 definition of landscape value as well as Natural England's definition (Landscape Institute and Institute of Environmental Management & Assessment, 2013; Tudor, 2014). The definition makes it clear that it is 'society' that assigns value to landscapes. However, landscape value means more than popularity and the Landscape Institute suggests that value assessments should be undertaken by a landscape professional, drawing on evidence from stakeholders where available.

2.1 Introduction

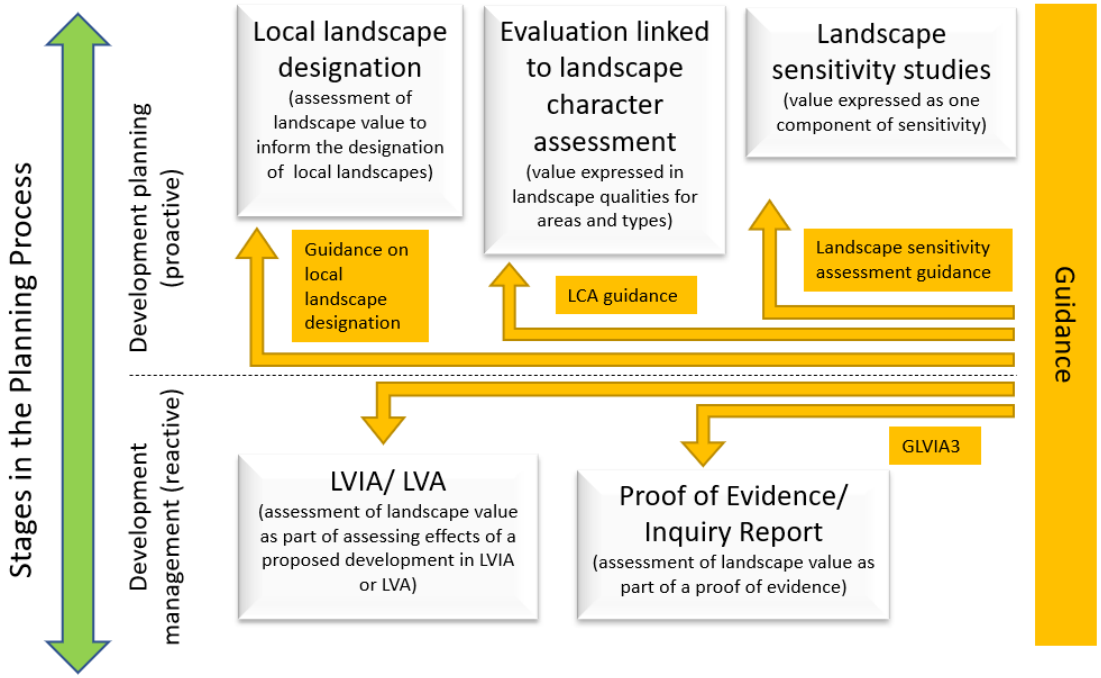
2.1.1 Assessments of landscape value (for landscapes which are outside, and not candidates for, national designation) may be required at different stages of the planning process, for example:

- *Local planning authorities (LPAs), neighbourhood planning groups and other parties at the evidence-gathering and plan-making stages;*
- *LPAs, applicants/appellants and others considering a site on which future development or other form of change is proposed, usually at the planning application or appeal stage.*

2.1.2 These scenarios are shown by **Figure 1**, along with the type of guidance that might feed in.

[3] National Parks are UK-wide. AONBs are found in England, Wales and Northern Ireland, and NSAs are unique to Scotland.

Figure 1: Assessing landscape value at different stages of the planning process



2.2 Assessing landscape value as part of plan making (development planning)

2.2.1 Landscape value at the local authority or neighbourhood level can be assessed and mapped spatially, i.e. through identifying areas for local landscape designation. Studies to support spatial designations should identify the landscape qualities of each area of landscape proposed for designation.

2.2.2 Landscape value can be assessed as an evaluation stage of a landscape character assessment or as a follow-on study. In this case landscape qualities will be identified in relation to individual character areas or types. Currently these are commonly described as 'valued landscape characteristics' or 'landscape qualities'.

2.2.3 Landscape value can also be assessed as part of a landscape sensitivity study, as landscape value is one of the two components of landscape sensitivity (the other being susceptibility). The areas to be assessed will depend on the purpose of the study.

2.2.4 The LI supports all approaches as they are all capable of highlighting the particular aspects of a landscape that are valued. Where value has been placed on a landscape by the local planning authority, this should ideally be defined in the development plan documents. Where value is not defined in the development plan, evaluations undertaken by local planning authorities and neighbourhood planning groups still form part of the evidence base.

Local landscape designations: the spatial approach

2.2.5 Although the guidance in this note is independent of policy, it is worth noting that different parts of the UK currently have different policy approaches to local landscape designations, as described in **Appendix A3**. Local landscape designation is supported by national policy in Scotland, Wales and Northern Ireland, but across England local landscape designations have been inconsistently applied due to past changes of emphasis in national planning guidance. Therefore, the absence of local landscape designations in England does not necessarily indicate there are no landscapes worthy of local designation. Additionally, in all nations, the lack of designation does not mean that a landscape has no value.

2.2.6 Guidance on how to identify local landscape designations has been produced in Scotland and Wales. This TGN is intended to support the approach set out in these guidance documents:

- *NatureScot and Historic Environment Scotland (2020) have jointly produced guidance on designating Local Landscape Areas (LLAs) in Scotland which is intended primarily for local authorities to use in taking forward their own designation process. The guidance acknowledges that local landscape designations are a valuable tool in the development plan toolbox and outlines the process for designating new LLAs and refreshing existing designations, noting that 'designations do not mean other places are unimportant or not valued' (paragraph **1.16**).*

- *NRW has published LANDMAP Guidance Note 1: LANDMAP and Special Landscape Areas (2017)[4] which sets out an approach for defining Special Landscape Areas in Wales using LANDMAP[5] information. These areas may be designated for 'their intrinsic physical, environmental, visual, cultural and historical importance, which may be considered unique, exceptional or distinctive to the local area' and they should be 'important for their distinctive character, qualities and sense of place'.*

2.2.7 The guidance produced by NatureScot and NRW may be helpful for other nations that do not have their own guidance.

2.2.8 Where local designations are used, the identification of their spatial boundaries and their landscape qualities should be supported by evidence.

2.2.9 **Table 1** of this TGN sets out a range of factors that could be considered to define the value of a landscape[6] and to inform the designation process. These factors are intended to be consistent with the factors set out in existing guidance in relation to local landscape designations in Scotland and Wales, as well as guidance in relation to national landscape designations (e.g. guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England). However, they are not intended to be an exhaustive list.

2.2.10 Stakeholder engagement and early collaboration with local communities will add depth to the assessment by helping the landscape professional to understand what people value about the local landscape. Community engagement should be encouraged whenever practicable in line with existing planning guidance.

Evaluative studies linked to landscape character assessment

2.2.11 The guidance on Landscape Character Assessment (The Countryside Agency and Scottish National Heritage, 2002), which is still in use in Scotland, acknowledges that 'most assessments will usually move beyond the characterisation stage to the stage of making judgements to inform particular decisions'[7]. Natural England's 2014 document, which replaced the 2002 guidance in England, also notes that landscape character assessment can be used to identify special qualities and inform judgements (Tudor, 2014). These evaluative studies can be undertaken as an extension to a landscape character assessment, or as a separate follow-on study. Such studies can include the identification of landscape qualities that contribute to the value of landscape areas or types[8]. **Table 1** of this TGN sets out a range of factors that could be considered as part of the process.

2.2.12 In these types of assessments, information from stakeholders (where available) about what is valued should inform the landscape professional's consideration of landscape value.

Landscape sensitivity studies

2.2.13 Landscape value is assessed as one of the two components of landscape sensitivity in strategic landscape sensitivity assessments. As explained in Natural England's *An Approach to Landscape Sensitivity Assessment – to Inform Spatial Planning and Land Management* (Tudor, 2019), landscape

[4] https://naturalresources.wales/media/680613/landmap-guidance-note-1-landmap-slas-2017.pdf https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf

[5] LANDMAP is an all-Wales landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated.

[6] It should be noted that designation is a process that may include factors other than landscape value.

[7] This is a two-stage process with the landscape character assessment being separate from subsequent assessments of value or sensitivity.

[8] It should be noted that, in Wales, LANDMAP already includes a range of criteria-based evaluations relating to the landscape.

sensitivity combines judgements about the susceptibility to the specific development type/development scenario or other change being considered together with the value(s) related to that landscape and visual resource.

2.2.14 Existing guidance on landscape sensitivity assessment should be followed where available. In addition to the guidance from Natural England above, Natural Resources Wales and NatureScot are also preparing guidance documents for Wales and Scotland which should be available soon. The Marine Management Organisation (MMO) has also published guidance on seascape sensitivity assessment (see further reading). The factors in **Table 1** of this TGN may be helpful to consider as part of the process of landscape sensitivity assessment.

2.3 Assessing landscape value of a site in its context (as part of development management)

2.3.1 The landscape value of a site in its context needs to be assessed as part of carrying out a Landscape and Visual Impact Assessment (LVIA) or Landscape and Visual Appraisal (LVA)[9]. Most commonly this will be as part of the assessment of a development proposal (for a planning application or appeal). The current guidance for LVIA/LVA is the third edition of *Guidelines for Landscape and Visual Impact Assessment* (GLVIA3; LI and IEMA, 2013) which states that the value of a landscape should be assessed as one of two components of landscape sensitivity[10]. Landscape value is the 'inherent' component, which is independent of the development proposal, while the other component, susceptibility, is development specific.

2.3.2 GLVIA3 recognises that landscape value is not always signified by designation: 'the fact that an area of landscape is not designated either nationally or locally does not mean that it does not have any value' (paragraph **5.26**). GLVIA3 recommends that when undertaking a LVIA/LVA in an undesignated area, landscape value should be determined through a review of existing assessments, policies, strategies and guidelines and, where appropriate, by new survey and analysis (paragraphs **5.27** and **5.28**). It is recommended that the process for identifying landscape value outside nationally designated areas is based upon a structured and transparent assessment process including community-based evidence where practical to do so.

2.3.3 The list of factors set out in Box 5.1 on page **84** of GLVIA3, which is a slightly modified form of the list of criteria from the 2002 landscape character assessment guidance, is described as an example of 'the range of factors that can help in the identification of valued landscapes'. It should be noted that they are not comprehensive nor intended to be prescriptive. Nevertheless, 'Box 5.1' has been widely used to inform judgements about landscape value as part of LVIA/LVA in the planning process.

2.3.4 Since GLVIA3 was published in 2013, appeal decisions, high court judgements and practitioners' experience have provided further information about the factors which can be considered in assessing landscape value outside nationally designated landscapes. These have been incorporated into **Table 1** of this TGN.

2.4 Range of factors that can be considered when identifying landscape value

2.4.1 **Table 1** sets out a range of factors that can be considered when identifying landscape value in any of the contexts described above. It also includes examples of potential indicators of value.

2.4.2 This broadly presents the same factors as Box 5.1 from GLVIA3 (and the 2002 Landscape Character Assessment Guidance), with the following changes:

- *'Conservation interests' is separated into natural heritage and cultural heritage factors (reflecting the approach in NatureScot's guidance on local landscape designations and Natural England's*

[9] Landscape and Visual Impact Assessments (LVIA) form part of an Environmental Impact Assessment (EIA). Landscape and Visual Appraisals (LVA) are standalone assessments.
[10] This is consistent with the approach set out in Tudor (2019).

Guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England);

- *The term 'landscape condition' is used in place of 'landscape quality (condition)';*
- *'Rarity' and 'representativeness' are combined into a newly-named factor 'distinctiveness'; and*
- *A new factor, 'function' is included which addresses the value attached to landscapes which perform a clearly identifiable and valuable function.*

2.4.3 It should be noted that the factors are not presented in order of importance.

2.4.4 As with Box 5.1 in GLVIA3, **Table 1** is not intended to be an exhaustive list of factors to be considered when determining the value of landscapes, but to provide a range of factors and indicators that could be considered. This TGN is intended to be complementary to GLIVA3.

Table 1: Range of factors that can be considered when identifying landscape value

Factor	Definition	Examples[11] of indicators of landscape value	Examples of evidence[12]
Natural heritage	Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape	Presence of wildlife and habitats of ecological interest that contribute to sense of place Extent and survival of semi-natural habitat that is characteristic of the landscape type Presence of distinctive geological, geomorphological or pedological features Landscape which contains valued natural capital assets that contribute to ecosystem services, for example distinctive ecological communities and habitats that form the basis of ecological networks Landscape which makes an identified contribution to a nature recovery/ green infrastructure network	Landscape character assessment LANDMAP Geological Landscape and Landscape Habitats Aspects (in Wales) Ecological and geological designations SSSI citations and condition assessments Geological Conservation Review Habitat surveys Priority habitats Nature recovery networks/ nature pathways Habitat network opportunity mapping/ green infrastructure mapping Catchment management plans Ecosystem services assessment/ schemes Specialist ecological studies
Cultural heritage	Landscape with clear evidence of archaeological, historical or	Presence of historic landmark structures or designed landscape elements (e.g. follies,	Landscape character assessment

[11] These examples are not exhaustive.
[12] Evidence may be set out in development plans (or evidence that sits alongside development plans). Online mapping may also provide useful information (see 'useful data links' at the end of this TGN).

Factor	Definition	Examples[11] of indicators of landscape value	Examples of evidence[12]
	cultural interest which contribute positively to the landscape	monuments, avenues, tree roundels) Presence of historic parks and gardens, and designed landscapes Landscape which contributes to the significance of heritage assets, for example forming the setting of heritage assets (especially if identified in specialist studies) Landscape which offers a dimension of time depth. This includes natural time depth, e.g. presence of features such as glaciers and peat bogs and cultural time depth e.g. presence of relic farmsteads, ruins, historic field patterns, historic rights of way (e.g. drove roads, salt ways, tracks associated with past industrial activity)	LANDMAP Historic Landscape and Cultural Landscape Services Aspect (in Wales) Historic environment and archaeological designations Conservation Area appraisals, Village Design Statements Historic maps Historic landscape character assessments[13] Historic Land Use Assessment[14] and Historic Area Assessments[15] Place names Specialist heritage studies
Landscape condition	Landscape which is in a good physical state both with regard to individual elements and overall landscape structure	Good physical condition/ intactness of individual landscape elements (e.g. walls, parkland, trees) Good health of elements such as good water quality, good soil health Strong landscape structure (e.g. intact historic field patterns) Absence of detracting/ incongruous features (or features are present but have little influence)	Landscape character assessment LANDMAP condition and trend questions (in Wales) Hedgerow/ tree surveys Observations about intactness/ condition made in the field by the assessor SSSI condition assessments Historic landscape character assessments/ map regression analysis
Associations	Landscape which is connected with notable people, events and the arts	Associations with well-known literature, poetry, art, TV/film and music that contribute to perceptions of the landscape	Information about arts and science relating to a place Historical accounts, cultural traditions and folklore

[13] Historic Landscape Characterisation has developed as a GIS mapping tool to capture how land use has changed and the 'time-depth' of the present-day landscape. https://historicengland.org.uk/research/methods/characterisation/historic-landscape-characterisation/

[14] Mapping of Scotland's Historic Landscape: https://hlamap.org.uk/

[15] https://historicengland.org.uk/images-books/publications/understanding-place-historic-area-assessments/

Factor	Definition	Examples[11] of indicators of landscape value	Examples of evidence[12]
		Associations with science or other technical achievements Links to a notable historical event Associations with a famous person or people	Guidebooks/ published cultural trails LANDMAP Cultural Landscape Services aspect (in Wales)
Distinctiveness	Landscape that has a strong sense of identity	Landscape character that has a strong sense of place (showing strength of expression of landscape characteristics) Presence of distinctive features which are identified as being characteristic of a particular place Presence of rare or unusual features, especially those that help to confer a strong sense of place or identity Landscape which makes an important contribution to the character or identity of a settlement Settlement gateways/approaches which provides a clear sense of arrival and contribute to the character of the settlement (may be ancient/historic)	Landscape character assessment LANDMAP Visual & Sensory question 3 and 25, – Historic Landscape question 4 (in Wales) Guidebooks Observations about identity/ distinctiveness made in the field by the assessor
Recreational	Landscape offering recreational opportunities where experience of landscape is important	Presence of open access land, common land and public rights of way (particularly National Trails, long distance trails, Coastal Paths and Core Paths) where appreciation of landscape is a feature Areas with good accessibility that provide opportunities for outdoor recreation and spiritual experience/ inspiration Presence of town and village greens Other physical evidence of recreational use where experience of landscape is important Landscape that forms part of a view that is important to the	Definitive public rights of way mapping/ OS map data National Trails, long distance trails, Coastal Paths, Core Paths Open access land (including registered common land) Database of registered town or village greens Visitor surveys/ studies Observations about recreational use/ enjoyment made in the field by the assessor

Factor	Definition	Examples[11] of indicators of landscape value	Examples of evidence[12]
		enjoyment of a recreational activity	
Perceptual (Scenic)	Landscape that appeals to the senses, primarily the visual sense	Distinctive features, or distinctive combinations of features, such as dramatic or striking landform or harmonious combinations of land cover Strong aesthetic qualities such as scale, form, colour and texture Presence of natural lines in the landscape (e.g. natural ridgelines, woodland edges, river corridors, coastal edges) Visual diversity or contrasts which contributes to the appreciation of the landscape Memorable/ distinctive views and landmarks, or landscape which contributes to distinctive views and landmarks	Landscape character assessment LANDMAP Visual and Sensory scenic quality question 46 (in Wales) Protected views, views studies Areas frequently photographed or used in images used for tourism/ visitor/ promotional purposes, or views described or praised in literature Observations about scenic qualities made in the field by the assessor Conservation Area Appraisals Village Design Statements, or similar
Perceptual (Wildness and tranquillity)	Landscape with a strong perceptual value notably wildness, tranquillity and/or dark skies	High levels of tranquillity or perceptions of tranquillity, including perceived links to nature, dark skies, presence of wildlife/ birdsong and relative peace and quiet[16] Presence of wild land and perceptions of relative wildness (resulting from a high degree of perceived naturalness[17], rugged or otherwise challenging terrain, remoteness from public mechanised access and lack of modern artefacts) Sense of particular remoteness, seclusion or openness Dark night skies	Tranquillity mapping and factors which contribute to and detract from tranquillity Dark Skies mapping Wildness mapping, and Wild Land Areas in Scotland Land cover mapping Field survey LANDMAP Visual and Sensory Aspect

[16] More about tranquillity can be found in Landscape Institute Technical Information Note 01/2017 (Revised; Landscape Institute, 2017).

[17] Relating to extensive semi-natural vegetation, presence of wildlife and presence of natural processes/ lack of human intervention.

Factor	Definition	Examples[11] of indicators of landscape value	Examples of evidence[12]
		A general absence of intrusive or inharmonious development, land uses, transport and lighting	
Functional	Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape	Landscapes and landscape elements that contribute to the healthy functioning of the landscape, e.g. natural hydrological systems/ floodplains, areas of undisturbed and healthy soils, areas that form carbon sinks such as peat bogs, woodlands and oceans, areas of diverse landcover (benefits pest regulation), pollinator-rich habitats such as wildflower meadows Areas that form an important part of a multifunctional Green Infrastructure network Landscapes and landscape elements that have strong physical or functional links with an adjacent national landscape designation, or are important to the appreciation of the designated landscape and its special qualities	Land cover and habitat maps Ecosystem services assessments and mapping (particularly supporting and regulating services) Green infrastructure studies/strategies Development and management plans for nationally-designated landscapes, Local Plans and SPDs Landscape character assessments

The practical application of factors in coming to a judgement on landscape value

2.4.5 The following bullet points provide some advice on the practical application of the factors in **Table 1**:

- *The factors to be considered are not fixed as they need to be appropriate to the particular project and location. It is recommended that the factors used to assess landscape value in a particular assessment are, where appropriate, discussed with the relevant planning authority or statutory consultees.*
- *The indicators of value should be reviewed on a case-by-case basis, taking into account what they contribute (positively or negatively) to a specific landscape. The relative importance to be attached to each indicator is likely to vary across different landscapes. Once evidence for each factor has been collated and assessed, it is important to step back and judge the overall 'weight of evidence' in coming to an overall judgement on landscape value.*
- *There are likely to be overlaps between the factors, as well as overlaps with other specialist studies for example in relation to natural and cultural factors. These overlaps should be acknowledged and considered when presenting conclusions on the overall value of the landscape.*
- *While condition/intactness of a landscape is one factor that can influence value, poor landscape management should not be a reason to deny a landscape a valued status if other factors indicate*

value. Deliberately neglecting an area of landscape and allowing its condition to deteriorate should not be allowed to diminish its value in a planning context.

- *When assessing landscape value of a site as part of a planning application or appeal it is important to consider not only the site itself and its features/elements/characteristics/qualities, but also their relationship with, and the role they play within, the site's context. Value is best appreciated at the scale at which a landscape is perceived – rarely is this on a field-by-field basis.*
- *Landscape function can influence value, but the presence of a spatial designation (e.g. Green Belt or Green Gap) is not in itself an indicator of high landscape value.*
- *The presentation of information about landscape value should be proportionate to the task at hand.*
- *Landscape value, and the way in which landscapes are valued by people, is a dynamic process, and can change over time. Any value assessment will be a snapshot in time.*

3 References and further reading

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Welsh Government (2018) ***Valued and Resilient: The Welsh Government's Priorities for Areas of Outstanding Natural Beauty and National Parks*****. Cardiff: Welsh Government.**

Useful data links

England

https://naturalengland-defra.opendata.arcgis.com/

https://www.gov.uk/right-of-way-open-access-land/access-private-land

https://magic.defra.gov.uk/

Wales

www.naturalresources.wales/landmap

www.naturalresources.wales/landscape

http://lle.gov.wales

Scotland

Landscape Character Assessment https://www.nature.scot/professional-advice/landscape/landscape-character-assessment [*the general LCA page; links from these pages include Coastal Characterisation guidance]*

Local Landscape Areas guidance https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/local-designations/local-landscape-areas

Wild Land https://www.nature.scot/professional-advice/landscape/landscape-policy-and-guidance/landscape-policy-wild-land

Historic Land Use Assessment https://hlamap.org.uk/

Northern Ireland

https://www.daera-ni.gov.uk/services/natural-environment-map-viewer

https://www.daera-ni.gov.uk/topics/land-and-landscapes/landscape-character-areas

https://www.daera-ni.gov.uk/articles/seascape-character-areas

4 Glossary

Term	Definition
Aesthetics	Philosophical study of beauty and taste
Characteristics (landscape)	Elements, or combinations of elements, which make a particular contribution to distinctive character (An Approach to Landscape Character Assessment Natural England 2014)
Green infrastructure	The network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. Individually, these elements are GI assets, and the roles that these assets play are GI functions (Green Infrastructure Landscape Institute Position Statement 2013)
Elements	Individual parts which make up the landscape, such as, for example, trees, hedges and buildings (GLVIA3)
Features	Particularly prominent or eye-catching elements, like tree clumps, church towers, or wooded skylines (from GLVIA3 and An Approach to Landscape Character Assessment 2014)
Landscape	An area as perceived by people whose character is the result of the action and interaction of natural and/or human factors (European Landscape Convention)
Landscape condition	A measure of the physical state of the landscape (including the intactness of the landscape structure and the condition of individual elements)
Landscape management	Action, from a perspective of sustainable development, to ensure the regular upkeep of a landscape, so as to guide and harmonise changes which are brought about by social, economic and environmental processes (European Landscape Convention)
Landscape planning	Strong forward-looking action to enhance, restore or create landscapes (European Landscape Convention) The development and application of strategies, policies and plans to create successful environments, in both urban and rural settings, for the benefit of current and future generations (Landscape Institute)
Landscape policy	An expression by the competent public authorities of general principles, strategies and guidelines that permit the taking of specific measures aimed at the protection, management and planning of landscapes (European Landscape Convention)
Landscape protection	Actions to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity (European Landscape Convention)
Landscape qualities	Characteristics/features of a landscape that have been identified as being valued

Term	Definition
	Landscape qualities are usually referred to as 'special qualities' or 'special landscape qualities' in relation to nationally designated landscapes or 'wildness qualities' in relation to Wild Land Areas.
Landscape value	The relative value or importance attached to different landscapes by society on account of their landscape qualities (see **Table 1**).
LVA	Landscape and visual appraisal
LVIA	Landscape and visual impact assessment
Natural beauty	The term 'natural beauty' is enshrined in the 1949 National Parks and Access to the Countryside Act (it was also subsequently included in the Nature Conservation and Amenity Lands Order (NI) 1985), the Town and Country Planning (Scotland) Act 1997, and the Planning etc. (Scotland) Act 2006). Natural beauty is not exhaustively defined in the legislation, but its meaning has been clarified and interpreted through a series of studies, guidance documents and public inquiries (see 'Further reading'). *N.B. Since the term 'natural beauty' applies to national designation, it is not the purpose of this note to define it.*
Natural capital	The elements of nature that directly and indirectly produce value or benefits to people, including ecosystems, species, fresh water, land, minerals, the air and oceans, as well as natural processes and functions. (Natural Capital Committee, 2014)
Scenic quality	The extent to which the landscape appeals to the senses (primarily, but not only, the visual senses) (Landscape Character Assessment Guidance 2002)
Special qualities	A statutory expression used in (amongst other places) sections 5 and 11A of the National Parks and Access to the Countryside Act 1949 (as amended), section 87 of the Countryside and Rights of Way Act 2000 and National Parks (Scotland) Act 2000 (although the term is not defined in legislation). Special qualities are defined by Nature Scot as 'the characteristics that, individually or combined, give rise to an area's outstanding scenery'

Appendices



A1 (Appendix 1) Assessment of landscape value: a summary of historical background and context

A1.1.1 Land has always had a productive value for food and other natural resources, but our appreciation of the landscape has evolved over time. A summary is provided below.

A1.1.2 During the 17th century in Europe, an appreciation of landscape became closely linked to ideas about beauty and aesthetics. In the 18th–19th centuries influential artists writers and thinkers such as Turner, Ruskin, Wordsworth and others publicly described their appreciation of scenic qualities, landform, nature, vernacular architecture, traditional agriculture, tranquillity and wildness, raising awareness of these landscape qualities.

A1.1.3 From the 19th century, the value of access to natural landscapes for recreation and wellbeing was also recognised, partly as a response to industrialisation. The National Trust was the first organisation to use the term natural beauty. Originally called the National Trust for Places of Historic Interest or Natural Beauty, it was established in 1895.[18] Its purpose, confirmed in the first National Trust Act passed in 1907, was 'promoting the permanent preservation for the benefit of the nation of lands and tenements (including buildings) of beauty or historic interest and as regards lands for the preservation (so far as practicable) of their natural aspect features and animal and plant life'.[19]

A1.1.4 Pressure in the early decades of the 20th century resulted in the establishment of the Addison Committee in 1929 and in 1931 the Addison Report (see Ministry of Town and Country Planning, 1947) recommended the identification of national parks in England and Wales. However, it was the establishment of the National Parks Committee and the publication of the Dower report (Ministry of Town and Country Planning, 1945), the Ramsay Report (Department for Health for Scotland, 1945) and the Hobhouse Report (Ministry of Town and Country Planning, 1947) that finally led to the 1949 National Parks and Access to the Countryside Act. This Act established a National Parks Commission with the purpose of preserving and enhancing 'natural beauty in England and Wales', and particularly in the areas designated under this Act as National Parks or as 'areas of outstanding natural beauty', for encouraging the provision of 'opportunities for open air recreation and the study of nature'.[20]

A1.1.5 The 1949 Act did not define 'natural beauty', but since then its meaning has been debated and tested through a series of studies, guidance documents (see the section on 'Further reading'), Secretary of State Decision letters, an Appeal Court judgement, and public inquiries. Some clarification has also been provided through legislative amendments to the 1949 Act, e.g. NERC Act 2006 Section 99. Following the 1949 Act national landscape designations were made in England and Wales following advice from experts who relied on criteria originally defined by Hobhouse (Ministry of Town and Country Planning, 1947) to assess the value of an area for its natural beauty and recreational opportunity. The first statutory designations in the UK were the Peak District and Lake District National Parks in England, and Snowdonia in Wales (all confirmed in 1951).[21] This approach to assessing

[18] For England, Wales and Northern Ireland. The National Trust for Scotland was established in Scotland in 1931.
[19] National Trust Act 1907.
[20] National Parks and Access to the Countryside Act 1949.
[21] Scotland passed the National Parks (Scotland) Act in 2000 and designated the Loch Lomond and the Trossacks National Park in 2002. Northern Ireland passed the Nature Conservation and Amenity Lands (Northern Ireland) Order in 1985 but has no designated National Parks at present, despite a proposal to designate the Mourne Mountains.

landscape value continued throughout the 1950s and 60s. **Appendix A3** provides a summary of current landscape designations within the UK.

A1.1.6 In the 1970s there were attempts to introduce a quantitative approach to assessing landscape value. These, along with other methods, were tested at the North Pennines AONB Public Inquiry in 1985. The inspector noted the lack of an agreed methodology to evaluating landscape, acknowledged that there was inevitably a degree of subjectivity, and recommended the use of informed opinion, a trained eye and common sense. The quantitative approach was generally considered inappropriate because it reduced complex concepts to a series of numerical values.

A1.1.7 In the 1980s a new methodology for understanding and recording what is important about a landscape began to emerge. Then known as Landscape Assessment, and now known as Landscape Character Assessment (see Landscape Institute, 2015), it was not limited to identifying landscapes worthy of designation but considered all landscapes with the objective of identifying what makes one area 'different' or 'distinct' from another (Countryside Agency and Scottish National Heritage, 2002b). Although the landscape assessment approach covered all landscape, early guidance included advice on evaluating landscapes (Countryside Commission, 1987) by identifying factors for evaluating 'natural beauty' which built on the Hobhouse criteria. The 1993 landscape assessment guidance (Countryside Commission, 1993) was specific in separating the classification and description of landscape character, which concerns what makes one area 'different' or 'distinct' from another, from landscape evaluation, which concentrates on relative value (Countryside Agency and Scottish National Heritage, 2002b). The 1993 guidance included criteria for evaluating 'landscape quality' (particularly in relation to designating landscapes) and identified factors important for evaluating natural beauty (see **Appendix A2**). Historic Landscape Characterisation, piloted at the end of the 1990s, also developed as a way of understanding and mapping the time-depth of places.

A1.1.8 In 1996, the evolving national approach for Landscape Assessment in Wales (Countryside Council for Wales, 1996), LANDMAP, took the strategic decision to include landscape evaluation information. A range of national criteria, grouped under different landscape themes, was developed to provide a relative indication of landscape value to prompt further investigation and consideration as part of planning projects or landscape assessments (see **Appendix A2**).

A1.1.9 The Countryside Agency and Scottish Natural Heritage (2002a) guidance on Landscape Character Assessment developed the criteria set out in the 1993 Landscape Assessment Guidance further, and these were presented as criteria for making judgements about 'landscape value' more widely (i.e. not just in relation to designated landscapes). These criteria informed subsequent guidance including guidance on Local Landscape Designations in Scotland (2006, updated 2020), Natural England's *Guidance for Assessing Landscapes for Designation as National Park or Area of Outstanding Natural Beauty in England* (2011) and Box 5.1 in the *Guidelines for Landscape and Visual Impact Assessment* (GLVIA3) (LI and IEMA, 2013). **Appendix A2** provides a summary of the evolution of factors used in the assessment of natural beauty and landscape value from 1945 onwards.

A1.1.10 The European Landscape Convention (2000) (ELC) was informed and influenced by the UK's landscape assessment work in the 1980s and 1990s. The first international treaty dedicated to the protection, management and planning of all landscapes in Europe, it was signed by the UK government in 2006[22]. Signatories acknowledge that 'the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas'[23] and that 'the landscape is a key element of individual and social well-being'. Article 6 of the Convention places a responsibility on all signatories to increase awareness of 'the value of their landscapes, their role and changes to them'.[24] As a signatory to the ELC, the UK has an obligation to enhance the natural and cultural value of all landscapes though a blend of strategies: managing and planning (restoring, creating/enhancing) landscapes.

A1.1.11 The importance of landscape and its value continues to be recognized, for example in DEFRA's 25 Year Environment Plan (HM Government, 2018). There has also recently been a re-emergence of the

[22] The UK remains a member of the Council of Europe, which is a separate body from the European Union.
[23] European Landscape Convention – Preamble.
[24] European Landscape Convention – Article 6.

word ‘beauty’ in the field of planning and placemaking (for example in the UK Government's commissioned ‘Living with Beauty’ report; see Building Better, Building Beautiful Commission/MHCLG, 2020).

A1.1.12 The landscape profession’s understanding of landscape value is still developing, particularly in light of the nature and climate emergency (as well as the lockdowns caused by the Covid-19 pandemic). People today value different aspects of landscape than they did in the past or may do in the future, but it is clear that landscape value is more than just beauty and aesthetics.

A2 (Appendix 2) An evolution of factors used to describe landscape value

A2.1 Introduction

A2.1.1 This Appendix summarises the factors used in the assessment of natural beauty and landscape value from 1945 onwards.

A2.2 1945

Report on National Parks in England and Wales (Cmd 6628), John Dower, Ministry of Town and Country Planning

A2.2.1 In 1942 John Dower, a research officer in the Planning Department of the Ministry of Works and Planning, was requested to report on the establishment of National Parks in England and Wales. In his 1945 report, he noted that 'the task of selecting and delimiting the areas which are to be established as National Parks … will clearly be no easy matter … It must rest on an adequate and disinterested survey and investigation of all areas which are, or are claimed to be, in any way suitable, and it must take into account a wide range of factors' (Ministry of Town and Country Planning, 1945).

A2.2.2 These factors were included in **paragraph 6**, as:

- *landscape beauty*
- *wildlife*
- *suitability for rambling access*
- *popularity*
- *existing and potential land utilization*
- *existing or threatened disfigurements*
- *transport and accommodation facilities, and*
- *the financial and administrative strength of the local authorities concerned.*

National Parks: A Scottish Survey, 'The Ramsay Report', Department of Health for Scotland

A2.2.3 The Scottish National Parks Survey Committee was set up to advise on areas suitable for National Parks and to supervise a survey of potential areas. The Committee laid down seven selection criteria (see Department for Health for Scotland, 1945):

- *outstanding scenic beauty*
- *accessibility*
- *preservation and preservability*
- *recreational facilities (of an open-air type)*

- *educational, cultural and social interests*
- *flora and fauna, and*
- *accommodation.*

A2.3 1947

Report of the National Parks Committee (England & Wales) (CMD 7121), Sir Arthur Hobhouse, Ministry of Town and Country Planning

A2.3.1 **Para 35 -** Factors in selection (of National Parks; see Ministry of Town and Country Planning, 1947)):

Natural beauty	Great natural beauty
Recreation	A high value for open-air recreation
Substantial continuous extent	Distribution so that at least one of them is quickly accessible from each of the main centres of population in England and Wales
Merit in variety	With the wide diversity of landscape which is available in England and Wales, it would be wrong to confine the selection of National Parks to the more rugged areas of mountain and moorland, and to exclude other districts which, though of less 'outstanding' grandeur and wildness, have their own distinctive beauty and high recreational value

A2.4 1986

Wildlife and Countryside Acts 1981 & 1985: Section 3 Conservation Maps of National Parks – Guidelines (CCD6), Countryside Commission (out of print)

A2.4.1 This guidance included a table of 'factors affecting natural beauty' in response to Section 3 of the Wildlife and Countryside Acts of 1981 and 1985 which placed a responsibility on each of the National Parks of England and Wales to prepare a map showing those areas of mountain, moor, heath, woodland, down, cliff or foreshore, the natural beauty of which the Authority considers it is particularly important to conserve. The same factors were subsequently reproduced in Countryside Commission (1987).

Physiographic	Geology, soils, relief/landform, land use, vegetation, ecological habitats, natural history/wildlife, archaeology, artefacts – buildings, walls
Associations	a. Historical – general history of settlements, special events b. Cultural – well-known personalities, literary, painting, music
Aesthetics	a. Visual – extent/degree of enclosure, form, scale, continuity/harmony/ contract, diversity, colour (hue, time), texture, presence of eyesores, detractors from scene, contribution to wider landscape, views out – length and breadth, views in – length and breadth, boundaries to views b. Other Senses – sounds, smalls, tastes, touch
Relative to other areas	Nationally rare, regionally rare, typical/representative of an area

Feelings evoked in the observer	Comfort, awe, remoteness, solitude, joy
Public accessibility	Indirect/visual, direct/actual – by vehicle, bicycle, horse or foot

A2.5 1991

Landscape Assessment: Principles and Practice, Countryside Commission (out of print)

A2.5.1 This Countryside Commission for Scotland (1991) guidance proposed criteria for evaluating landscape quality in Scotland, in relation to designation of National Scenic Areas, which are summarised in **Table 2** (originally **Table 4.2** of Part 4) of the University of Sheffield's 'A Statement on Natural Beauty: A Report to the Countryside Council for Wales' (2006).

Table 2: Proposed criteria for evaluating landscape quality in Scotland:

Main criterion	Factors considered	Explanation
Landscape as a resource	Rarity	Value conferred by virtue of scarcity value either of landscape as a whole or elements within it
	Representativeness/ typicality	Value because a landscape is typical or representative of its type demonstrating better than other areas the combination of features and attributes which characterise that type
Scenic quality	Combination of landscape elements	Landscape quality arising from the particular mix of landscape elements in an area of their disposition in relation to each other
	Aesthetic quality	Landscape quality resulting from the interaction of elements in terms of visual characteristics such as form, line, colour, texture, diversity, memorability, intactness and so on
	Intangible qualities	Includes sense of place or the 'genius loci' and ideas from preference theory including ideas of prospect/refuge and landscape legibility
Preference	Evidence on public preference	Ideally based on preference attitude surveys
	Informed consensus on value	Evidence from planners and landscape professionals, interest groups involved with landscape and writers, artists and photographers
Special values	Wild land/wilderness quality	Depends on factors such as apparent naturalness, remoteness, extent and feelings of solitude, escape and exposure
	Cultural associations	Landscape can assume significance because of its special cultural associations with people or events
	Special heritage interests	Landscape cannot be divorced from other interests and wildlife, archaeological and historical features and geological or geomorphological features will make major contributions to landscape character as well as having conservation value in their own right

A2.6 1993

Landscape Assessment Guidance (CCP 423), Cobham Resource Consultants, Countryside Commission (1993)

A2.6.1 The section of the 1993 guidance dealing with landscape evaluation dealt explicitly with the need to evaluate the quality of the landscape, especially where the assessment related to an area of designated landscape. A list of criteria for evaluating landscapes for designation was included, developing the factors contained in the Countryside Commission's 1991 guidance. They were:

Landscape as a resource	Important for reasons of rarity or representativeness
Scenic quality	High scenic quality, with pleasing patterns and combinations of features
Unspoilt character	Unspoiled by large scale, visually intrusive industry, mineral extraction etc.
Sense of place	Distinctive and common character, including topographic and visual unity
Conservation interests	Such as features of historical, wildlife or architectural interest
Consensus	Consensus of both professional and public opinion as to its importance

A2.7 1995

Guidelines for Landscape and Visual Impact Assessment (GLVIA1), Landscape Institute and Institute of Environmental Assessment (1995)

A2.7.1 Paragraph **3.41** suggested that a qualitative analysis requires an assessment to be made of landscape condition and importance in the sense of aesthetic or cultural value. It suggested that the analysis may include:

Landscape designations	List of landscape designations that may apply
Reasons for designations	Summary of the reasons for landscape designations, e.g. landscape type is rare in a national or regional context
Scenic quality	Professional judgements as to the scenic quality of the site and its wider landscape context, and to the importance of landscape components
Condition of landscape components	Assessment of the condition of important landscape components, including management of land, and the extent of deviation from the perceived optimum condition
Conservation interests	Details of any notable conservation interests such as features of historical, wildlife or architectural importance
Cultural associations	Reference to any special cultural associations, such as important writing and paintings that feature local landscapes
Local perceptions	Past and present perceptions of local value

A2.7.2 GLVIA1 also referred to Countryside Commission (1993) for further advice on criteria for evaluating landscape quality in England.

A2.8 1999

Interim Landscape Character Assessment Guidance, C. Swanwick & Land Use Consultants, Countryside Agency and Scottish Natural Heritage (out of print)

A2.8.1 Criteria for making judgments about landscape value were:

Landscape as a resource	Rarity, representativeness or typicality
Landscape quality	Extent to which typical character is demonstrated in an area and condition or state of repair of the landscape
Scenic quality	Depends upon perception and reflects the particular combination and pattern of elements in the landscape, its aesthetic qualities and its more intangible sense of place or genius loci
Consensus	Consensus of opinion, expressed by the public, informed professionals, interest groups, and artists, writers and other media
Conservation interests	Presence of features of wildlife, earth science or archaeological or historical interest which add to the value of the landscape as well as having value in their own right
Other values	Landscapes may be valued for their wilderness qualities, or particular cultural associations, or because of their tranquillity

A2.9 2001

LANDMAP 2001, and as amended to date. Countryside Council for Wales (2001)

A2.9.1 The LANDMAP assessment for Wales developed a set of evaluation criteria for separate themed layers.

A2.9.2 A method document for each theme set out and defined each criterion[25], as follows:

[25] LANDMAP methodology, including definitions of each layer, reports, guidance and interactive map browser.

Geological Landscape	*Landscape Habitats*	*Visual and Sensory*	*Historic Landscape*	*Cultural Landscape (NB: not evaluated by degree of importance)*
• *Research value* • *Educational value* • *Historical value* • *Rarity/ uniqueness* • *Classic example*	• *Priority habitats* • *Significance* • *Opportunity* • *Expansion rates* • *Sensitivity* • *Connectivity/ cohesion* • *Habitat evaluation* • *Importance for key species*	• *Scenic quality* • *Integrity* • *Character (strength of)* • *Rarity*	• *Integrity* • *Survival* • *Condition* • *Rarity* • *Potential*	• *Recognition/ transparency* • *Rarity* • *Group value* • *Survival*

Further layers, for seascapes and (ecosystem cultural) services are being added. The latter responds to the Welsh policy context, which views landscape value through ecosystem services, well-being and placemaking.

A2.9.3 Not all evaluations will be relevant to all projects, so intelligent selection is needed. 'Adding up' evaluations for different themes is discouraged as that masks what is important about a landscape (and would just confirm that all landscapes are very important in some way). Their intended use is to open rather than close discussion of landscape value, by alerting users to topics and areas that may need more detailed enquiry.

A2.10 2002

Landscape Character Assessment: Guidance for England and Scotland (CAX 84), Countryside Agency and Scottish Natural Heritage (2002a)

A2.10.1 Paragraph 7.22 states, 'In considering natural beauty and amenity, and in any other situation which requires that a landscape be identified as requiring special attention, judgements must be based at least in part on the concept of landscape value'. The reasons may be set out according to a range of more detailed criteria that may include the following:

Landscape quality/ condition	Intactness of the landscape and the condition of features and elements
Scenic quality	The term that is used to describe landscapes which appeal primarily to the visual senses
Rarity	The presence of rare features and elements in the landscape, or the presence of a rare landscape character type

Representativeness	Whether the landscape contains a particular character, and/or features and elements, which is felt by stakeholders to be worthy of representing
Conservation interests	Presence of features of particular wildlife, earth science or archaeological, historical and cultural interest can add to the value of a landscape as well as having value in their own right
Wildness	Presence of wild (or relatively wild) character in the landscape which makes a particular contribution to sense of place
Associations	Associations with particular people, artists, writers, or other media, or events in history

A2.11 2006

A Statement on Natural Beauty, Sheffield University Landscape Department, Countryside Council for Wales (CCW; Selman and Swanwick, 2010)

A2.11.1 This was an academic study commissioned by CCW. Paragraph **6** refers to criteria that can be taken into account in defining landscape value and hence defining landscapes which have outstanding 'natural beauty' as:

Scenic quality	Aesthetic aspects of landscape (those which give pleasure to the senses), its perceptual dimensions and the spiritual or emotional impact that both have on people
Sense of place	Unity and distinctiveness of landscape character
Landscape quality/condition	Intactness of the landscape and its condition, distinctiveness of landscape character in a particular locality
Integrity	Intact rural character and general lack of large-scale, visually intrusive or otherwise inharmonious development
Perceptual qualities	Perceptual qualities which make a particular contribution to sense of place, including wildness and tranquillity
Associations	Important associations of the landscape with people, places or events relevant to a particular place
Cultural descriptions	Expressions or descriptions of the landscape in art, literature, music and other art forms, through language and folklore, and through modern media
Rarity or representativeness	Either of the landscape as a whole, or of individual elements and features within it
Conservation interest	Presence of features of particular wildlife, earth science or archaeological, historical and cultural interest which add value to the landscape as well as having conservation value in their own right

Guidance on Local Landscape Designations, SNH and Historic Environment Scotland[26]

A2.11.2 SNH and Historic Environment Scotland's (2006) guidance on local landscape designations suggested that local authorities need to identify both the character and qualities of the landscape considered to be of particular value in the local context, and suggested the following aspects/factors could be considered:

	Definition	Description
Aspects of landscape character		
Typicality	Elements of landscape character which are particularly common within the assessment area as a whole	Landscape features or combination of features that recur throughout the area
Rarity or uniqueness	Particular aspects of landscape character which are rare or unique in the area	Landscape features or combination of features which are rare or unique within the assessment area as a whole
Condition or quality	The degree to which individual characteristics of landscape character are in a good state of repair or health	Landscape features or combination of features which are in a good state of repair
Landscape qualities		
Scenic	Aspects of the landscape and our reaction to it which contribute to its natural beauty and aesthetic appreciation	Landscapes with strong visual, sensory and perceptual impacts and experiential appeal. May contain a pleasing combination of features, visual contrasts or dramatic elements
Enjoyment	Aspects of the landscape and our reactions to it which contribute to its potential for recreation and amenity	Landscapes of importance as local greenspace, as tranquil areas and/or for countryside recreation. May contain viewpoints and landmarks
Cultural	Aspects of the landscape and our reactions to it which contribute to the understanding of its historic character and the wider cultural record	Landscapes rich in archaeology, built heritage, literary, artistic and other cultural associations and local history. May include historic gardens and designed landscapes
Naturalness	Aspects of the landscape and our reactions to it which contribute to its naturalness	Landscapes with extensive semi-natural habitat, a lack of human presence and perceived qualities of wildness. May include areas of wild land

A2.12 2011

Guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England, Natural England (2011)

A2.12.1 Table 3 of this guidance sets out factors that are related to Natural Beauty. These are expanded upon in Appendix 1 to include sub-factors and indicators, as follows:

[26] Accessible at https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/local-designations/local-landscape-areas

Factor	Example sub-factor	Example Indicator
Landscape quality	Intactness of the landscape in visual, functional and ecological perspectives	Characteristic natural and man-made elements are well represented throughout
	The condition of the landscape's features and elements	Landscape elements are in good condition
	The influence of incongruous features or elements (whether man-made or natural) on the perceived natural beauty of the area	Incongruous elements are not present to a significant degree, are not visually intrusive, have only localised influence or are temporary in nature
Scenic quality	A distinctive sense of place	Landscape character lends a clear and recognisable sense of place
	Striking landform	Landform shows a strong sense of scale or contrast
		There are striking landform types or coastal configurations
	Visual interest in patterns of land cover	Land cover and vegetation types form an appealing pattern or composition in relation to each other and/or to landform which may be appreciated from either a vantage point or as one travels through a landscape
	Appeal to the senses	Strong aesthetic qualities, reflecting factors such as scale and form, degree of openness or enclosure, colours and textures, simplicity or diversity, and ephemeral or seasonal interest
		Memorable or unusual views and eye-catching features or landmarks
		Characteristic cognitive and sensory stimuli (e.g. sounds, quality of light, characteristic smells, characteristics of the weather)
Relative wildness	A sense of remoteness	Relatively few roads or other transport routes
		Distant from or perceived as distant from significant habitation
	A relative lack of human influence	Extensive areas of semi-natural vegetation
		Uninterrupted tracts of land with few built features and few overt industrial or urban influences
	A sense of openness and exposure	Open, exposed to the elements and expansive in character
	A sense of enclosure and isolation	Sense of enclosure provided by (e.g.) woodland, landform that offers a feeling of isolation
	A sense of the passing of time and a return to nature	Absence or apparent absence of active human intervention

Relative tranquillity	Contributors to tranquillity	Presence and/or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences
	Detractors from tranquillity	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences
Natural heritage features	Geological and geo-morphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality
		Presence of striking or memorable geo-morphological features
	Wildlife and habitats	Presence of wildlife and/or habitats that make a particular contribution to distinctive sense of place or other aspects of scenic quality
		Presence of individual species that contribute to sense of place, relative wildness or tranquillity
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a particular contribution to distinctive sense of place or other aspects of scenic quality
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape
	Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty
	Associations with written descriptions	Availability of descriptions of the landscape in notable literature, topographical writings or guidebooks, or significant literature inspired by the landscape
	Associations with artistic representations	Depiction of the landscape in art, other art forms such as photography or film, through language or folklore, or in inspiring related music
	Associations of the landscape with people, places or events	Evidence that the landscape has associations with notable people or events, cultural traditions or beliefs

A2.13 2013

Guidelines for Landscape and Visual Impact Assessment (GLVIA3), Landscape Institute and Institute of Environmental Management & Assessment (2013)

A2.13.1 **Box 5.1** contains a 'Range of factors that can help in the identification of valued landscapes'. These are:

Landscape quality (condition)	A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual area, the intactness of the landscape and the condition of individual elements
Scenic quality	The term used to describe landscapes that appeal primarily to the senses (primarily but not wholly the visual senses)
Rarity	The presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type.
Representativeness	Whether the landscape contains a particular character and/or features or elements which are considered particularly important examples
Conservation interests	The presence of features of wildlife, earth science or archaeological or historical and cultural interest can add to the value of the landscape as well as having value in their own right
Recreation value	Evidence that the landscape is valued for recreational activity where experience of the landscape is important
Perceptual aspects	A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity
Associations	Some landscapes are associated with particular people such as artists or writers, or events in history that contribute to perceptions of the natural beauty of the area

A2.14 2017

Guidance Note 1: LANDMAP and Special Landscape Areas, Natural Resources Wales (2017)

A2.14.1 Paragraph **6.1.2** states that 'by definition, an SLA designation usually only applies to areas that are deemed as 'special' in terms of their local landscape character. This reflects both local distinctiveness and sense of place, as well as landscape quality in its own right'. Examples of landscape criteria are:

Rarity	A landscape that is particularly rare/unique or special in the local context
Distinctiveness	An area with a distinct landform or topography, forming a discrete and recognisable area in the local landscape
Natural or cultural character	A landscape with strong character linked to natural or cultural factors, which contribute to an understanding of historic character, wider cultural values or create a strong degree of naturalness
Cultural associations	A landscape with particular cultural associations, represented in art, literature, music, language or folklore
Scenic qualities	An area of recognisable character with a strong sense of place and/or scenic qualities

Guidance on Local Landscape Areas (Draft), Scottish Natural Heritage and Historic Environment Scotland (now superseded)

A2.14.2 **Table 1** of Scottish Natural Heritage and Historic Environment Scotland's (2017) draft guidance set out the common criteria used to define landscape qualities:

Landscape Qualities	Definition	Description
Scenic	Landscape that appeals primarily to the visual senses, appreciated for its natural beauty	Landscapes with strong visual, sensory and perceptual impacts and experiential appeal. May contain a pleasing combination of features, visual contrasts or dramatic elements
Cultural	Landscape with features of archaeological, historical or cultural interest, offering a time-depth to people's experience.	Landscapes rich in archaeology, built heritage, literary or artistic connections, consciously designed (parks and gardens), the scene of historic events (such as battles), other cultural associations and local history. and designed landscapes
Natural	Landscape of strong natural or semi-natural character, with wildlife or earth science features	Landscapes with extensive semi-natural habitat, distinctive topography or geology, a lack of human presence and perceived sense of 'wildness'
Enjoyment	Landscape recognised for recreation and amenity, which evokes pleasure	Landscapes valued as tranquil areas and/or for countryside recreation. May contain viewpoints and landmarks
Rarity or uniqueness	The presence of rare elements or features in the landscape or a rare landscape character type	Landscape features or combination of features which are rare or unique within the assessment area as a whole. Landscapes that are distinctive with a strong 'sense of place'
Typicality	A landscape that is a good example of a particular landscape type, and often relatively common within the assessment area	Landscape features or combination of features that recur throughout the area

A2.15 2020

Guidance on Designating Local Landscapes, NatureScot and Historic Environment Scotland (2020)

A2.15.1 This guidance states, at paragraph **2.4.2**: 'Selection criteria are essential. These must be fit for purpose, developed by agreement with interested stakeholders where possible, and applied consistently. The criteria relate to the special qualities of a landscape'. **Table 1** of the guidance sets out the range of evaluation criteria commonly used, noting 'this is not a fixed list as the criteria need to be appropriate to each designation process' (paragraph **2.4.4**). The criteria in **Table 3** of the guidance are:

Landscape criterion	Definition	Description
Scenic	Landscape that appeals primarily to the visual senses, and is appreciated for its beauty	Landscapes with strong visual, sensory and perceptual impacts and experiential appeal. May contain a pleasing combination of features, visual contrasts or dramatic elements

Cultural	Landscape with clear evidence of archaeological, historical or cultural interests / associations / significance, offering a time-depth to people's experience	Landscapes rich in archaeology or built heritage, or consciously designed (e.g. parks and gardens), or largely the product of human interaction. May include the scene of historic events (such as battles), have literary or artistic connections, or other cultural associations and local history
Natural	Landscape of strong natural or semi-natural character, with clear evidence of ecological, geological or geomorphological interest	Landscapes with extensive semi-natural habitat, distinctive topography or geology, a general lack of permanent human presence and a perception of wildness
Recreation and enjoyment	Landscape recognised as offering opportunities for recreation and amenity, where experience of landscape is important	Landscapes valued for recreation. May contain viewpoints, landmarks and renowned vistas; paths and trails including core paths, rights of way, long distance trails, national cycle routes; and scenic routes
Local distinctiveness and sense of place	Landscape that has a strong sense of identity	Landscape features or combination of features which are identified as being characteristic of a particular place. Landscapes that are distinctive with a strong 'sense of place'
Health and wellbeing	A landscape which makes particular contribution to both the physical and psychological health and wellbeing of a local community and/or visitors	Landscape facilities and features which are well-used and valued by local communities and visitors
Important spatial function	Landscape that performs a clearly identifiable and valued spatial role	Can include, for example, settlement 'gateways', or separation between developments

A2.15.2 The guidance notes that the list is not fixed as the criteria need to be appropriate to each designation process. It also recognises that not all the criteria need to be met in every case: a landscape might be deemed so valued under one criterion that it merits designation on that basis alone. The guidance explains that the aim is to identify and analyse what the qualities are that, individually or when combined, make the area special in terms of its landscape and scenery.

A3 (Appendix 3) Designated landscapes: UK policy and guidance

A3.1 Introduction

A3.1.1 This Appendix considers how landscape is valued in UK legislation and in UN, European and UK policy statements, regulations and guidance. It describes the current UK hierarchy of international, nationally protected, and locally designated landscapes, including the different approaches of devolved nation governments.

A3.2 Internationally valued landscapes

A3.2.1 Globally, under the **UNESCO World Heritage Convention 1992**, landscapes may be designated to ensure the protection of their natural and/or cultural heritage. World Heritage Sites must have values that are outstanding and universal, and it is each site's Outstanding Universal Value (OUV) that is to be protected. Cultural landscapes are said to 'express a long and intimate relationship between peoples and their natural environment'.

A3.2.2 In the UK there are 32 sites on the current list. The UNESCO 2008 operational guidelines describe categories of 'clearly defined landscape designed and created intentionally by man, organically evolved landscape, and associative cultural landscape, identified on the international list as 'cultural, natural or mixed' sites'. Criteria for selection are described on UNESCO's website[27].

A3.2.3 **The International Union for Conservation of Nature (IUCN)** provides a global classification system for Protected Areas. National Parks in England, Wales and Scotland, and Areas of Outstanding Natural Beauty (AONBs) in England, Wales and Northern Ireland are internationally recognised as **Category V Protected Areas**, as living, working landscapes and seascapes. National Parks and AONBs are periodically assessed by the IUCN to ensure continued compliance with the standards and management guidelines[28].

A3.3 The European Landscape Convention

A3.3.1 The UK is a member state on the Council of Europe and a signatory to the **European Landscape Convention (ELC) 2004**, which came into effect in the UK in 2007. The first aim of the ELC is to encourage public authorities to adopt policies and measures at local, regional, national and international level for protecting, managing and planning landscapes throughout Europe.

A3.3.2 The treaty introduces the concept of all landscapes having value in terms of quality of life and wellbeing. Signatories commit to 'acknowledging that the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas.' The ELC's 'all-landscapes' approach is compatible with the identification of 'valued landscapes' as it seeks to promote 'measures to preserve the present character and quality of a landscape which is greatly valued'.[29]

[27] https://whc.unesco.org/en/criteria/

[28] https://www.iucn.org/theme/protected-areas/about/protected-area-categories

[29] www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176

A3.4 National landscape designations

A3.4.1 Planning legislation and policy in each of the UK's devolved nations recognise landscape value at both national and local levels. England, Wales, Scotland and Northern Ireland each have their own primary planning legislation.

A3.4.2 It should be noted that Green Belt is not a landscape designation and does not denote landscape value, although it does perform a spatial function in the landscape.

England

A3.4.3 Statutory designations of landscapes in England, which are safeguarded by legislation, originated with the National Parks and Access to the Countryside Act 1949. The Broads National Park is designated under its own Act of Parliament (the Broads Act 1988). National Park purposes are defined as 'conserving and enhancing its natural beauty[30], wildlife and cultural heritage, and promoting understanding and enjoyment of its special qualities by the public'. The 1949 Act also made provision for the designation of AONBs to 'preserve and enhance natural beauty'. This original purpose of 'preserving and enhancing' was subsequently changed to 'conserving and enhancing' (Environment Act 1995).

A3.4.4 The Countryside & Rights of Way (CROW) Act 2000 consolidated the provisions of the 1949 Act, enabling conservation boards to be set up for larger AONBs and requiring management plans to be adopted for AONBs. Two AONBs have Conservation Boards, the Chilterns and Cotswolds AONBs.

A3.4.5 AONBs carry the same status and level of landscape protection as National Parks (Defra Vision and Circular 2010). Paragraph 20 states: 'The Government continues to regard National Park designation (together with that for Areas of Outstanding Natural Beauty ['AONBs']) as conferring the highest status of protection as far as landscape and natural beauty is concerned'.

A3.4.6 In England, Heritage Coasts (from 1973) are protected by policy rather than statute, though many are located within National Parks or AONBs and benefit from their statutory protection. They are defined (rather than designated) by agreement between local authorities and Natural England. The policy framework for Heritage Coasts in England was issued by the Countryside Commission (the predecessor to Natural England) in 1992. Heritage Coasts are defined as coastlines of exceptionally fine scenic quality, which are more than a mile in length, substantially undeveloped and contain features of special significance and interest.

A3.4.7 Historic England maintains a statutory 'Register of parks and gardens of special historic interest in England' and a separate 'Register of historic battlefields'. Although these designations bring no additional statutory controls, they contribute to landscape value as well as being heritage assets which are protected through national policy. National policy also requires local authorities to make provision for the protection of the historic environment in their policies and their allocation of resources.

Wales

A3.4.8 Historically, Wales shared most of the legislation and guidance relevant to landscape with England, notably the National Parks and Access to the Countryside Act 1949. The statutory landscape designations that apply in Wales are therefore the same as in England: National Parks, which are valued for their 'natural beauty and recreational value', and AONBs, valued for their 'outstanding distinctive landscape character and natural beauty'. In Wales, National Parks and AONB authorities are legally required to produce a management plan which sets out the Special Qualities of the area and policies to conserve and enhance the natural beauty of the designation. As set out in Planning Policy Wales, National Parks and AONBs are of equal status in terms of landscape and scenic beauty, and must both be afforded the highest status of protection from inappropriate developments.

A3.4.9 In 2014 Welsh Government commissioned a Review of Designated Landscapes and the 'Marsden Report' was published the following year. The review concluded in 2018 with Welsh

[30] The term 'natural beauty' is enshrined in the 1949 Act. The 1949 Act did not define what 'natural beauty' actually meant. Since then, its meaning has been clarified and interpreted through a series of studies, guidance documents, Secretary of State Decision letters, an Appeal Court judgement and public inquiries. Some clarification has also been provided through legislative amendments to the 1949 Act, e.g .NERC Act 2006 Section 99. Today, it is understood that natural beauty goes well beyond scenic or aesthetic value: it is to do with the relationship between people and place, and encompasses everything - 'natural' and human - that makes an area distinctive.

Governments response: 'Valued and Resilient' (Welsh Government, 2018). This sets out Welsh Governments priorities for the National Parks and AONBs in Wales.

A3.4.10 Non-statutory landscape designations valued at a national level include Heritage Coasts, which represent the most scenically outstanding stretches of undeveloped and unspoilt coast in Wales. Cadw, the historic environment service of the Welsh Government, in partnership with Natural Resources Wales (NRW) and the International Council on Monuments and Sites (ICOMOS UK) compiled (in 2014) a Register of landscapes of outstanding or special historic interest in Wales. This is a non-statutory register, 'intended to provide information and raise awareness of an initial selection of the most important and significant historic landscape areas in Wales in order to aid their protection and conservation'.[31]

Scotland

A3.4.11 Scotland's two National Parks (Loch Lomond and The Trossachs National Park and the Cairngorms National Park) are designated under the National Parks (Scotland) Act 2000. Scotland also has National Scenic Areas (NSAs), designated as *'areas of outstanding scenic value in a national context'*[32], and broadly equivalent to AONBs in England and Wales. NSAs were first described in 'Scotland's Scenic Heritage' (CCS 1978) and have been recognised within the planning system since 1980. As explained on the Scottish Government's website[33], in 2010, Scottish Ministers issued directions to local authorities under provisions in section 263A of the Town and Country Planning (Scotland) Act 1997 (inserted by section 50 of the Planning etc. (Scotland) Act 2006) to designate the current suite of NSAs. The NSAs include areas of landscape described variously on the www.nature.scot website as 'spectacular, dramatic, picturesque and richly diverse'.

A3.4.12 Wild land is not a statutory designation but the third National Planning Framework (NPF3, 2014) 'recognises wild land as a nationally important asset and indicates that Scotland's wildest landscapes merit strong protection'. NatureScot has identified 'wild land areas' – nationally important extensive areas of semi-natural landscapes that show minimal signs of human influence.[34] Historic Environment Scotland maintains the Inventory of Gardens and Designed Landscapes and the Inventory of Historic Battlefields. The cultural significance of sites can be taken into account in the planning process.

Northern Ireland

A3.4.13 In 2015, a new two-tier planning system came into force under the Planning Act (Northern Ireland) 2011. It introduced a sharing of planning responsibilities between eleven Councils and the Department for Infrastructure (DfI). The new planning system involved a move away from a suite of Planning Policy Statements (PPS) to a single Strategic Planning Policy Statement (SPPS 2015). However, a transitional period is in operation until local authorities adopt their Local Development Plans (LDPs). The Department of Agriculture, Environment and Rural Affairs (DAERA) has two Executive Agencies, namely Northern Ireland Environment Agency (NIEA) and Northern Ireland Forest Service.

A3.4.14 The main legislative basis for DAERA NIEA in relation to landscape and amenity protection is the Nature Conservation and Amenity Lands Order (NI) 1985 (NCALO). Through this, the former Department of the Environment for Northern Ireland (DOE NI) designated the seven landscape areas with the highest amenity value as Areas of Outstanding Natural Beauty (AONB), although the Lagan Valley AONB remains designated under an earlier act, The Amenity Lands Act 1965.

A3.4.15 'Shared Horizons' (2003) is the former DOE NI's Statement of Policy on Protected Landscapes, relating to the protection and sustainable use of Northern Ireland's finest landscapes. Such areas are usually recognised by some form of designation, which sets them apart from the wider countryside. Whilst the only designation currently in use in Northern Ireland to identify areas of high landscape

[31] https://lle.gov.wales/catalogue/item/RegisteredLandscapesOfOutstandingHistoricInterestInWales/?lang=en
[32] Planning etc. (Scotland) Act 2006 2006 asp 17.
[33] https://www.gov.scot/policies/landscape-and-outdoor-access/natural-heritage-designations/
[34] https://www.nature.scot/professional-advice/landscape/landscape-policy-and-guidance/landscape-policy-wild-land

quality is that of Area of Outstanding Natural Beauty (AONB) provision has been made for the potential designation of National Parks in future.[35]

A3.5 Local landscape designations

England

A3.5.1 England has seen a rise and fall in the use of local landscape designations over the years. In line with the Town and Country Planning Act 1968, many county councils adopted some form of non-statutory landscape designation when preparing their structure plans. Local designations had various names such as Areas of Great Landscape Value, Special Landscape Areas, Areas of Special Landscape Value, Undeveloped Coast and Coastal Preservation Areas.

A3.5.2 In 2004 national guidance in Planning Policy Statement (PPS 7): Sustainable development in rural areas (ODPM 2004) (now cancelled and superseded by the National Planning Policy Framework (NPPF 2019)) advised local planning authorities only to rely on statutory designations when seeking to conserve 'specific features and sites of landscape, wildlife and historic or architectural value'. Paragraph 25 stated that 'Local landscape designations should only be maintained or, exceptionally, extended where it can be clearly shown that criteria-based planning policies cannot provide the necessary protection'. This resulted in a decline in the use of local landscape designations in England, and in many places they were replaced by criteria-based local plan policies linked to local landscape character assessments.

A3.5.3 NPPF paragraph 171 requires development plans to 'distinguish between the hierarchy of international, national and locally designated sites'; but does not make any specific reference to local landscape designations. However, national Planning Practice Guidance (PPG) Paragraph: 036 [Reference ID: 8-036-20190721] makes it clear that strategic policies should provide for the conservation and enhancement of landscapes and that this can include locally designated landscapes. The NPPF also enables land to be designated as a 'Local Green Space' through local and neighbourhood plans – these are areas that are special to a local community or have particular local significance, for example because of their beauty, historic significance, recreational value, tranquillity or richness of wildlife.

A3.5.4 Future changes in the planning system are proposed in the Government's draft planning white paper: *Planning for the Future* (2020), but it is not yet clear how 'valued landscapes' may be interpreted within the proposed categories of 'growth', 'renewal' and 'protected' areas.

Wales

A3.5.5 Since the establishment of the Welsh Assembly Government in 1999, and following the 2011 referendum and the Wales Act 2017, Wales has been developing its own regulatory framework for landscape. Planning Policy Wales (PPW10 2018) currently sets the context for planning in Wales. Para 6.3.3 explains that 'all the landscapes of Wales are valued for their intrinsic contribution to a sense of place'.

A3.5.6 PPW10 supports local landscape designations and advises (para 6.3.11) that 'Planning authorities should provide for the conservation and, where appropriate, enhancement of local landscapes. This may include policies for landscape features, characteristics and qualities of local significance, and the designation of Special Landscape Areas (SLAs). Planning authorities should state which features, characteristics or qualities require extra protection, and explain how the policy or designation will achieve this protection'. Special Landscape Areas (SLAs) in Wales are non-statutory local landscape designations used by some local authorities to define areas of high landscape importance and to provide for their conservation and enhancement through policies in their local plans and supplementary guidance. SLAs are defined using LANDMAP, and mainly include landscape areas evaluated as Outstanding and High (of national or county importance). In June 2020, 17 local authorities out of 22 had SLAs linked to a local policy plan.

A3.5.7 LANDMAP is the all-Wales GIS based landscape resource that records and evaluates landscape characteristics, qualities and influences on the landscape for the purposes of landscape assessment. LANDMAP Guidance Note 1 (Natural Resources Wales, 2017) sets out an approach for defining Special

[35] https://www.daera-ni.gov.uk/articles/shared-horizons

Landscape Areas (SLAs). These may be designated for 'their intrinsic physical, environmental, visual, cultural and historical importance, which may be considered unique, exceptional or distinctive to the local area'. They should be 'important for their distinctive character, qualities and sense of place'.

Scotland

A3.5.8 National policy in Scotland is set out in NPF3 and Scottish Planning Policy (SPP 2014). SPP states that the planning system should 'facilitate positive change while maintaining and enhancing distinctive landscape character' (paragraph 194), and the ELC is listed as a key document. Paragraph 197 advises that 'Planning authorities are encouraged to limit non-statutory local designations to areas designated for their local landscape or nature conservation value: the purpose of areas of local landscape value should be to safeguard and enhance the character and quality of a landscape which is important or particularly valued locally or regionally; or promote understanding and awareness of the distinctive character and special qualities of local landscapes; or safeguard and promote important local settings for outdoor recreation and tourism'.

A3.5.9 Local Landscape Area (LLA) designations (previously Special Landscape Area; prior to that a variety of names was used), are used in local development plans across Scotland. NatureScot and Historic Environment Scotland (2002) jointly published *Guidance on Designating Local Landscape Areas* (LLAs) is a revised and updated version of guidance originally produced in 2006). This is intended primarily for local authorities to use in taking forward their own designation process. The guidance acknowledges that local landscape designations are a valuable tool in the development plan toolbox and outlines the process for designating new LLAs and refreshing existing designations.

Northern Ireland

A3.5.10 Planning Policy Statement 2 (PPS2 2013) sets out policies for the conservation, protection and enhancement of Northern Ireland's natural heritage. Local authorities are responsible for zoning a variety of landscape related areas as part of their Local Development Plan process. The designations that may be used for local landscapes include Local Landscape Policy Areas (LLPAs) and Areas of High Scenic Value (AoHSVs), although Areas of Townscape Character (ATCs), Areas of Village Character (AVCs) and Countryside Policy Areas (CPAs) may also be designated.

A3.5.11 Planning Policy Statement 6 (PPS6 1999) explains that 'Environmental assets, identified as part of the process of Countryside Assessment, will normally form the basis for the designation of local landscape policy areas. These consist of those features and areas within and adjoining settlements considered to be of greatest amenity value, landscape quality or local significance and therefore worthy of protection from undesirable or damaging development'.

A3.5.12 The Department of the Environment's 'Strategic Planning Policy Statement for Northern Ireland' (SPPS 2015), which will supersede PPS6, highlights Local Landscape Policy Areas (LLPAs) stating that Local Development Plans should, where appropriate, designate LLPAs and bring forward local policies and guidance to maintain the intrinsic landscape, environmental value and character of such areas.

A4 (Appendix 4) The valued landscape 'policy test' in England

A4.1 2012 National Planning Policy Framework (NPPF)

A4.1.1 In 2012, the first version of the NPPF was published. It included a policy (paragraph 109) which stated that 'The planning system should contribute to and enhance the natural and local environment by: [inter alia] protecting and enhancing valued landscapes'.[36] No definition of a 'valued landscape' was given in the NPPF[37]. Planning Practice Guidance paragraph 036 Ref ID:036-20190721 provides advice on the use of policies for landscapes of a particular local value but there is no guidance on how to identify such landscapes.

A4.1.2 The term valued landscape appears in the 2002 landscape character assessment guidance and in the title of GLVIA3 Box 5.1 ('Range of factors that can help in the identification of valued landscapes') which was published in 2013. However, the reference in GLVIA is a quote from the 2002 guidance and not a response to the use of the term 'valued landscapes' in the 2012 NPPF.

A4.1.3 Following the 2012 NPPF the identification of 'valued landscapes' took on a new level of significance in planning appeals. Methods used to identify 'valued landscapes' in the context of the NPPF began to emerge, based on evidence presented by expert landscape witnesses at inquiry, Inspectors'/Secretary of State's decisions, and court judgements. The evolution of approaches to the identification of 'valued landscapes' is summarised in **Appendix A5.** The 'preferred' approach that has emerged is based on the value factors set out in GVLIA3 Box 5.1.

A4.1.4 One particularly influential judgment[38] accepted an approach which identified whether a landscape had sufficient 'demonstrable physical attributes' to take it beyond 'ordinary landscape'. This judgment also found that the 2012 NPPF was clear that 'designation' and 'valued' in relation to landscapes do not mean the same thing. Although this approach is still widely accepted the particular term 'demonstrable physical attributes' is not used in this TGN because it can be misunderstood as focusing exclusively on physical factors and excluding the perceptual and associative factors that may contribute towards the value of a landscape.

A4.2 2018/9 NPPF

A4.2.1 In July 2018, the NPPF was revised, and the 2012 'valued landscape' paragraph 109 was transposed, with modifications, to paragraph 170. The NPPF was revised again in February 2019[39] but paragraph 170 remained unchanged. There is still no definition of 'valued landscapes'.

A4.2.2 Paragraph 170 a) qualifies the term 'valued landscapes' as follows (qualification underlined): 'Planning policies and decisions should contribute to and enhance the natural and local environment by:

[36] Planning Policy Statement 7 Sustainable Development in Rural Areas P24 introduces the idea of valued landscapes which can be protected via of criteria-based policies rather than local designations.

[37] The Landscape Institute is aware of the lack of clarity regarding the expression 'valued landscapes'. The LI drew attention to this wording in a response to the government consultation on the draft NPPF 2012, and again on the draft revised NPPF 2018 (in 2017). The LI continues to respond to all relevant government consultations, in particular those issued by MHCLG and DEFRA. The LI uses these invitations to comment and draw attention to any perceived lack of clarity or inconsistencies in the text of consultation drafts, making suggestions for revised wording where appropriate.

[38] Stroud DC v SoSCLG [2015] EWHC 488 (See Appendix 2 for further discussion of this judgement).

[39] The current consultation draft of a proposed revision to the NPPF (2020) does not include any changes to the wording of paragraph 170.

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (*in a manner commensurate with their statutory status or identified quality in the development plan*)'.

A4.2.3 The precise meaning of *in a manner commensurate with their statutory status or identified quality in the development plan* has been the subject of much debate, especially at planning inquiries, since 2018. **Appendix A5** refers to a number of decisions relating to its interpretation which provide an indication of the issues inspectors have considered to be relevant in the light of this qualification. However, there is no consensus on the meaning of the qualification and the interpretation of policy intentions and meanings can only be determined by the Courts. At the time of writing there have been no court judgments, post the 2018 revision, that have addressed the issue of 'valued landscapes'.

A4.2.4 This Appendix sets out the Landscape Institute's guidance on how landscape professionals should identify 'valued landscapes' and in particular how landscape professionals might interpret the phrase 'in a manner commensurate with their statutory status or identified quality in the development plan'. It is intended to:

- *guide landscape professionals undertaking landscape assessments in England, so that their judgments about landscape value are based on a transparent and structured approach such as the one set out in Table 1 above; and*
- *assist decision-makers in England who have to interpret and balance the judgments made by different landscape professionals.*

Statutory status

A4.2.5 The interpretation of the phrase 'in a manner commensurate with their statutory status' is relatively straightforward. Where a landscape has a statutory status, such as a National Park or AONB, it is self-evident that it is a valued landscape[40]. The great weight that should be given to conserving and enhancing landscape and scenic beauty in nationally designated landscapes is set out at NPPF paragraph 172 and relates to the statutory requirements with regard to natural beauty and (for National Parks only) the opportunities afforded for open-air recreation. Paragraph 170 a) does not alter those requirements.

Identified quality in the development plan

A4.2.6 The interpretation of 'identified quality in the development plan' is not clear. There are two fundamentally different interpretations that have been adopted by inspectors, which are considered below in more detail:

1. It means non-statutory, locally designated landscapes;
2. It means any landscape where there is evidence to justify the identification of a 'valued landscape'. Local designation alone may not be sufficient evidence.

In both cases it is assumed that the word 'quality' means degree of excellence.

Locally designated landscape

A4.2.7 The phrase 'identified quality in the development plan' was interpreted by one inspector as meaning a locally designated landscape. This interpretation was accepted by the Secretary of State, although the acceptance was implicit not explicit.[41] However, this interpretation has not been adopted by subsequent inspectors who have identified problems with this approach, in particular:

[40] In cases where a particular area within a National Park or AONB may not demonstrate the level of quality expected of its designation status, this does not mean that its value is diminished. Such an area is still a component of the nationally designated area with the characteristics associated with the park or AONB as a whole, and the aim should be to bring it back or much closer to the quality and character of the wider designated area so that it can be a positive contributor to the statutory purpose (to conserve and enhance the area's natural beauty).

[41] App 3197293 Pods Brook Road, Braintree, Essex (June 2019).

- *that many planning authorities, following previous policy guidance,[42] no longer have local landscape designations; and*
- *that some local designations do not have an underlying evidence-base.*

A4.2.8 At least one inspector has disagreed with the interpretation that any locally designated landscape must automatically be a valued landscape because in that case the parties agreed there was no evidence base to support the designation.[43]

Development plan policy support

A4.2.9 Many inspectors have continued to consider evidence presented to support the identification of a 'valued landscape' whether a local landscape designation exists or not. Evidence that has been used in reaching judgements about whether a landscape should be considered to be a valued landscape includes:

- *factors that are generally agreed to influence landscape value as set out in GLVIA3 Box 5.1;*
- *the presence of qualities in the landscape that are identified in the development plan (which includes neighbourhood plans) as requiring protection, such as in policies that require development to respect key aspects of a local landscape identified in the local landscape character assessment; and*
- *when a local designation exists, whether the landscape in question demonstrates the landscape qualities that are identified as important for that designation.*

A4.2.10 The Landscape Institute supports the evidence-based approach. The Landscape Institute does not consider that planning authorities which removed local designations following previous policy guidance, or those which never had local landscape designations, should be considered to have no 'valued landscapes' outside nationally designated areas.

A4.2.11 Where a landscape has a statutory status, it will not be necessary to undertake an assessment based on Box 5.1 of GLVIA3 or the factors identified in Table 1 of this TGN. It may also be unnecessary where a local designation is supported by a strong evidence base. However, where there is little published evidence to support existing local landscape designations, an assessment based upon these factors would be helpful to support planning decision making.

Valued landscape definition

A '**valued landscape'** is an area identified as having sufficient landscape qualities to elevate it above other more everyday[44] landscapes.

A4.2.12 Where possible the development plan should be referenced to support the value placed on the landscape. Where the development plan is silent, evidence should be provided in the form of professional analysis. Key points to note are as follows:

- *It is not possible to set a definitive threshold in this TGN above which a landscape is considered to be a 'valued landscape'. It is a judgment that must be made on a case-by-case basis, based on the evidence. There should be a weight of evidence that supports the recognition of a landscape as valued above more everyday landscapes.*
- *The character and quality of landscapes across England are variable and what may be defined as reaching the 'valued landscape' threshold/criteria in one part of the Country may be considered to be an 'everyday landscape' in another.*
- *It would be expected that a 'valued landscape' would demonstrate the presence of a number of indicators of landscape value, as set out in Table 1, although it is possible for one indicator to be of*

[42] Planning Policy Statement (PPS 7): Sustainable development in rural areas (ODPM 2004) – see Appendix A3.
[43] App 3215534 Tuffs Road and Maple Way, Eye, Suffolk (March 2020) The local plan policy was based on an old structure plan and the parties agreed there was no evidence base for that.
[44] 'Everyday' landscapes may nevertheless have value to people.

such importance (e.g. rarity, association or perceptual aspects) that the landscape is judged to be a 'valued landscape' even if other indicators are not present.

- *The identification of landscape value needs to be applied proportionately ensuring that identification of 'valued landscape' is not over used.*
- *In line with the ELC's approach, landscapes that are not judged to be 'valued landscapes' may still have value, and NPPF paragraph 170 b) requires planning policies and decisions to recognise the intrinsic character and beauty of the countryside. It is well-established that a landscape does not have to be a 'valued landscape' to be afforded protection from inappropriate development (**see Appendix A5**).*

A5 (Appendix 5) Inspectors' decisions and case law in relation to the interpretation of 'valued landscapes' in the National Planning Policy Framework (NPPF) in England

A5.1 Introduction

A5.1.1 This Appendix summarises how inspectors' decisions and case law have dealt with the interpretation of 'valued landscapes', first set out in Paragraph 109 of the NPPF 2012 which referred to 'protecting and enhancing valued landscapes'. This was subsequently updated in Paragraph 170 of the revised NPPF 2018 (with the addition of the qualifying phrase 'in a manner commensurate with their statutory status or identified quality in the development plan') and carried forward to the 2019 NPPF.

A5.1.2 The aim of this Appendix is to demonstrate some of the permutations of the arguments and evidence presented in relation to valued landscapes. Planning appeal decisions, by Inspectors and the Secretary of State, must be read as a whole to understand the full context of decisions, noting that Appeal decisions are made independently and on the basis of the evidence before the Inspector or Secretary of State at that time. Interpretation of policy intentions and meanings can only be determined by the Courts.

The 'Stroud Judgement'

A5.1.3 The 'Stroud' Appeal decision in 2014 is of significance because it became the subject of the first definition of 'valued landscape' (in relation to Paragraph 109 of the NPPF) by the courts. An Appeal was made by Gladman Developments Ltd against Stroud District Council's refusal of planning permission for 150 houses at the foot of the escarpment to the Cotswold Hills (Appeal reference APP/C1625/A/13/2207324). In his decision, the Inspector acknowledged that there was no agreed definition of 'valued' as used in Paragraph 109 of the NPPF and that in the absence of any formal guidance on the point, he considered that to be valued would 'require the site to show some demonstrable physical attribute rather than just popularity'. He went on to say that 'In the absence of any such designation, I find that paragraph 109 is not applicable to the appeal site' (Paragraph 18). In this instance, the Inspector found that the site was not a 'valued landscape' and allowed the Appeal.

A5.1.4 Stroud District Council challenged the Inspector's decision (summarised above) in the High Court on four grounds including the Inspector's approach to valued landscape. During the hearing between Stroud District Council and the Secretary of State for Communities and Local Government & Gladman Developments Limited, the Council suggested that the Inspector equated valued landscape with designated landscape. In his judgement (dated February 2015) Mr Justice Ouseley stated that if the Inspector had concluded that designation was the same as valued landscape he would have been wrong because in the NPPF, 'the word "designation" is used when designation is meant and "valued" is used when valued is meant and the two words are not the same'. Mr Justice Ouseley then considered whether the Inspector really meant that he equated designation with valued landscape and concluded that he did not. He judged that the Inspector knew that designation was not the start and finish of the debate. He concluded that '. . . in the end I am satisfied that the Inspector did not make that error. In particular, the key passage is in the third sentence of paragraph 18, in which he said that the site to be valued had to show some demonstrable physical attribute rather than just popularity' (Paragraph 14).

A5.1.5 In Paragraph 16 of the judgment he explains the Inspector's reasoning: 'It is not difficult to see that the sort of demonstrable physical attributes which would take this site beyond mere countryside, if I can put it that way but into something below that which was designated had not been made out in the Inspector's mind'.

Demonstrable physical attributes

A5.1.6 Following this judgment a number of Inspectors have considered the issue of what constitutes a valued landscape by reference to 'demonstrable physical attributes' that take the landscape beyond ordinary countryside and this phrase was taken as a general principle by many. However, in a later judgement (CEG Land Promotions II Lts v SoS HCLG 2018 EWHC 1799), Mr Justice Ousley made it clear that he was not laying down any general principles when he concluded that it was reasonable for an Inspector to look for such demonstrable physical attributes in reaching a conclusion on valued landscape (Paragraph 58).

The role of the site in the wider landscape

A5.1.7 When assessing landscape value, there has been a growing consensus regarding the importance of looking at the role that a site plays in the wider landscape and not limiting the assessment to the site itself. The Inspector for APP/Z1510/W/16/3160474 (West Street, Coggeshall, July 2017) concluded at Paragraph 30 of her decision as follows:

> 'Whilst the Framework paragraph 109 test based on the Stroud case (which I shall consider later) refers to "this site" I consider that it would be too narrow to just consider the appeal site. A site might have a variety of characteristics but, taken in isolation, for some sites it would be difficult to assess whether those characteristics have any particular value or importance. Moreover, a site might be important because of its position in the landscape as part of it rather than being important in its own right, rather like the pieces of a jigsaw puzzle. Further, as my colleague in the Nanpanton Road appeal sets out, the interactions between people and place are important in the perceptions of landscape and people will perceive the site in a wider context'.[45]

A5.1.8 While this decision pre-dates the amendment of the NPPF, its approach to assessing landscape value remains relevant.

Does a lack of local landscape designation preclude the presence of a valued landscape?

A5.1.9 An Inspector in his report for Appeal 3197293 (Pods Brook Road, Braintree, Essex) concluded that 'A straightforward reading of paragraph 170(a) does not lead to the view that there are other categories of valued landscape (which are not statutorily designated or identified in a development plan)'[46] and he equated this with some form of protection in the development plan. This interpretation was accepted by the Secretary of State, although the acceptance was implicit not explicit. However, this interpretation has not been adopted by other inspectors as set out in the following paragraphs.

A5.1.10 An inspector in a decision letter for APP 3200335 (Watlington Road, Lewknor) made clear that he considered the lack of a local landscape designation should not preclude the presence of a valued landscape: 'It would be wrong in my view to conclude that a landscape cannot be considered as valued simply because it was not identified in a development plan formulated at a time when no such requirement existed'.[47]

A5.1.11 In this instance the inspector was not persuaded that the landscape in question was a 'valued landscape' but this judgement was based on the evidence the parties had put to him about the value of the landscape rather than lack of a local designation.

A5.1.12 In relation to App 3207509 (Land off Colchester Road, Bures Hamlet) the Inspector concluded 'Neither, having regard to Paragraph 127, do I consider that the exhortation to protect and enhance "valued" landscapes is necessarily limited to landscapes that have either a statutory designation or a local designation in the development plan' (Paragraph 21). In this case an evaluation for potential

[45] APP 3160470 West Street Coggeshall Inspector Hill Paragraph 30 2017

[46] Appeal 3197293 Pods Brook Road, Braintree, Essex Inspector Clegg Paragraph 185 June 2019

[47] APP 3200335 Watlington Road, Lewknor Inspector Baugh-Jones Paragraph 40 January 2019

extension of the Dedham Vale AONB to include the land in question had been undertaken and so there was a detailed evidence base to demonstrate landscape value despite the lack of designation.

A5.1.13 In relation to App 3214324 (Poplar Hill, Stowmarket, August 2019) the inspector concluded that the development would harm a valued landscape even though the site was not located within a nationally or locally designated area. Additionally, it was in a district that still had local landscape designations. The inspector was concerned with the harm that would arise to features in the landscape surrounding the appeal site as a consequence of development on the appeal site, stating:

> 'Although the site is not recognised in published documents as an exemplary or outstanding component of the Suffolk landscape and its development would in some ways be consistent with characteristic patterns of development along valley sides, the appeal proposal would compromise the appreciation of sufficiently impressive examples of other characteristic features of the landscape as to cause an unacceptable effect on the landscape character and appearance of the area. These characteristic features are Combs Wood and St Mary's Church both of which have statutory status and so would qualify the landscape to be regarded as valued, to be protected and enhanced in terms of NPPF paragraph 170(a)'.[48]

Implication of the NPPF wording for local landscape designations?

A5.1.14 There has been some speculation as to whether the addition of the qualifying phrase 'in a manner commensurate with their statutory status or identified quality in the development plan' to the 2018 version of the NPPF (and carried forward to the February 2019 version) will result in a resurgence of local landscape designations. In his decision letter, the Inspector for App 3207509 (Land off Colchester Road, Bures Hamlet) concluded:

> '22. The Framework does not provide a definition of a valued landscape. However, *I consider it improbable that the addition of the words in brackets to paragraph 170(a) which occurred in July 2018 was intended to encourage policy makers to revive the practice of creating local "Special Landscape Areas" or similar designations in development plans* as a means of identifying a valued landscape. Previous advice had sought to discourage such designations in favour of landscape character assessment which would identify the distinctive and valued qualities of landscapes'[49] (emphasis added).

A5.1.15 Other inspectors suggest the local plan process is the proper forum for landscape value to be considered and for designations to be made. For example, the inspector for App 3200409 (Old Street, Stubbington, January 2019) concluded:

> '30 a . . . the landscape is not specifically recognised for its quality in the current development plan. This is because local landscape designations fell from favour in national planning policy. Previously, the Lower Meon Valley had been identified as an Area of Special Landscape Character.
>
> 31. *In view of para 170 the matter of landscape value will no doubt be considered through the emerging Local Plan process. That is the proper forum for any designation to be made.* However, until that time it is difficult to understand why there would be a change in terms of intrinsic value'[50] (emphasis added).

If a landscape is not a 'valued landscape' can it still have value?

A5.1.16 At the appeal in relation to Bayley Gate Farm, College Road, Cranfield Appeal 3190779 neither the council's nor the appellant's landscape architect considered that the site was a valued landscape. Nevertheless, the inspector concluded that this did not mean it had no value, stating:

> 27. 'The site does not form a valued landscape for the purposes of paragraph 109 of the National Planning Policy Framework (the Framework), a position accepted by both parties. *That however does not mean that it has no value* and although it may not be rare or have significant conservation interest or have any known associations it is very representative of the wider landscape, has a pleasant and attractive scenic quality and is in good condition. Its arable

[48] App 3214324 Poplar Hill, Stowmarket Inspector Clark Paragraph 81, August 2019.
[49] App 3207509 Land off Colchester Road, Bures Hamlet, Inspector Mellor, Paragraph 22, March 2019.
[50] App 3200409 Land west of Old Street, Stubbington, Hampshire, January 2019.

nature, strong boundary hedge and tree treatment ensure that it, along with the surrounding fields, narrow country lanes, bridleway and public rights of way create a strong rural character'[51] (emphasis added).

[51] App 3190779 Bayley Gate Farm, College Road, Cranfield Inspector Stone Paragraph 27, July 2018.

Appendix I

ECC Place Services - Landscape Character Effects – District Focus

1. *Tendring District Council*

1.1 The landscape character assessment covering Tendring is the Tendring District Landscape Character Assessment (2001). Dedham Vale National Landscape is located partially within and to the north of Study Area Section C. The Suffolk & Essex Coasts and Heaths National Landscape is located 3.7 km to the south-east of the nearest pylon / Cable Sealing End (CSE) compound at Wenham Grove (Section C). It is within 2.8 km of the proposed underground cable alignment and is therefore within the 3 km Study Area.

1.2 It is identified in the LVIA that there is no potential for significant landscape and visual effects to occur, or effects on its special qualities, yet we have concerns that recognition of the widespread smaller-scale but combined construction, visual and indirect landscape effects is understated and that these combine in places to produce significant effects.

1.3 It is inappropriate to state that there are no locally designated landscapes without clarifying that the local authority doesn't currently identify these. The Tendring District Landscape Character Assessment (2001) identifies 5 No. LCAs along the Project line. The Landscape and Visual Impact Assessment suggests that significant effects would likely be substantially limited to within 1.5 Km of the Project, at both construction and operations stages. Whilst accepting that at construction stage this is likely to be the situation in many instances, we do not agree that this would be the case at the operational stage where the finished project would affect the perceptual character of the landscape and the nature of the intervisibility.

1.4 The visualisations demonstrate that within Tendring District, the landscapes affected by the Project are often undeveloped, rural landscapes where intervisibility Is frequently quite high due to the large scale flat or gently undulating landscapes with shallow river valleys, where the scale of the pylons and overhead wires means the effect is a perceived significant industrialisation of the countryside up to 2Km from the Project. These are often landscapes without existing significant detractors.

1.5 Even where the effects are deemed not significant, the character of the landscape is changed over a much wider area, with proposed overhead lines reducing the provision of what GLVIA3 (Page 18. Para 2.11) describes as:

- Opportunities for aesthetic enjoyment
- A sense of place and a sense of history which contributes to individual, local, national and European identity.

- Inspiration for learning, as well as for art and other forms of creativity

1.6 In relation to specific Landscape Character Areas:

1.7 **LCA 6A: Stour Valley System:** The Stour Valley System LCA is located on the south side of the River Stour, around Lawford. Part of the LCA is within Dedham Vale National Landscape (an AONB). We agree the sensitivity to linear energy infrastructure and underground cables is high. The assessment judges that although the draft Order Limits fall within 2 km of the Stour Valley System LCA it is unlikely that construction activity would be perceptible. We substantially agree with this, however, we query whether the cumulative effects of the cabling works for this project and proposed onshore sub-station Projects from North Falls and Five Estuaries would combine to create a significant effect on tranquillity and other perceptual characteristics of LCA6A and even the National Landscape overall.

1.8 At operation, we substantially agree with the assessment.

1.9 **LCA 7A: Bromley Heaths**: The Bromley Heaths LCA is located to the south of Manningtree with small parts of the northern fringes extending into the Dedham Vale National Landscape (an AONB). This is the substantive character area within Tendring District impacted by the Project. The western half of the Bromley Heaths LCA would be directly affected by construction activity and at the operational stage. There would be a concentration of construction activity and the finished Project to the north, west and east of Ardleigh. Other construction activity would include creation of the access road to the proposed EACN Substation, works between the EACN Substation and north of Ardleigh, overhead wires over the northern part of Ardleigh Reservoir, the removal of landscape features, disturbance to farmland, and to Wick Lane, a Protected Lane. There would be indirect affects too. There are several 132Kv overhead lines that converge on the existing Langham sub-station close to the EACN site.

1.10 We do not agree with the value judgements for Associations which are judged as Low (if these are unknown, they should be marked as such). Nor that Perceptual Scenic and Tranquillity assessments are Low-Medium as this is a substantially rural unspoiled landscape displaying many of the key characteristics of the type. Also, the Functional value is higher because of the provisioning role of the farmed landscape (much of the land is Best and Most Versatile land.) Cultural value assessment ignores the Protected Lane.

1.11 We do not agree with the Susceptibility judgement as Medium as this is an open, substantially flat or undulating landscape in which there is high intervisibility and for

which a '*dramatic, dominating skyscape'* is a key characteristic. We judge it to be at least **Medium – High**.

1.12 The assessment judge's that effects on the LCA would likely be **significant** (**adverse**) within approximately 1.5 km of the draft Order Limits at construction with which we agree, however, we disagree that these geographical effects are only Medium as they extend 1.5Km either side of the order limits and for 4Km plus along the Project route i.e. c12KM2 (not including haul roads to the south east). We consider the construction effects would be **Moderate-Major** (adverse)within 0.5Km and **Moderate** (adverse) up to 1.0Km.

1.13 At Operation we disagree with the judgement and consider the residual effects would be **Major** (adverse) within 0.5Km and **Moderate-Major** (adverse) up to 1.5 km due to the sheer scale of the pylons and the adverse effects, for instance, on the open skyscape of the overhead line and the changes to perceptual character over such a wide area (c12km2). In addition, due to the wide intervisibility in this LCA with pylons likely demonstrably visible from 2Km we would argue that the cumulative effects of the Project could still be **significant** (adverse) at some distance from the Order Limits, especially in combination with activity and infrastructure from North Falls and Five Estuaries.

1.14 **LCA 6B: Ardleigh Valley System**: The Ardleigh Valley System LCA is located to the south-west of Ardleigh and encompasses Ardleigh Reservoir. The assessment identifies a small part of the north of the LCA, would be directly affected by the construction and at the operational stage. Direct effects from construction would include the removal of landscape features either side of Ardleigh Reservoir and the introduction of access tracks. There would be disturbance to farmland. Hedgerows along Wick Lane, a Protected Lane, would be lost. There would be indirect effects too.

1.15 We do not agree with the Susceptibility judgement as **Medium** as this is a distinctive, intimate, tranquil wooded landscape that would be highly susceptible to this form of development. The scale of the proposed infrastructure is not comparable to the road and rail infrastructure that crosses to the south of the character area due to its overwhelming height. These existing detractors do not form part of the immediate setting of the reservoir so should not form part of the evidence to argue reduced value and susceptibility. We consider susceptibility and sensitivity to be at least **Medium – High**.

1.16 The assessment judge's that effects on the LCA at construction would likely be **significant** (**adverse**) within approximately 0.5 km of the draft Order Limits at construction with which we agree. However, we consider the construction effects

would be **Moderate-Major** (adverse) within 0.5Km not **Moderate** due to higher Susceptibility and Sensitivity. Towards the end of the construction period, the significant effects would spread beyond 0.5Kms as the pylons and overhead wires are attached.

1.17 At Operation we disagree with the judgement of **Moderate** (adverse) and consider the residual effects would be **Moderate** - **Major significant** (adverse**) within 0.5Km** due to the sheer scale of the pylons and the direct adverse effects on bankside vegetation and the adverse effects on perceptual character. We judge the significant effects spread beyond 0.5Km and are not **minor and not significant (adverse)** elsewhere within the LCA. Visualisations show the scale of the effect beyond 0.5KM.

1.18 **LCA 6C: Alresford Valley System**: The Alresford Valley System LCA is located to the south of Great Bromley, following the course of the Alresford River. The assessment identifies that although the draft Order Limits fall within 2 km of the Alresford Valley System LCA it is unlikely that construction activity and the operational stage would be perceptible due to the valley topography and low-lying landform of the LCA together with intervening layers of vegetation. It is judged that there would likely be no effect on the LCA. We generally agree with this assessment.

1.19 **LCA 6D: Holland Valley System:** The Holland Valley System LCA is located to the south-east of Little Bromley, following the course of the Holland Brook. The assessment judges that although the draft Order Limits fall within 1 km of the Holland Valley System LCA it is unlikely that construction activity or the pylon structures would be perceptible due to the valley topography and low-lying landform. We generally agree with this assessment.

2. Colchester City Council

2.1 The landscape character assessment covering Colchester City Council is the Colchester Landscape Character Assessment (LUC November 2024). This is an update on the previous assessment Colchester Borough Landscape Character Assessment (2005). It looks as though the Landscape and Visual Impact Assessment in the Environmental Impact Assessment has not been updated to reflect this change. We have scrutinised the work as submitted but suggest the LVIA in this area to be reviewed in relation to the updated LCA.

2.2 The Landscape and Visual Impact Assessment suggests that significant effects would likely be substantially limited to within 1.5 Km of the Project, generally at both construction and operations stages. Whilst accepting that at construction stage this is likely to be the situation, it is not agreed that this would be the case at the operational

stage where the finished infrastructure consists substantially of an overhead line with 50m pylons as opposed to undergrounding, and in landscapes where intervisibility is frequently quite high.

2.3 The visualisations demonstrate that within Colchester City Council's boundaries, the landscapes affected by the Project are substantially undeveloped and rural where intervisibility can be quite high due to being large scale flat or gently undulating with undeveloped river valleys, where the scale of the pylons and overhead wires means the effect will potentially significantly industrialise the countryside in places up to 2Km away. These are often landscapes without existing significant detractors.

2.4 Even where the effects are deemed not significant, the character of the landscape is changed over a much wider area, with proposed overhead lines reducing the provision of what GLVIA3 (Page 18. Para 2.11) describes as:

- Opportunities for aesthetic enjoyment
- A sense of place and a sense of history which contributes to individual, local, national and European identity.
- Inspiration for learning, as well as for art and other forms of creativity

2.5 The cumulative effects of minor adverse impacts over a wide geographical area can in themselves result in a significant effect.

<u>In relation to specific Landscape Character Areas:</u>

2.6 **LCA B7: Langham Farmland Plateau**: The Langham Farmland Plateau LCA encompasses the area around Langham and Dedham Heath, extending south of Langham to the A120 on the outskirts of Colchester. A small part of this LCA is located within Dedham Vale National Landscape (an AONB). It is identified that central and southern parts of the Langham Farmland Plateau LCA would be directly affected due to proposed underground cables between Lamb Corner and Langham and proposed overhead line through the former airfield south of Langham and east of the A12. We suggest that the cable route is more north-eastern rather than central.

2.7 The updated LCA lists additional key characteristics:

- Gently undulating plateau …
- A predominantly arable landscape characterised by large open fields in the south and smaller more irregular fields in the north
- … Smaller patches of newer woodland around the settlements in the north.
- Good levels of public access via a network of public rights of way…
- Historic settlement pattern of dispersed farmsteads and cottages…

- A generally open landscape with occasional long distance framed views… some localised sense of visual enclosure near woodland and along tree-lined roads.
- An overall rural character with some urban influence … and intrusion form the A12 …

2.8 We agree that the setting of the overhead line route is one of a more open landscape, partly due to accommodating the old airfield. However, the 'major road' namely the A12, only runs along the very eastern and southern most boundaries of the character area, not through the middle. The modern infill is small scale and is within the parish of Langham whose overall population was just over 1000 in the 2021 census.

2.9 We query the Sensitivity assessment for this landscape as being **Medium** sensitive to this sort of infrastructure as this is an open, gently undulating landscape in which there is high intervisibility and for which '*long distance framed views*' are characteristic. We consider the Sensitivity to be at least **Medium – High**.

2.10 In relation to Construction effects, we do not agree that the effect would only be **moderate and significant (**adverse**)** within 1.5 km of the Order Limits. As we consider the landscape is at least of Medium-High Sensitivity we consider the effects would be **moderate-major** (adverse) at least for the first 0.5Kms. We agree the effect would be **minor and not significant (adverse)** beyond 1.5Kms.

2.11 We disagree with the judgement that '…*would not affect the underlying scale of the LCA due to its relatively large-scale.'* In addition, the A12 is peripheral to this LCA, not central, and the other man-made infrastructure, including the solar farm, do not match the Project for height, spatial extent or visual dominance.

2.12 In relation to the overhead line, we consider the geographical effects would be wider than 0.5Kms due to the relatively open landscape spreading visual effects wider and reducing perceptual factors of tranquillity and amenity. We agree the magnitude of effect would be **high** but suggest it would be up to 1.0Km of the Project Line. We agree the effect is **moderate-major and significant** (adverse) but suggest that this is within 1.0 km of the lateral overhead line not 0.5Km; **moderate and significant (**adverse**)** between 1.0-1.5 km and **minor and not significant (**adverse**)** elsewhere in the LCA.

2.13 **LCA A8: Stour River Valley Floor**: The Stour River Valley Floor LCA is located along the south side of the River Stour, west of Stratford St Mary and east of Dedham. It is almost entirely located within Dedham Vale National Landscape. A small portion of the central part of the Stour River Valley Floor LCA (west of Stratford St Mary and

north of Langham) would be directly affected at the construction stage by the undergrounding of the cable run.

2.14 We agree that the assessments for susceptibility, value and overall sensitivity are **high**. Taking account of the high sensitivity, we agree the effect would be **moderate and significant (**adverse**)** within 0.5 km of the Project, and **negligible (not significant)** elsewhere in the LCA.

2.15 We haven't commented on judgements made on the severity of the impact on the special qualities of the National Landscape nor on whether the duty has been met in relation to Section 245 of the Levelling Up and Regeneration Act in relation to actively **"seek to further"** the statutory purposes of the protected landscapes or their functions at this stage. However we may comment at a later date.

2.16 **LCA A7: Stour River Valley Slopes**: The Stour River Valley Slopes is located to the south of the Stour River valley floor and includes the settlement of Boxted and Langham Hall and is almost entirely located within Dedham Vale National Landscape (an AONB). There appear to be no viewpoint assessments in this area. A short linear section of the Stour River Valley Slopes LCA to the southwest of Stratford St Mary would be directly affected by construction activity

2.17 We agree with the judgements of **high** susceptibility and value, and that overall sensitivity is judged to be high. We agree the effect of the underground sections of cable at construction would be **minor and not significant** (adverse) reducing to **negligible** elsewhere in the LCA. However there appears to be no assessment of the effects of the overhead line e.g. at TB35, on the LCA just to the north-east where there is a tributary of the Stour to the east of Little Horkesley. Assessment of this element of the Project is required.

2.18 We haven't commented on judgements made on the severity of the impact on the special qualities of the National Landscape nor on whether the duty has been met in relation to Section 245 of the Levelling Up and Regeneration Act in relation to actively **"seek to further"** the statutory purposes of the protected landscapes or functions outside a protected landscape if they affect land within it. We reserve the right to comment at a later date.

2.19 **LCA Sub Area A7a: Stour River Valley Slopes**: The Stour River Valley Slopes LCA has a sub area (A7a) which is centred on small streams near Vinesse Road, to the south of Little Horkesley, approximately half of which is located within Dedham Vale National Landscape. The Stour River Valley Slopes LCA sub area A7a would not be directly affected by construction activity. There appear to be no viewpoint assessments or visualisations in the sub character area.

2.20 The effect on the LCA is identified as likely **significant** (adverse) within approximately 1 km of the draft Order Limits at construction stage and the effect on the LCA at an operational stage is identified as likely adverse but not likely significant. We generally agree with this judgement. However, we would seek to caveat this with the result of any judgements made on the severity of the impact on the special qualities of the National Landscape.

2.21 **LCA Sub Area A7b Stour River Valley Slopes:** The Stour River Valley Slopes LCA has a sub area (A7b) which is centred on Black Brook to the north of Langham a small part of which is located within Dedham Vale National Landscape. A section of this area would be directly affected by construction activity. There would be a notable loss of trees including sections of woodland and other vegetation.

2.22 The effect on the LCA is identified as likely to be **significant** (adverse) within approximately 1 km of the Project during construction. There would be a long-term direct effect, notably due to the fragmentation of tree cover along Black Brook. This would affect the key characteristic of the '*intimate tranquil, relatively steep-sided river valley which is narrow in places and has the narrow meandering Black Brook running through the floodplain'* with **significant** (adverse) effects within approximately 1 km during operation. Due to their intimate character valley landscapes contribute considerably to a sense of place and history which would be affected strongly at a local level. From the information given it is unclear if these long-term significant effects are within the National Landscape as the character sub areas are not clearly marked on the landscape character maps. The approach needs to be rethought if it results in **significant** residual adverse effects on the National Landscape.

2.23 **LCA Sub Area A7c: Stour River Valley Slopes**: This LCA has a sub area (A7c) which is centred on small streams and ponds to the north of Workhouse Hill, part of which is located within Dedham Vale National Landscape. Although the draft Order Limits just fall within 1 km of the Stour River Valley Slopes LCA sub area A7c, we agree it is unlikely that construction activity would be perceptible due to intervening landform, buildings, and layers of vegetation. We agree that there would likely be no effect on the LCA at either the construction or operational stage. However we have concerns about the cumulative effects on this part of the National Landscape overall during the construction stage.

2.24 **LCA B5: Rochfords Farmland Plateau:** The Rochfords Farmland Plateau LCA is located to the south of the Stour Valley and includes the settlement of Wormingford. Northern parts of the LCA fall within Dedham Vale National Landscape. A small part of the eastern fringe would be directly affected by construction activity. A CSE compound

and associated gantries would be introduced to a localised part of the LCA. There would be disturbance to the '*open and exposed*' character of the LCA. We agree that the effect on the LCA would likely be significant (negative) within approximately 1 km of the draft Order Limits at construction. In the longer term, proposed planting within the Environmental Area around the CSE compound would reduce effects. The effect on the LCA would likely be significant (negative) within approximately 1 km of the Project once operational. Generally, we agree with this judgement.

2.25 **LCA B6: Great Horkesley Farmland Plateau**: This LCA is located to the north of Colchester and includes the settlements of Great Horkesley and West Bergholt and a small section of the northern part of this LCA is located within Dedham Vale National Landscape. A central part of the Great Horkesley Farmland Plateau LCA would be directly affected by construction activity across a large section from the western edge of the former airfield at Langham to Vinesse Road, southwest of Little Horkesley. A CSE compound is to be created. The effect on the LCA would likely be significant (negative) within approximately 1 km of the draft Order Limits. Once operational a central part of the character area would be directly affected by the Project and where the CSE compound would also be located. Whilst there are existing detractors close to the A12 such as the road itself, large commercial buildings and telecoms masts, there is still an air of rurality closer to the Project line. Whilst in the longer term, proposed planting within the Environmental Area around the CSE compound would reduce negative effects these are likely to remain significant due to its sheer scale and height. We agree the effect on the LCA would likely remain significant (negative) within approximately 1 km of the Project.

2.26 **LCA A5: Colne River Valley Slopes:** This LCA is located either side of the River Colne to the west of Colchester. A central part of the Colne River Valley Slopes LCA would be directly affected by construction activity, to the east of Fordham and Fordstreet crossing the River Colne. During construction there would be disturbance to farmland and open access land (3 No pylons are due to be sited on the Access Land with the overhead line oversailing the land), and a loss of hedgerows, hedgerow trees, semi-mature and mature field trees, clumps of woodland/scrub and recently planted young woodland in open access land to the south of Fordham and riparian vegetation along the River Colne This is judged to cause a disturbance to the '*attractive and open*' character of the LCA. Even though the valley sides of the Colne are quite steep at this point, we do not accept that beyond 1Km, the valley topography and layers of vegetation including woodland, riparian vegetation, hedgerows, and field boundary trees would reduce intervisibility within the wider LCA, nor reduce the significant effects, due to the height of the infrastructure, during construction and at operation.

2.27 We judge that there will be long views from Mill Road, the Essex Way, the PRoW network to the west of Hillhouse Woods, within the Open Access Land itself, from the PRoW east of the Shoulder of Mutton at Ford Street (where the pylons parallel the Essex Way for 700m at only 200-300m distance), from the PRoW network on the south side of the Colne north of Porters Lane. The alignment appears to take almost the longest route that could be chosen along the Colne Valley slopes. This area used to be a Special Landscape Area and would likely be identified as Valued Landscape if an assessment was carried out. It is the most accessible section of unspoiled riverside landscape to the west of Colchester and used extensively by walkers. The opportunity should be explored further for either realignment north and west of the Open Access Land or undergrounding the overhead line.

2.28 **LCA A4: Colne River Valley Floor:** This LCA is located along the River Colne to the west of Colchester. A narrow part of the Colne River Valley Floor LCA would be directly affected by construction activity to the east of Fordstreet. As above we judge the significant effects would be more widespread, both towards the end of the construction period and during operation, as this is an unspoiled river valley and views in and out of the valley, including from Mill Lane and along the Essex Way that follows the river for some distance, are quite widespread. This area used to be a Special Landscape Area and would likely be identified as Valued Landscape if an assessment was carried out. It is the most accessible section of unspoiled riverside landscape to the west of Colchester and used extensively by walkers. The opportunity should be explored for either realignment north and west of the Open Access Land explored or undergrounding be proposed as an alternative.

2.29 **LCA B4: Great Tey Farmland Plateau:** The Great Tey Farmland Plateau LCA is located to the south of the River Colne and contains the settlements of Great Tey and Aldham The eastern part of the Great Tey Farmland Plateau LCA would be directly affected by construction The preliminary assessment identifies there would also be disturbance to the '*peaceful and tranquil*' character of the LCA. The LCA would also be indirectly affected by the construction activity, which it is identified would be perceptible within approximately 1 km of the draft Order Limits. **VP4.10 at Great Tey** shows how, even at 1.6Km, the effects of the overhead line are significantly negative over a wide area once operational. We do not support the assertion, therefore that, significant effects only occur within 1.0Km of the Project line. An assessment and visualisation should be prepared for VP 4.15 or 4.22 where there are wide views of the proposals, or on one of the PRoW closer to the scheme between 1-1.5KM.

2.30 **LCA B2: Easthorpe Farmland Plateau:** The Blackwater and Brain Valley LCA is located to the west of Colchester and contains the settlements of Marks Tey and Copford. The northern part of the Easthorpe Farmland Plateau LCA would be directly affected by

construction activity, north of Marks Tey and Little Tey and running broadly parallel to the north of the A120. The effect on the LCA is judged likely to be significant (negative) within approximately 1 km of the draft Order Limits. However, **VP 4.12** which views the Project from 1.2Km shows that the effects are still significant. Therefore, we cannot agree that once operational the effect on the LCA would only likely be significant (negative) within approximately 1 km of the Project.

2.31 **LCA A2: Wooded Roman River Valley**: The Wooded Roman River Valley LCA is located along the Roman River to the south of Colchester. As the draft Order Limits fall only just within 2 km of the Wooded Roman River Valley LCA it is unlikely that construction activity or the finished Project would be perceptible. We agree with the judgement that there's likely no effect on this LCA.

2.32 **LCA B3: Southern Colchester Farmland Plateau**: This LCA is located to the southwest of Colchester. The draft Order Limits would be more than 2 km from the Southern Colchester Plateau LCA and is not likely to be perceptible. We agree there would likely be no effect on the LCA during construction nor during operation.

2.33 **LCA F1: Messing Wooded Farmland**. The draft Order Limits and finished Project line would be more than 2 km from the Southern Colchester Plateau LCA and is not likely to be perceptible. We agree with the judgement that there would likely be no effect on the LCA.

3. Braintree District Council

3.1 The Essex Landscape Character Assessment (2003) identifies 4 No. LCTs along the Project line covering the district of Braintree. The Landscape and Visual Impact Assessment suggests that significant effects would likely be limited to within 1.5 Km of the Project, generally at both construction and operations stages. Whilst accepting that at construction stage this is likely to be the situation in many instances, it is not accepted that this would be the case at the operational stage where the outcome is generally an overhead line with 50m pylons, and where intervisibility is frequently quite high.

3.2 The visualisations demonstrate that within Braintree Borough Council boundaries, the landscapes affected by the Project are substantially undeveloped and rural where intervisibility can be quite high due to being large scale flat or gently undulating with undeveloped river valleys, where the scale of the pylons and overhead wires means the effect will potentially significantly industrialise the countryside in places up to 2Km away. These are often landscapes without existing significant detractors.

3.3 Even where the effects are deemed not significant, the character of the landscape is changed over a much wider area, with proposed overhead lines reducing the provision of what GLVIA3 (Page 18. Para 2.11) describes as:

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3.4 The cumulative effects of minor adverse impacts over a wide geographical area can in themselves result in a significant effect.

<u>In relation to specific Landscape Character Types:</u>

3.5 **LCA B1: Central Essex Farmlands:** We remain concerned regarding the impact of the 50m high pylons and overhead lines on the sense of rurality and tranquilness, a key characteristic of the LCA as noted by the assessment. Large areas of woodland and riparian vegetation are to be permanently reduced in height at T109 where the Project crosses the River Brain. We consider this would affect the underlying scale or predominant landcover of the LCA. This could impact neighbouring C6 also. The area of Terling and Fairstead are noted as containing more frequent hedgerow trees compared to the rest of the LCA and are considered therefore more sensitive to change.

3.6 Generally, we agree with the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction. We agree with the judgements in Table A13.2.50 (construction and operational).

3.7 **LCA B4: Gosfield Wooded Farmland:** We welcome that the operational effect has now been identified as significant negative up to 1.5Km. We retain concerns that fragmentation of long sinuous hedgerows and reduction in hedgerow trees could have wider impact. However we generally agree that the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction. We agree with the judgements which conclude effects are moderate significant (construction and operational).

3.8 **LCA C6: Blackwater and Brain Valley**: We note Table A35 which sets out the assessment of value for C6 and query some of the individual judgements which has resulted in an overall judgement of medium value. For example, Distinctiveness has been judged to be medium value noting *"The LCA description notes the following key characteristic: 'The Brain and the Upper Blackwater Valleys are narrow with*

undulating valley sides.' Extensive linear poplar and willow plantations are a distinctive feature." We would consider this LCA to be of higher value than that judged. Notably, we consider distinctiveness and function to be undervalued given the number of indicators the LCA satisfies.

3.9 Furthermore, effects are judged to reduce to low beyond 1.5km. The orientation of the River Blackwater and the River Brain are both broadly north to south; the Order Limit route and, in turn, the study area is broadly east to west severing the character of the River Blackwater and River Brain which spans the entire width of the study area. While we can accept that the effects could be considered to be greater at 0.5km where the route requires removal of vegetation, the wider effects to the functionality of this landscape stretches beyond this and should still be considered. Overall, we consider LCA C6 has been undervalued.

4. <u>Chelmsford City Council</u>

4.1 The Essex Landscape Character Assessment (2003) – Braintree District, Chelmsford District, Brentwood District identifies 4x No. LCTs along the Project line in Chelmsford. The preliminary Landscape and Visual Impact Assessment suggests that significant effects would likely be substantially limited to within 1 Km of the Project, generally at both construction and operations stages. Whilst accepting that at construction stage this is likely to be the situation in many instances, it is not accepted that this would be the case at the operational stage where the outcome is generally an overhead line with 50m pylons as opposed to undergrounding, and where intervisibility is frequently quite high.

4.2 The visualisations demonstrate that within Chelmsford, the landscapes affected by the Project are often undeveloped, rural landscapes where intervisibility can be quite high due to large scale flat or gently undulating landscapes or where the scale of the pylons and overhead wires means the effect is a perceived industrialisation of the countryside up to 2Km away that can be significant in places. These are often landscapes without existing significant detractors.

4.3 Even where the effects are deemed not significant, the character of the landscape is changed over a much wider area, with proposed overhead lines reducing the provision of what GLVIA3 (Page 18. Para 2.11) describes as:

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In relation to specific Landscape Character Types:

4.4 **LCA B1: Central Essex Farmlands**: We welcome the change from the PEIR which now identifies that the operational effect would be significant negative up to 1.5Km as we consider the presence of the 50m high pylons and overhead lines could impact on the sense of rurality and tranquilness over a wide area. The area of Terling and Fairstead are noted as containing more frequent hedgerow trees compared to the rest of the LCA and are considered therefore more sensitive to change.

4.5 Generally, we welcome the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction. Generally, we agree with the judgements in Table A13.2.50 (construction and operational).

4.6 **LCA C5: Chelmer Valley:** We agree the Project would result in Direct effects arising during construction which would include the removal of some landscape features including the disturbance to farmland (mainly arable fields) and riparian habitat associated with the River Chelmer, and the loss of some field boundary hedgerows, field trees, and hedgerow trees. These all form key characteristics of the LCA. Features such as hedgerows, riparian vegetation and hedgerow trees are present throughout the landscape and are well connected linear features. Fragmentation of these features potentially have significant impact in the wider LCA. That being said, we generally agree with the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction. We mostly agree with the judgements in Table A13.2.52 (construction and operational).

4.7 We query the magnitude at 0.5-1.5km (construction) which has been judged to be medium in the table but high in para 13.3.707.

4.8 **LCA D2: Brentwood Hills**: We note the semi-enclosed nature of this LCA and key characteristics such as undulating hills/ridge, semi enclosed character due to presence of numerous woodlands, frequent hedgerow trees and patchwork of small irregular pasture/arable fields within the scope of the landscape assessed. We welcome recognition that significant effects can occur up to 1.5Km. Generally, we agree with the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction.

4.9 **LCA G2: Chelmsford and Environs:** The Project intercepts this LCA only between TB165 and TB168. Generally, we agree with the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in

effects from construction. Generally, we agree with the judgements in Table A13.2.53 (construction and operational).

5. *Brentwood and Basildon District Council*

5.1 The Essex Landscape Character Assessment (2003) – Braintree District, Chelmsford District, Brentwood District identifies 1 No. LCTs along the Project line in Brentwood and Basildon. The Landscape Character Assessment of Basildon Borough (2014) identifies 6 No. LCAs along the Project line in Brentwood and Basildon. The preliminary Landscape and Visual Impact Assessment suggests that significant effects would likely be substantially limited to within 1 Km of the Project, generally at both construction and operations stages. Whilst accepting that at construction stage this is likely to be the situation, it is not accepted that this would be the case at the operational stage where the outcome is generally an overhead line with 50m pylons as opposed to undergrounding, and where intervisibility is quite high.

5.2 The visualisations demonstrate that within Brentwood, the landscapes affected by the Project are often undeveloped, rural landscapes where intervisibility can be quite high due to large scale flat or gently undulating landscapes where the scale of the pylons and overhead wires means the effect is a perceived industrialisation of the countryside significantly in places up to 2Km away. These are often landscapes without existing significant detractors.

5.3 Even where the effects are deemed not significant, the character of the landscape is changed over a much wider area, with proposed overhead lines reducing the provision of what GLVIA3 (Page 18. Para 2.11) describes as:

- Opportunities for aesthetic enjoyment
- A sense of place and a sense of history which contributes to individual, local, national and European identity.
- Inspiration for learning, as well as for art and other forms of creativity

In relation to specific Landscape Character Areas:

5.4 **LCA D2: Brentwood Hills**: We note the semi-enclosed nature of this LCA and key characteristics such as undulating hills/ridge, semi enclosed character due to presence of numerous woodlands, frequent hedgerow trees and patchwork of small irregular pasture/arable fields within the scope of the landscape assessed. Severance of this elements could potentially cause effects further than 1km. Generally, however, we welcome the individual judgements made for “within 0.5km, between 0.5-1.5 km and beyond1.5 km” which confirm no reduction in effects from construction.

5.5 **LCA 9: Upper Crouch Valley Farmlands:** We can accept that given the limited presence of this LCA within proximity to the Project, the effects on the LCA would be negative but is not likely to be significant. We agree with judgements made in Table A13.2.59

5.6 **LCA 10: East Billericay Wooded Hills and Ridges:** We accept that due to the proximity of the Project with the LCA and intervening urbanisation present of Billericay, there will likely be no effect on this LCA. We agree there would be no effect (not significant) at construction, operation year 1 and operation year 15.

5.7 **LCA 11: West Billericay Wooded Farmlands**: While we retain concerns on the effects of removal of riparian vegetation, arable hedgerows and hedgerow trees, we welcome the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction. We generally agree with the judgements which acknowledge effects beyond 1km

5.8 **LCA 12: Burstead Sloping Farmland**: We retain concerns regarding impacts on the open agricultural plateau which provides the elevated setting of St Marys Church, Little Burstead, a notable landmark. However, we welcome the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond1.5 km" which confirm no reduction in effects from construction. We generally agree with the judgements which acknowledge effects beyond 1km.

5.9 **LCA 13: Dunton Settled Claylands**: The LCA is impacted wholly by the project and extends beyond 1km. Given extensive works proposed to include undergrounding and diversions we would consider effects during construction to be significant (negative) beyond 1km. Although there are existing detracting elements within the small LCA, we consider the effects of landscape feature removal to be significant and therefore effects beyond 1km are likely to be significant negative.

5.10 We welcome the acknowledgement of geographical extent which contributes towards the high magnitude of change. However, magnitude of effects for Operation Year 1 are judged to be medium stating that *"Parts of the landscape that were affected during construction would be reinstated, including the reinstatement of field boundary hedgerows."* We disagree that effects would reduce by Year 1 and do not anticipate that any reinstatement would be established enough to justify this reduction.

5.11 Generally, we agree with the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond1.5 km" which confirm no reduction in effects from construction. We agree with the judgements which acknowledge effects beyond 1km.

5.12 **LCA 14: Langdon Hills**: While we can accept that due to the proximity of the Project to the LCA, operation effects would likely be negative but perhaps not significant, we would consider construction effects to be significant given the presence of Langdon Nature Reserve and the impact on hedgerow connections to the wider landscape. Generally, however, we welcome the individual judgements made for "within 0.5km, between 0.5-1.5 km and beyond 1.5 km" which confirm no reduction in effects from construction. We agree with the judgements which acknowledge effects beyond 1km.

5.13 Visual Receptor Areas:

Tendring District Council

Theoretical visibility of Project

5.13.1 Section C is located broadly between Ipswich in the north-east and Colchester in the south including Tendring. The ZTV indicates relatively widespread theoretical visibility of the overhead line within and beyond the 3 km study area in Section C. This highlights how widespread the potential negative landscape and visual effect of the scheme are.

Visual Receptor Area C (in Tendring)

5.13.2 We do not agree with the value of the view being judged substantially on identified viewpoints and promoted views in tourist-focussed documents especially in lieu of local landscape designation and district-wide Valued Landscape Assessments. The value of the view should be judged by how it relates to the LCA. We judge the sensitivity of receptors and significance of the effects is downplayed as a result.

5.13.3 **C10 Dedham Heath**: This Visual Receptor Area is located to the north and east of the Project, in the area surrounding Dedham Heath, Dedham and Foxash Estate. Part of the area is located within Dedham Vale National Landscape (an AONB). Representative Viewpoints for this area are:

- **Viewpoint 3.15 Birchwood Road near Lamb Corner**
- **Viewpoint 3.19 Essex Way, Dedham Road**

5.13.4 **Viewpoint 3.20 Fenbridge Lane,** outside this area on the north side of the River Stour in Dedham Vale National Landscape, was included as part of the C10 Dedham Heath assessment in the PEIR but does not appear in the final ES. More commentary is needed as to why this is the case.

5.13.5 In the PEIR, the assessment judged that within approximately 0.5 km of the draft Order Limits there would be close views of construction activity, but that the impact of these views reduces at 2Km distance. However, it is also stated that it is likely that cranes associated with the construction of the overhead line would be distantly visible, at approximately 4.5 km away, from small sections of local lanes and PRoW within Dedham Vale National Landscape (an AONB). The photomontage image of **Viewpoint 3.20 Fenbridge Lane north side of the River Stour in Dedham Vale National Landscape (an AONB)** taken form 4.24Km provided for the PEIR indicated that the overhead line would still be perceptible even from this distance. However, the final ES image does not show this. More commentary is needed as to why this is the case.

5.13.6 It is stated that much of the Project would be undergrounded within this Visual Receptor Area so permanent effects are reduced. However, this understates the potential effects of the East-West pylons running from TB005 to TB020. **Viewpoint 3.15 Birchwood Road near Lamb Corner** is taken from 1.66Km away from the Project line and demonstrates that **moderate significant (adverse)** effects over a wide area can occur even from this distance. Whilst little is seen of the pylons at 2.44Km (see **Viewpoint 3.19 Essex Way, Dedham Road)** there are likely more significant effects closer to the Proposed EACN substation from the northeast sector of the VRA. We consider that an additional viewpoint assessment and visualisation is needed closer to the Proposed EACN substation in order to properly evaluate its effects from the north east of this Visual Receptor Area.

5.13.7 We consider that effects on visual receptors could be **significant (adverse)** beyond 1.5 km of the Project in some circumstances, as evidenced by **Viewpoint 3.15 Birchwood Road near Lamb Corner.** The assertion that *'…intervening vegetation on the relatively flat plateau would filter most views*' appears overstated.

5.13.8 Generally, we agree that the significance of the effect is **Major** (**adverse)** close to the project line but judge it extends **up to 1Km**. We consider that the significance of effect is **Moderate (adverse**) only **from 1Km** and that some of these effects extend beyond 1.5Km. Whilst generally we agree that effects beyond 1.5Km are **Minor (adverse),** we judge that the cumulative effect of multiple pylons and lengthy overhead its linear character combined with the potential adverse effects from North Falls and Five Estuaries projects mean that the collective effects within the study area creates **an overall significant adverse effect**.

5.13.9 **C12 Ardleigh:** This Visual Receptor Area is located to the south of the Project, in the area surrounding Ardleigh, Fox Street, Burnt Heath and Bromley Cross. The Representative Viewpoints are:

- **Viewpoint 3.11 PRoW north of Ardleigh (Ardleigh 2)**
- **Viewpoint 3.14 Lodge Lane, Ardleigh Reservoir,**
- **Viewpoint 3.23 Crown Lane North, near Ardleigh Reservoir**

5.13.10 It is identified that construction activities would be visible in close views in the north of the VRA, associated mainly with the overhead line, but also with the construction of the underground cables and the EACN Substation. It is identified there would be effects on the local road and PRoW network, including Wick Lane (which is a Protected Lane). Longer distance impacted views will be had from Crown Lane (also a Protected Lane).

5.13.11 We agree that at construction, close to the project line that the magnitude of effect would be high, and that the effect would be major and significant (adverse). However, we question that this extends only to 0.5Km. We argue that this extends in places to up to 1KM. We generally agree between 1- 1.5 km the scale of change would be medium, increasing to large to the east of Ardleigh, and that the effect would be moderate and significant (adverse), increasing to major and significant (adverse) east of Ardleigh. Whilst we agree generally that beyond 1.5 km the scale of change would be small, and the effect would be minor and not significant (adverse), we consider that the cumulative effect of multiple pylons and the Project's lengthy prominent overhead linear character combined with the potential adverse effects from North Falls and Five Estuaries projects mean that the collective effects within the study area creates an overall significant adverse effect.

5.13.12 At operation, the effects on scattered properties and PRoW users and those in and around Ardleigh are represented in **Viewpoint 3.11 PRoW north of Ardleigh (Ardleigh 2).** VP 3.11 illustrates how substantial both the scale and extent of the negative effects are at 0.22Km from the Project line. Most of the setting of Ardleigh, to the west, north and east will be permanently adversely significantly affected by these proposals.

5.13.13 We have concerns, looking at the visualisation of **Viewpoint 3.14 Ardleigh Reservoir, Lodge Lane** seen from 0.68Km from the Project line, that the whole overhead line is not shown. It appears to stop in mid-visualisation. This appears different from the PEIR image. More information is needed regarding this image. We have some concerns also with **Viewpoint 3.23 Crown Lane North, near Ardleigh Reservoir** visualisation**.**

5.13.14 We query why there are no viewpoints, representing the PRoW network of the project line southeast of Ardleigh, between 0.5-1-5 Km

5.13.15 We agree that effects on visual receptors would likely be **significant** (adverse) up to 1.5 km of the draft Order Limits or finished Project Line. However, we suggest there are potential **major adverse effects** between 0.5-1.0KM not just <0.5Km. We still judge further assessment is needed between 1-1.5Km in order to demonstrate that effects from that distance are not significant. One of the public footpaths somewhere north of Green Island Gardens or just south of Frating road may be appropriate. We consider that the cumulative effect of multiple pylons and its lengthy prominent linear character combined with the potential adverse effects from North Falls and Five Estuaries projects mean that the collective effects within the study area creates an **overall significant adverse effect**.

5.13.16 **C13 Little Bromley:** This Visual Receptor Area is located to the east of the Project, broadly between Lawford, Little Bromley and Little Bentley and a small part is located within Dedham Vale National Landscape (an AONB). The sole Representative Viewpoint is identified as:

- **Viewpoint 3.12 Waterhouse Lane, Burnt Heath**
- **Viewpoint 3.13 PRoW, Little Bromley (Little Bromley 16)**
- **Viewpoint 3.21 Barn Lane, Little Bromley**

5.13.17 The assessment identifies that construction activity associated with the proposed overhead line, the underground cable and EACN Substation, would be visible in close views, of construction from the local road and PRoW network and scattered properties. We query the amount of vegetation removal that appears to be necessary in this VRA.

5.13.18 We query that at both construction and operation, **major significant adverse effects** only occur <0.5Km distance. **Viewpoint 3.12 Waterhouse Lane, Burnt Heath** at 0.83Km from the project demonstrates the potential significance of the adverse effects from a distance of close to 1 Km from the Project line, and therefore also the likely effects towards the end of the construction period. Little Bromley Road (Protected Lane) between 0.5-1.0Km would likely be similarly affected. It is likely that between approximately 1 km and 2 km construction activity would be perceptible in some medium to long distance views from scattered properties.,

5.13.19 **Viewpoint 3.13 Little Bromley** is taken from 1.94KM and demonstrates potential moderate effects at completion from this distance in these open, flat landscapes. It is likely therefore that significant construction effects could be felt at this distance, especially towards of the of the construction period, not just up to 1.5Km.

5.13.20 Although the overhead line and EACN Substation would most often be seen in the middle distance, above intervening vegetation and hedgerows and sometimes viewed in the context of existing 132 kV overhead lines between 1-2 Kms, this additional proposed line intensifies this effect as shown in **Viewpoint 3.13 Little Bromley**, which is actually taken from 1.94Km**.** Whilst views of the EACN Substation are less likely to be apparent between 1-2Kms due to the lower height of structures combined with distance and intervening vegetation.

5.13.21 **Viewpoint 3.13 Little Bromley** demonstrates potential **moderate adverse** effects at completion from this distance in these open, flat landscapes. It is likely therefore that significant construction effects could also be felt at this distance, towards of the of the construction period, not just up to 1.5Km.

5.13.22 Additional visualisation VP 3.21 **Barn Lane, Little Bromley** is not helpful as it is taken substantially alongside a hedgerow. We query whether an alternative location for this viewpoint should have been taken.

5.13.23 We consider that the cumulative effect of multiple pylons and the Project's lengthy overhead linear character combined with the potential adverse effects from North Falls and Five Estuaries projects mean that the collective effects within the study area creates an **overall significant adverse effect**.

Visual Receptor Area C and D (in Colchester)

5.13.24 We do not agree with the value of the view being judged substantially on identified viewpoints and promoted views in tourist-focussed documents especially in lieu of local landscape designation and district-wide Valued Landscape Assessments. The value of the view should be judged by how it relates to the LCA. We judge the sensitivity of receptors and significance of the effects is downplayed as a result.

Colchester City Council

Theoretical visibility of Project

5.13.25 Section D is located broadly between the north-east of Colchester and Marks Tey in the south-west and therefore captures most of the effects on the Colchester City Council's area. The landscape comprises plateau farmlands incised by valley slopes associated with the River Colne and its tributary valleys. The ZTV indicates relatively widespread theoretical visibility of the overhead line within the 3 km study area in Section D. However, this highlights how widespread the potential significant visual effects of the scheme are.

5.13.26 Theoretical visibility of CSE compounds south of Dedham Vale National Landscape (an AONB) indicates that theoretical visibility of the CSE compounds in Section D would be relatively widespread within approximately 1 km of each CSE compound, with more intermittent theoretical visibility between 1 km and 3 km. Theoretical visibility is also indicated from the fringes of Dedham Vale National Landscape (an AONB) including from parts of Wormingford.

5.13.27 **VRAs C11 Langham (Section C) and Area D (in Colchester)**

5.13.28 **C11 Langham (Section C)** This VRA is located to the north and west of the Project, in the area surrounding Langham, Boxted, Boxted Cross and Ardleigh Heath. A small part of the area in the north is located within Dedham Vale National Landscape.

- **Viewpoint 3.31 Ardleigh Heath**
- **Viewpoint 4.01 Boxted Airfield Memorial, Park Lane**
- **Viewpoint 4.02 PRoW, Oldhouse Farm, south of Boxted (Boxted 38)**
- **Viewpoint 4.16 Langham Playing Field off School Road, Langham**

5.13.29 We agree that within 0.5 km the scale of change would be large, the magnitude of effect would be high and the effect would be **major and significant** (adverse). **Viewpoint 3.31 Ardleigh Heath** at 0.49Km illustrates the scale and extent of the effect and its **major significant** adverse impact. However, we disagree that between 0.5 km and 1.5 km the scale of change would be medium and the effect only **moderate and significant** (adverse). Whilst **Viewpoint 4.01 Boxted Airfield Memorial, Park Lane** visualisation from 1.16Km does demonstrate a **moderate significant** adverse impact, up to 1Km we judge the effects would still be **major adverse.** Whilst we agree that generally, beyond 1.5 km the scale of change would be small and effect would be minor and not significant partly due to intervening vegetation, **Viewpoint 4.16 Langham Playing Field off School Road, Langham** from 1.71Km indicates there are still effects, which we would suggest, in open sections of the landscape would be more significant.

5.13.30 We consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects within the VRA creates an **overall significant adverse effect** at both construction and operation.

5.13.31 **D1 Tye Green and Boxted:** This Visual Receptor Area is located to the north of the Project, broadly between the farmland south of Langham and to the east of Little

Horkesley and the northern part is located within Dedham Vale National Landscape (an AONB). The only Representative Viewpoints in this receptor area is:

- **Viewpoint 4.02 Oldhouse Lane PRoW**

5.13.32 The assessment identifies that construction activity would be visible in close views from the south of the Visual Receptor Area as it runs along the southern boundary. During construction, we agree that it is likely that effects on visual receptors would likely be significant (negative) within approximately 1.0 km of the draft Order Limits. It is likely that the enormous impact of access for construction and operational purposes and the temporary and permanent haul roads throughout the Project merits the creation of a haul road decommissioning plan so that the effects of this infrastructure's removal is also understood.

5.13.33 At operation, within approximately 0.5 km it is identified that there would be close views of the overhead line and a CSE compound from scattered properties, including properties along Straight Road, the local PRoW network NCN Route 1 and people travelling along the A143 and local road networks Pylons would remain prominent in the view. Between approximately 0.5 km and 1 km, there would be close to medium views of the Project from scattered properties and the local PRoW and road network. Between approximately 1 km and 2 km, it is stated that views of the Project would likely be filtered and screened by layers of vegetation including woodlands and hedgerows resulting in intermittent medium to long distance views from scattered properties, a number of local PRoW, the Essex Way and roads. However, at **VP 4.01 Boxted Airfield Memorial,** which is to outside the Receptor Area D1 and to the north, the pylons to the south remain prominent on the skyline even though they re 1.2Km away. An additional viewpoint is needed, therefore, within D1 but between 1-1.5Km away from the Project so that the effects can be clearly identified as significant or not.

5.13.34 **D2 Little Horkesley and Wormingford:** This Visual Receptor Area is located to the north and west of the Project, broadly between Little Horkesley and Wormingford and the northern part is located within Dedham Vale National Landscape (an AONB). Representative Viewpoints are identified as:

- **Viewpoint 4.04 PRoW off Holt's Road, east of Wormingford (Little Horkesley 18)**
- **Viewpoint 4.07 School Road / Stour Valley Path, west of Little Horkesley**
- **Viewpoint 4.13 B1508 Main Road, Wormingford**
- **Viewpoint 4.27 B1508 Colchester Road, near Grove Lodge**

5.13.35 It is identified that construction activity and the finished Project would be visible in close views from the southern fringes of the Visual Receptor Area, and that within approximately 0.5 km, there would be close views of construction activity associated with the underground cable, overhead line and CSE compound, from the local road network, alongside local PRoW and scattered properties.

5.13.36 We agree that within 0.5 km of the project line, the scale of change would be large, the magnitude of effect would be high, and the effect would be **major and significant (adverse). Viewpoint 4.27 B1508 Colchester Road, near Grove Lodge 0.12Km** demonstrates the major significant adverse effect of the pylons close to. We welcome this additional viewpoint. However, we disagree that major effects are limited to below 0.5KM and that between 0.5 km and 1.5 km the scale of change would necessarily be medium and the effect only **moderate and significant** (adverse).

5.13.37 Whilst we agree that from **Viewpoint 4.04 PRoW off Holt's Road, east of Wormingford (Little Horkesley 18)** from 0.76Km, the visualisation does demonstrate a **moderate significant adverse** impact, we hold that in a more open landscape we consider the effects could remain **major adverse up to 1Km.** Similar receptors between 0.5Km-1Km, particularly receptors on linear features such as PRoW, would be affected by close to medium distance views of this construction activity and by the operational Project. Between approximately 1 km and 2 km intermittent medium to long distance views of construction activity and the completed overhead line would be seen, including from the National Landscape and the Stour Valley Path.

5.13.38 Whilst we agree that generally, beyond 1.5 km, the effects would be minor and not significant (adverse), partly due to intervening vegetation, the visualisation from **Viewpoint 4.13 B1508 Main Road, Wormingford** at 1.90Km on the edge of Dedham Vale National Landscape, shows **moderate adverse significant effects** would still occur because of the elevation. This will generate a long-term impact on the setting of the National Landscape if it goes ahead. We would argue that further undergrounding is needed and that the CSE compound needs to be moved further south-west, potentially south of King's Farm.

5.13.39 We would suggest that effects on visual receptors would likely be significant (negative) between 1-2 km of the Project. however, additional viewpoint assessments and visualisations are needed to demonstrate this. We consider that the cumulative effect of multiple pylons and the lengthy overhead linear character of the project, means that the collective effects within the study area creates an **overall significant adverse effect** on the perception of the wider countryside for both local householders and visitors.

5.13.40 **D3 Great Horkesley:** This Visual Receptor Area is located to the south of the Project, broadly between the A12 near Ardleigh Reservoir and West Bergholt. The identified Representative viewpoints for this area are

- **Viewpoint 4.03 Broad Lane / Essex Way, east of Great Horkesley**
- **Viewpoint 4.17 Lodge Lane, Colchester Viewpoint 4.18 NCN Route 1 / Langham Lane, north of Colchester**
- **Viewpoint 4.19 PRoW at Peppers Lane, east of Great Horkesley (Boxsted 28)**
- **Viewpoint 4.34 Crabtree Lane, north of West Bergholt**

5.13.41 We welcome the additional viewpoints.

5.13.42 It is identified that construction activity relating to both the overhead line, underground cable and two CSE compounds would be visible in close views from the northern fringes of the VRA. Within approximately 0.5 km, there would be close views of construction activity from PRoW such as Essex Way. This diminishes with distance.

5.13.43 Once operational, **Viewpoint 4.03 Essex Way** 0.42Km demonstrates the major significant adverse effect of the CSE at completion but also that the mitigation does reduce the significant effects at Year 15. We welcome the additional viewpoint assessments from VP 4.17 and VP 4.19 that give a more accurate understanding of negative effects close to. It is disappointing that **Viewpoint 4.17 Lodge Lane, Colchester NCN Route 1 / Langham Lane, north of Colchester** 0.38Km from the project line, is only presented as a wireline especially as it represents NCN Route 1. The effects are large, widespread and **major adverse significant**. We don't accept that either construction or operational impacts would be major significant adverse only within 0.5KM.

5.13.44 **Viewpoint 4.19 PRoW at Peppers Lane, east of Great Horkesley (Boxsted 28)** 0.23Km from the project line shows the significant vegetation loss required. **Viewpoint 4.34 Crabtree Lane, north of West Bergholt** 0.19Km demonstrates the significant major adverse impact which seriously impacts the view across the valley to Fordham. The mitigation hides the pylons but also completely hides the view and therefore part of the character

5.13.45 There is a complete lack of viewpoints from beyond 0.5Km therefore we do not accept that effects are not **major significant adverse** up to 1Km nor that effects are not **significant moderate adverse** beyond 1.5Km.

5.13.46 We consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects within the VRA creates an **overall significant adverse effect** at both construction and operation.

5.13.47 **D4 North Colchester:** This Visual Receptor Area is located to the south of the Project and south of the A12, broadly encompassing the northern urban edge of Colchester. There are no representative viewpoints within this Visual Receptor Area which we don't think is acceptable. There would be no construction activity within the Visual Receptor Area

5.13.48 We accept that effects on visual receptors would likely be negative but not significant during the construction phase and the operational phase but suggest a viewpoint is needed from e.g., the edge of the Receptor Area from National Cyle Network as it passes along Severall's Lane crossing over the A12 to demonstrate this. This is c 1Km from the Project line and it is known from elsewhere in the Project area that significant effects can be perceived at 1 Km.

5.13.49 **D5 Fordham:** This VRA is located to the north-west of the Project, broadly between Rochfords and Rose Green. The topography consists of a gently rolling elevated plateau which slopes down to the south and east towards the Colne Valley and one of its tributary valleys. The Representative Viewpoints are identified as:

- **Viewpoint 4.08 Fordham**
- **Viewpoint 4.14 Fordham Road, north-east of Fordham**
- **Viewpoint 4.24 Essex Way near Fordstreet**
- **Viewpoint 4.30 Mill Road, south of Fordham**
- **Viewpoint 4.35 PRoW, Hemps Green (Fordham 5)**

5.13.50 It is identified that construction activity would be visible in close views from the south-eastern fringes of the Visual Receptor Area from the local road network (which is predominantly rural lanes), the PRoW network, NCN Route 13, and Open Access Land, as well as scattered properties such as north-east of Fordham within the Colne Valley. The Project run of pylons is approximately 3Km through this area and would generate **major significant adverse** effects along this line as it crosses the valley between Fordham and the outskirts of West Bergholt parish. Part of this area would have formed part of the previous Special Landscape Area. Colchester no longer designates local landscape designations.

5.13.51 **Viewpoint 4.08 Fordham** 0.47Km from the project: It is unclear why this is only presented as a wireline as this VP has a close-to view, and is at the heart of the village just in front of the church and the pub. A full photomontage should be

produced for VP4.08 to better demonstrate the effects. The assertion that '*Views from within Fordham would be screened and filtered in places by woodland blocks'* is at best misleading as the vegetation in the baseline photos and visualisations of **Viewpoint 4.08 Fordham** are generally uncut hedgerows. Substantially unfiltered views of the overhead line would be visible from most of the Fordham Hall Estate Open Access Land with three of the pylons actually being sited on this land, therefore producing **significant major adverse** un-mitigatable effects.

5.13.52 *EN1 5.11.9 states 'Applicants will need to consult the local community on their proposals to build on existing open space, sports or recreational buildings and land'.* It should be made clear if the local community accepts the building of this infrastructure within publicly accessible greenspace. Further *'applicants should consider providing new or additional open space including green and blue infrastructure'*, And 5.11.24 '*Where green infrastructure is affected, the Secretary of State should consider imposing requirements to ensure the functionality and connectivity of the green infrastructure network is maintained'* and *'any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space'* And 5.11.25 '*The Secretary of State should also consider whether any adverse effect on green infrastructure and other forms of open space is adequately mitigated or compensated by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness and quality, and accessibility'.*

5.13.53 We would be interested to know what direct consultation has taken place with the community about siting three pylons on newly created Open Access Land.

5.13.54 **Viewpoint 4.14 Fordham Road, north-east of Fordham** 0.31Km from the project line. The visualisation demonstrates how significant the impact will be from this viewpoint, introducing a major industrial element over a 270-degree angle into an unspoilt, rural landscape. The baseline view is over an unspoilt shallow valley to higher ground beyond. The pylon run substantially fills the whole view of the valley. This landscape either forms part of the old Colne Valley SLA or is part of its setting. The OH line at Fordham itself is at an elevated level and so would be visible over a wide area including on the valley bottom and the Essex Way.

5.13.55 **Viewpoint 4.24 Essex Way near Fordstreet** 0.48Km This VP is sited in the bottom of the Colne Valley in what used to be the Special Landscape Area. It demonstrates the major significant adverse effects that would occur across the valley. We consider the line should be either undergrounded or diverted from this part of the valley and that

this is justified by the value and sensitivity of this distinctive landscape feature and the visual amenity it provides. There would be wide views up and down the valley to the pylons and wide views back up to the pylons and OH line as they come down the valley slope. We do not agree that significant impacts would be limited to <1.5Km at the operational stage.

5.13.56 **Viewpoint 4.30 Mill Road, south of Fordham** 0.21Km from line demonstrates the wide-ranging and prominent visibility of the overhead line from this viewpoint south of Fordham. This represents many of the views from the Open Access Land that surrounds Fordham. The overhead line is prominent in views over the Colne Valley. Looking back from the valley, the proposed overhead line is likely to be seen on the skyline framing views back to Fordham. The views in at least 180 degrees around Fordham are potentially industrialised. The scenic value of the views will be irrevocably changed. We do not accept that intervening woodland provides much filtering.

5.13.57 We do not accept that major adverse significant effects only occur within 0.5 km. We consider they extend to at least 1km due to the prominent location of much of the infrastructure. We agree the effects would be **major and significant (adverse)** but suggest this would be over a much wider area causing irrevocable degradation to the visual amenity of the Colne Valley and its surroundings.

5.13.58 We consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects within the VRA creates an **overall significant adverse effect** at both construction and operation. We do not accept that its reasonable that no additional mitigation or any compensation is proposed within the VRA.

5.13.59 **D6 Fordham Heath and Eight Ash Green:** This Visual Receptor Area is located to the south and east of the Project, broadly between West Bergholt and the railway line north of Copford and Marks Tey. The sole identified Representative Viewpoints is:

- **Viewpoint 4.05 PRoW near Hillhouse Wood, west of West Bergholt (West Bergholt 5)**
- **Viewpoint 4.09 NCR 13, Fiddlers Hill**
- **Viewpoint 4.20 PRoW near Bullbanks Farm, west of Fordham Heath (Aldham 4)**
- **Viewpoint 4.21 Brook Road, north of Marks Tey**
- **Viewpoint 4.25 Essex Way, Mill Road, south of Fordham**
- **Viewpoint 4.28 Essex Way near Poole's Farm**
- **Viewpoint 4.29 PRoW north of Eight Ash Green / Fordham Heath (Eight Ash Green 1)**

- **Viewpoint 4.33 Marks Tey Railway Station**
- **Viewpoint 4.38 Essex Way, West Bergholt**

5.13.60 The additional viewpoints are to be welcomed. **Viewpoint 4.28 Essex Way near Poole's Farm** needs at least to have a wireframe as this VP is taken from the Essex Way.

5.13.61 The assessment identifies that, at both the construction and operational stage, the Project and its construction, would be visible in close views from the local road network, such as A1124, (but also from the many lanes) alongside scattered properties such as southeast of Fordham, NCN Route 13, PRoW (including the Essex Way) and from Open Access Land within the Colne Valley and along the Essex Way where the overhead line would be visible on the skyline crossing the valley. Demonstrated in **Viewpoint 4.25 Essex Way, Mill Road, south of Fordham 0.24Km.** From properties and people travelling along the B1508, in the north-east of the area, there would be open and elevated views along the valley, towards the Project as pylons would be stacked in views.

5.13.62 There are still significant views greater than 0.5 km as evidenced by **Viewpoint 4.05 PRoW near Hillhouse Wood, (West Bergholt 5)** 0.9Km**, Viewpoint 4.20 PRoW near Bullbanks Farm, (Aldham 4)** 0.59KM **Viewpoint 4.28 Essex Way near Poole's Farm** 0.98Km. VP4.05, 4.20 and 4.28 are greater than 0.5Km from the Project line, therefore, we dispute that significant effects would not be found at greater distances than 1Km.

5.13.63 Between approximately 1 km and 2 km, the overhead line would most often be seen on the skyline and above intervening trees in medium to long distance views. **Viewpoint 4.29 PRoW north of Eight Ash Green / Fordham Heath (Eight Ash Green 1)** demonstrates though that the effects are still **moderate significant adverse** and that significance doesn't stop at 1.5 Km. It is accepted that visibility would decrease in the south-east of the Receptor Area and between approximately 2 km and 3 km.

5.13.64 We consider the scale of change would be large and the effect would be **major and significant (adverse) up to 1Km** and not 0.5Km as stated, due to the frequent open views and elevated pylon runs. We consider the scale of change would be medium and the effect would be **moderate and significant (adverse**) between 1.0 km and up to 2.0 km. Beyond 1.5 km, whilst the scale of change would be smaller, and the individual effects could be minor and not significant (adverse), we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects creates an **overall significant adverse effect** within the VRA at both construction and operation.

5.13.65 **D7 Fordstreet and Aldham:** This Visual Receptor Area is located to the north and west of the Project, broadly between Chappel, Fordstreet and Aldham. The Representative Viewpoints are:

- **Viewpoint 4.11 PRoW south of Aldham (Aldham 15)**
- **Viewpoint 4.31 Rectory Road near Hoe Farm, east of Great Tey**
- **Viewpoint 4.37 Hines Close, Aldham**

5.13.66 We agree that the Project would be visible in close views from the south-east of the VRA, demonstrated in **Viewpoint 4.11 PRoW south of Aldham (Aldham 15) and Viewpoint 4.37 Hines Close, Aldham** which show the severity of the impact at 0.17Km distant from the project line at Aldham including as it crosses over the Colne Valley south of Fordstreet. The pylons are very prominent next to the village of Aldham looming over existing housing and creating really negative place-making. The alignment is not acceptable and needs undergrounding or setting back. The proposed overhead line is likely to be seen on the skyline and would be prominent in views, particularly from Fordstreet and Aldham where there are some open views to the east in neighbouring VRA D5. There would also be close views from parts of the Essex Way and open access land within the Colne Valley. The Project would be introduced into a landscape otherwise absent of overhead lines. We consider the scale of change would be large and the effect would be **major and significant (adverse) within 1.0Km** of the project not 0.5Km due to the openness and elevation. **Viewpoint 4.31 Rectory Road near Hoe Farm, east of Great Tey** 0.95KM demonstrates how major effects persist beyond 0.5Kms.

5.13.67 We consider there would be medium distance views of the Project from between approximately 1.0Km and 1.5 km, and that woodland cover would do little in the way of filtering and screening due to the sheer height of the pylons and their extent. We consider that the effect would be **moderate and significant (adverse**) between only 1.0-1.5 Km. Between approximately 1 km and 2 km, the overhead line would be visible in medium to long views and would most often be seen on the skyline and above intervening trees, with visibility decreasing with distance as layers of vegetation and topography further screen out views. However, there are no viewpoint images to demonstrate this. Effects on visual receptors would likely be significant (negative) within approximately 1.5 km of the Project.

5.13.68 Beyond approximately 1.5 km, it is less likely that effects would be significant due to a reduction in perceptibility of the overhead line which would increase with distance. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective

effects creates an **overall significant adverse effect** within the VRA at both construction and operation.

5.13.69 **D8 Great Tey:** This Visual Receptor Area is located to the north of the Project, broadly between Swan Street and East Gores. The Representative Viewpoints are:

- **Viewpoint 4.10 Moor Road, Great Tey**
- **Viewpoint 4.22 PRoW between Great Tey and Little Tey**
- **Viewpoint 4.26 Essex Way, East Gores**
- **Viewpoint 4.32 Essex Way, west of Teybrook Farm**

5.13.70 The assessment identifies that the Project would be visible in close views (within 0.5 km) from the south of the VRA,from the local road and PRoW network, such as Essex Way, alongside scattered properties such as those south of Great Tey and properties at East Gores.The overhead line is likely to be seen on the skyline and would be prominent in views, particularly from the Essex Way and East Gores (see **Viewpoint 4.26 Essex Way, East Gores).** However, we consider major significant adverse impacts extend up to 1Km from the project line, See **Viewpoint 4.32 Essex Way, west of Teybrook Farm** 0.63Km). Between approximately 0.5 km and 1 km, close to medium distance views of the Project would be visible from the local road and PRoW network, alongside scattered properties such as those southwest of Great Tey.

5.13.71 The Project would be introduced into unspoiled rural landscapes. We consider that the scale of change would be large, and the effect would be **major and significant** (adverse) up to 1KM (not 0.5Km) from the project line.

5.13.72 Between approximately 1 km and 2 km, the overhead line would most often be seen on the skyline in medium to long views and above intervening trees, with visibility decreasing with distance as layers of vegetation further screen out views and as much of Great Tey is in a slight dip, views towards the Project would be limited in places as demonstrated **in Viewpoint 4.10 Moor Road, Great Tey.** (1.59Km) and **Viewpoint 4.22 PRoW between Great Tey and Little Tey** 1.08Km. A visualisation is needed from VP 4.22 to demonstrate the effects.

5.13.73 We consider it is between 1.0 km (not 0.5Km) and 1.5 km that the scale of change would be medium, and the effect would be **moderate and significant** (adverse), reducing to minor and not significant (adverse) within the Roman River valley. Beyond approximately 1.5 km, it is less likely that effects would be significant due to a reduction in perceptibility of the overhead line which would increase with distance. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective

effects create an **overall significant adverse effect** within the VRA at both construction and operation.

5.13.74 **D9 Marks Tey:** This Visual Receptor Area is located to the south of the Project, broadly between East Gores and Marks Tey. The Representative Viewpoints are:

- **Viewpoint 4.06 A120 Coggeshall Road, Broad Green**
- **Viewpoint 4.12 A120 Coggeshall Road, Marks Tey**
- **Viewpoint 4.23 Great Tey Road**

5.13.75 The assessment identifies the Project would be visible in close views (within 0.5 km) from the north of the VRA. The overhead line is likely to be seen on the skyline and would be prominent in views (as represented by Viewpoint 4.06 A120 Coggeshall Road, Broad Green (0.46Km) particularly from Salmon's Lane and Great Tey Road which are both crossed by the Project. The Project would be filtered in places by existing vegetation, including dense roadside vegetation and hedgerows. Within 0.5 km the scale of change would be large and the magnitude of effect would be high. The effect would be major and significant (adverse).

5.13.76 The Project would be visible in close views from the northern fringes of the Visual Receptor Area on its northern boundary. Within approximately 0.5 km, there would be close views of the overhead line from the PRoW and local road network including Salmon's Lane, Great Tey Road and the A120 alongside scattered properties such as those north-west of Marks Tey and near East Gores. Between approximately 0.5 km and 1 km the settlement of Little Tey would be exposed to close to medium distance views of the Project however views would be filtered and screened in places by vegetation surrounding the settlement.

5.13.77 Between approximately 1 km and 2 km, (**Viewpoint 4.12 A120 Coggeshall Road, Marks Tey** (1.15Km) the assessment identifies medium to long distance views of the Project but suggests these are reduced by layers of vegetation. The 'distant' views of the Project are actually quite prominent where the landscape opens and layers of vegetation are reduced. We agree there would be wide views of the overhead line from along the A120 and from properties along the road where the overhead line would be visible on the skyline across a wide view. We further agree that effects on visual receptors would likely be **significant (adverse**) within approximately 1.5 km of the Project, but that they are likely **major significant adverse** up to 1Km.

5.13.78 Beyond approximately 1.5 km, it is less likely that effects would be significant due to a reduction in perceptibility of the overhead line which would increase with distance. However, we consider that the cumulative effect of multiple pylons and the

continuous overhead linear character of the project, means that the collective effects creates an **overall significant adverse effect** within the VRA at both construction and operation.

5.13.79 **VRA D10 Copford**: This VRA is located to the south of the Project, broadly between the western edge of Colchester and farmland north of Easthorpe. The landform consists of an elevated farmland plateau crossed by the valley of the Roman River east of Copford.

5.13.80 There are no viewpoints located within the VRA.

5.13.81 This VRA is located 1 km to the south-east of the Project. so we agree views towards the Project from the majority of the VRA are well screened, particularly in the east from Copford and along the valley of the Roman River. The Project would be perceptible from PRoW on slightly higher ground west of Copford Green, where it would form a small part of distant views. Between 1 km and 1.5 km there would be a barely perceptible scale of change and the effect would be negligible and not significant.

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5.13.82 Theoretical visibility of Project: The LVIA identifies Section E covering the Project line broadly between Coggeshall in the northeast and Terling to the southwest. The Zone of Theoretical Visibility (ZTV) mapping indicates relatively widespread theoretical visibility of the overhead line within the 3 km study area including from villages, the PRoW network, National Cycle Network routes in this area, from the rural lanes and road network.

5.13.83 From the more elevated parts of the study area, it is identified that there would be theoretical visibility of up to 80 pylons. This also highlights how widespread the potential negative landscape and visual effect of the scheme are.

5.13.84 Theoretical visibility of CSE compound west of White Notley is identified as relatively widespread within approximately 1 km of the Project line, with more intermittent theoretical visibility between 1 km and 3 km.

Visual Receptors and Groupings

5.13.85 We do not agree that the value of the view should be judged substantially on identified viewpoints and promoted views in tourist-focussed documents and that in lieu of local landscape designation and district-wide Valued Landscape Assessments,

it should be judged by how it relates to the LCA. We consider the sensitivity of receptors and significance of the effects has been downplayed as a result.

5.13.86 **E1 Coggeshall**: This Visual Receptor Area is located to the north and west of the Project, in the area surrounding Coggeshall. Representative viewpoints are identified as:

- **Viewpoint 5.01 A120 layby, Stockstreet Farm, west of Coggeshall**
- **Viewpoint 5.05 Coggeshall Road, Coggeshall Hamlet**
- **Viewpoint 5.06 Cuthedge Lane, west of Coggeshall Hamlet**
- **Viewpoint 5.13 Tey Road / Buckley's Lane, between Coggeshall and Great Tey**
- **Viewpoint 5.14 Essex Way south of Coggeshall**
- **Viewpoint 5.18 PRoW south of Coggeshall Hamlet (Kelvedon 1)**

5.13.87 The Project would be visible in close views (within 0.5 km) from the south-east of the VRA demonstrated by **Viewpoint 5.05 Coggeshall Road, Coggeshall Hamlet** (0.43Km). The Project would be visible in open views from the local road network, especially where it crosses the A120, Old Road, the B1024 and unnamed roads. It would be visible in close, open views from the local PRoW network, including footpaths it would cross south of Surrex, east of Coggeshall Road, and at Pantling's Lane and the Essex Way. **Viewpoint 5.18 PRoW south of Coggeshall Hamlet (Kelvedon 1)** is even closer set at 0.13Km**.** The pylons disconcertingly parallel the PRoW. However, we consider the scale of change would be large and the effect would be **major and significant (adverse) for up to 1.0Km** not just 0.5Km. The woodland would not likely filter views to the east being located within an undulation mid distance between the VP and the Project.

5.13.88 **Viewpoint 5.05 Coggeshall Road, Coggeshall Hamlet** 1.44Km only gives glimpsed views of the tops of pylons. **Viewpoint 5.14 Essex Way south of Coggeshall** 1.08 Km where a short section of the top half of pylons and OH wire is visible. We agree from 1.0Km to 1.5 km the scale of change would be medium, and the effect would be **moderate and significant (adverse),** reducing to negligible and not significant from Coggeshall. However, we consider the effects could be **major adverse** between 0.5Km-1.0Km, for instance if moving down the PRoW or one of the lanes towards the project line.

5.13.89 It is also identified that the Project would be visible on the distant skyline above a wooded horizon from the north of the project approx. 0.5km outside of the Visual Receptor Area at **Viewpoint 5.01 A120 layby, Stockstreet Farm, west of Coggeshall** (3.22Km). We agree effects would be less likely from this particular viewpoint, beyond 1.5km of the Project, due to the perceptibility of the overhead line. We query the effects beyond 1km to the north where the landform is elevated.

Furthermore, as noted within the assessment of VP 5.01, *there are views to the south across a gently undulating arable landscape to the wooded valley of the River Blackwater.* We consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation.

5.13.90 **E2 Feering:** This Visual Receptor Area is located to the south and east of the Project, in the area surrounding Feering and Rivenhall. The Representative Viewpoints are:

- **Viewpoint 5.02 Old Road Feering**
- **Viewpoint 5.10 PRoW near Coggeshall Hall**

5.13.91 The Project would be visible in close views to the north-west of the VRA. We consider close views extend within 1.0Km not 0.5 km of the Project. We agree there would be close views of the proposed overhead line from the local road and PRoW network as demonstrated by **Viewpoint 5.10 PRoW near Coggeshall Hall** 0.03KM (a wireline or photomontage visualisation is needed from this VP). We agree the pylons would be large in scale and prominent features dominating the views. In the north of the VRA there is an existing 132 kV overhead line (part of which would be removed to accommodate the Project, near Skye Green).

5.13.92 **VP 5.02 Feering** is taken from. 0.98 km to the northwest at its closest point. We accept that the view south will likely be filtered by field boundary vegetation. The northern view from the viewpoint would comprise an increase in number of pylons despite removal of the existing overhead line. We therefore consider that significant effects would extend beyond 1 km, but that the effects are likely to be **moderate significant**. Generally, we consider the scale of change would be large **within 1.0KM** not 0.5Km and the effect would be **major and significant (adverse).** We agree that the effects on visual receptors would likely be significant (adverse) within 1.5 km of the Order Limits.

5.13.93 We consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation.

5.13.94 **E3 Kelvedon:** This Visual Receptor Area is located to the south and east of the Project, in the area surrounding Kelvedon**.** There is one representative view from this area.

- **Viewpoint 5.21 Cranes Lane Overbridge, south-west of Kelvedon**

5.13.95 This VRA is 1 km to the south-east of the Project at its closest point, at Feering. We agree the proposed overhead line would be visible in medium to long distance views and that woodland, vegetation along roads and the railway and buildings would screen and heavily filter views from the majority of the VRA. There would be distant views towards the proposed overhead line above a wooded skyline from lanes as they cross over the railway line on the north-western boundary of the VRA, as represented by Viewpoint 5.21 Cranes Lane Overbridge, south-west of Kelvedon 1.93Km.

5.13.96 We agree that during operation given the reduced topography of the landscape and enclosed nature in this area, effects on visual receptors would likely not be significant between approximately 1 km and 3 km of Project due to a reduction in perceptibility of the overhead line which would increase with distance.

5.13.97 That being said, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.98 **E4 Silver End:** This Visual Receptor Area is located to the north of the Project, in the area surrounding Silver End. There are three Representative Viewpoints from this area.

- **Viewpoint 5.03 Rivenhall Place, Silver End**
- **Viewpoint 5.11 Cressing Temple Barns, south-west of Silver End**
- **Viewpoint 5.17 PRoW south of Silver End**

5.13.99 The Project would be visible in close views (within 0.5 km) from the south of the VRA. **Viewpoint 5.03 Rivenhall Place, Silver End** 0.2Km should demonstrate this but no visualisation has been produced. The proposed overhead line is likely to be seen on the skyline and would be very prominent in views as demonstrated by **Viewpoint 5.17 PRoW south of Silver End** (0.13Km) and at **Viewpoint 5.11 Cressing Temple Barns, south-west of Silver End** (0.78Km). Cressing Temple Barns have very important heritage value.

5.13.100 The Project would be introduced into views otherwise absent of overhead lines. or other detracting elements within this landscape. Elsewhere woodland and roadside trees would filter views towards the Project. We consider that the scale of change would be large, and the effect would be **major and significant** (adverse) up to 1Km not 0.5Km. There are potential views from the south of Storey's wood, east of Silver End and north of the project beyond 1km.

5.13.101 Generally, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.102 **E5 Black Notley & White Notley:** This Visual Receptor Area is located to the north of the Project, in the area surrounding Black Notley, White Notley and Ranks Green. Representative viewpoints are identified as:

- **Viewpoint 5.04 White Notley**
- **Viewpoint 5.07 NCN Route 16 and Ranks Green Road east of Rank's Green**
- **Viewpoint 5.15 Essex Way south-east of White Notley**
- **Viewpoint 5.20 PRoW, Black Notley (Black Notley 9)**

5.13.103 We agree the Project would be visible in close views (within 0.5 km) from the south of the VRA, including towards the proposed overhead line and Fairstead (EACN side) and Fairstead (Tilbury side) CSE compounds. These elements of the Project are likely to be seen on the skyline and would be prominent in views, including from the Essex Way and NCN Route 16 (as represented by **Viewpoint 5.07 NCR 16 and Ranks Green Road, east of Rank's Green** (0.37Km). We agree that there would be close views of the overhead line and CSE compounds from this viewpoint. Views from Bridleway by Dines Hall, 150m southwest from 5.07 are likely to comprise much greater impact within a more sensitive location over 1km. Whilst the Project would be seen in the context of an existing 400 kV overhead line to describe this infrastructure '*uncharacteristic for the area'* is misleading. We suggest the scale of change would be large up to 1Km not 0.5Km and the effect would be **major and significant (adverse)** up to 1Km. We agree that effects on visual receptors at operation would likely be **significant (negative**) within approximately 1.5 km of the Project, however we suggest that these effects are major adverse up to 1Km and moderate adverse between 1Km and 1.5Km.

5.13.104 **Viewpoint 5.04 White Notley** 0.63 Km presents a view across the valley of the River Brain demonstrating the pylons' prominent dominance of the view over a wide area and how major impacts occur beyond 0.5 Km. Permanent reduction/removal of riparian vegetation along the River Brain would be noticeable from this location.

5.13.105 We agree that effects on visual receptors would likely be significant (negative) within 1.5 km of the Order Limit. Generally, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means

that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.106 **E6 Terling & Witham:** This Visual Receptor Area is located to the south of the Project, in the area surrounding Terling, Fairstead and northwest of Witham. Representative viewpoints are identified as:

- **Viewpoint 5.08 Fairstead Hall Road Fairstead**
- **Viewpoint 5.09 Fairstead Lodge Road near Fuller Street**
- **Viewpoint 5.12 PRoW, Faulkbourne**
- **Viewpoint 5.16 Essex Way near Troy's Hall, north-east of Fairstead**
- **Viewpoint 5.19 PRoW north of Gambles Green (Terling 15)**

5.13.107 We agree the Project would be visible in close views from the south of the VRA, including towards the proposed overhead line and Fairstead (EACN side) and Fairstead (Tilbury side) CSE compounds and a short section of undergrounding between these CSE compounds and that these are likely to be seen against the sky and would be prominent in views (as shown in **Viewpoint 5.16 Essex Way near Troy's Hall** 0.12Km, **Viewpoint 5.09 Fairstead Lodge Road** 0.33Km**)**, including from the Essex Way and NCN Route 16. We don't agree that the presence of an existing 400 kV overhead line makes that infrastructure characteristic for the area. Our position is that this would be large and the effect would be major and significant (adverse) up to 1Km not 0.5Km. We consider moderate significant adverse effects would occur between 1-1.5Km not from 0.5KM.

5.13.108 Generally, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation**.**

Visual Receptor Area F (in Chelmsford)

5.13.109 Theoretical visibility of Project: The preliminary LVIA identifies Section F covering the Project line broadly between Great Leighs in the northeast and Stock to the south. The Zone of Theoretical Visibility (ZTV) mapping indicates relatively widespread theoretical visibility of the overhead line within the 3 km study area including from villages, the PRoW network, National Cycle Network routes in this area, from the rural lanes and road network. The study also identifies theoretical visibility of one or more pylons from the majority of the study area and multiple pylons from the more elevated parts of the study area. This highlights how widespread the potential negative landscape and visual effect of the scheme are Chelmsford falls substantially within Visual Receptor Area F.

5.13.110 We do not agree that the value of the view should be judged substantially on identified viewpoints and promoted views in tourist-focussed documents and that in lieu of local landscape designation and district-wide Valued Landscape Assessments, it should be judged by how it relates to the LCA. We consider the sensitivity of receptors and significance of the effects has been downplayed as a result.

5.13.111 **F1 Great Leighs:** This Visual Receptor Area is located towards the south of the Project, southwest of Braintree. It lies broadly between the southern edge of Great Notley and Chatham Green. The representative viewpoints are:

- **Viewpoint 6.01 Castle Cose, Great Leighs**
- **Viewpoint 6.03 Essex Way, Chatham Green**
- **Viewpoint 6.25 PRoW, east of Littley Green (Great Waltham 54)**

5.13.112 We agree the Project would be visible in close views from the south-east of the VRA, including Pork Hall Lane and Boreham Road (Protected Lanes) (which would both be crossed by the Project), NCN Route 50 and PRoW. The Project would be seen above wooded skylines and in relatively open views. Views from the local road network would be partially filtered by intervening vegetation but would be seen through gaps in the vegetation, and as large scale features above wooded skylines. The Project would be introduced into views largely absent of overhead lines. However we consider the scale of change would be large and the effect major and **significant (adverse) within 1.0Km not 0.5Km**.

5.13.113 **Viewpoint 6.01: Castle Close, Great Leighs** 0.91Km and **Viewpoint 6.03: Essex Way, Chatham Green** 0.80Km demonstrate how even at this distance, the overhead line is prominent in a rural view. We consider the scale of change would be medium and the effect would be **moderate and significant (adverse**) **between 1.0 km and 1.5 km** not 0.5-1.5Km.

5.13.114 We agree that, generally, effects beyond 1.5km are unlikely due to woodland blocks and undulations as evidenced in **Viewpoint 6.25: PRoW, East of Littley Green (Great Waltham 54).** However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.115 **F2 Peverel's Farm:** This Visual Receptor Area is located towards the south of the Project, broadly between Fuller Street and the northern edge of Chelmsford. The sole representative viewpoint is identified as:

- **Viewpoint 6.02 Essex Way near Fuller Street**
- **Viewpoint 6.17 Sheepcotes Lane, Little Waltham**

5.13.116 We agree the Project would be visible in close views from the north-west of the VRA, with close views from the local road network, scattered properties along the lanes, PRoW including the Essex Way (**Viewpoint 6.02 Essex Way, west of Fuller Street** 0.64Km) which presents gently undulating countryside views in all directions. We disagree that the pylons are only '*noticeable features*' as in VP 6.02, we would consider these prominent. Despite the removal of some existing pylons, cumulative impact would likely degrade the landscape further by closing up the openness to the north. The proposed pylons would appear larger than the existing pylons. We consider the scale of change would be large and the effect would be **major and significant (adverse)** within 1.0Km not 0.5Km.

5.13.117 Viewpoint 6.17: Sheepcotes Lane, Little Waltham 1.25Km demonstrates that there are still **moderate and significant** (adverse) effects at this distance. We consider the scale of change would be medium and the effect would be **moderate and significant** (adverse) only beyond 1.0 km and up to 1.5 km. Generally, beyond that we accept that individual impacts will be not significant, however, we consider that the cumulative effect of multiple pylons and the continuous overhead linear character of the project, means that the collective effects create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.118 **F3 Great Waltham:** This Visual Receptor Area is located to the south of the Project, north of Chelmsford. It lies broadly north of Broad's Green, and to the south of Littley Green. The sole representative viewpoint is identified as:

- **Viewpoint 6.18 Langleys Park, Great Waltham 1.01**
- **Viewpoint 6.16 Chatham Hall Lane, north of Little Waltham 0.28**

5.13.119 It is identified that low height pylons are proposed at this location to mitigate effects on the views from heritage assets. We assume this is represented by Viewpoint 6.18 Langleys Park, Great Waltham. We have concerns that this has not been presented as an option on a more widespread basis as it is a lower and a far more elegant solution, and as identified, with the lower height reduces the likely visibility of the proposed overhead line. Using the T-pylon within a run of lattice ones, also creates the potential for visual inconsistency with the two styles of pylon seen in the same view.

5.13.120 In landscape and visual impact terms, there are concerns regarding the wider impact of the pylons and overhead line on the historical landscape setting associated with Langleys Mansion, not just the impact on views from the mansion. While we agree views of the Project would likely be filtered, introduction of pylons will likely degrade the setting forming a backdrop of pylons behind the building within the wider landscape.

5.13.121 We agree there would be close and sometimes open views of the Project from local receptors, from properties along several roads/lanes, and from scattered properties as shown in **Viewpoint 6.16 Chatham Hall Lane, north of Little Waltham** where pylons are very prominent and seen in full against the sky. Pylons would also appear stacked behind each other in some views. The Project would be introduced into views otherwise absent of overhead lines. We agree the scale of change would be large, and the effect would be **major and significant** (adverse), reducing to **moderate and significant** (adverse) from Great Waltham but consider generally **major and significant adverse** effects extend up to 1Km from the project line not 0.5 km.

5.13.122 We consider that generally a medium scale of change and moderate and significant (adverse) effects occur between 1.0KM and extend up to 1.5 km. Generally, beyond 1.5Km we accept that individual impacts will be not significant, however, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.123 It is identified that no additional mitigation is proposed within the VRA but we are concerned that opportunities could be taken, for instance, to enhance the historic landscape to strengthen its resilience going forward.

5.13.124 **F4 Little Waltham:** This Visual Receptor Area is located to the south of the Project, north of Chelmsford. It lies broadly between Broomfield and Broomfield Hospital in the south, and north of Little Waltham. There is one representative viewpoint within this Visual Receptor Area

- **Viewpoint 6.13 B1008, Little Waltham**

5.13.125 It is identified that low height pylons are proposed at this location to mitigate effects on the views from heritage assets. We assume this is represented by Viewpoint 6.18 Langleys Park, Great Waltham. We have concerns that this has not been presented as an option on a more widespread basis beyond heritage assets as it is a lower and a far more elegant solution, and as identified, with the lower height reduces the likely

visibility of the proposed overhead line. Using the T-pylon within a run of lattice ones, also creates the potential for visual inconsistency with the two styles of pylon seen in the same view. A viewpoint should be presented to show the T-Pylon in place. We have concerns that no viewpoints have been offered outside the 0.5Km range and suggest one or more of these are needed to demonstrate that effects are reduced due to intervening settlement or vegetation.

5.13.126 Generally, we agree that there would be close and sometimes open views of the Project from receptors such as Chatham Hall Lane, from the local PRoW network and scattered properties, and that Pylons would be seen in full in places from less vegetated sections such as Chatham Hall Road, with much of the pylon's structure prominently visible against the sky. We are deeply concerned by the amount of vegetation proposed for removal as demonstrated in **Viewpoint 6.13: B1008, Little Waltham.**

5.13.127 Pylons would appear stacked behind each other in some views from locations close to the alignment, such as near Lark's Lane and Chelmsford Road. The Project would be introduced into views otherwise absent of overhead lines. We agree that the scale of change would be large, and the effect would be **major and significant (adverse),** reducing to moderate and significant (adverse) within Little Waltham. However, we consider **major significant adverse effects occur up to 1Km** not 0.5 Km.

5.13.128 We consider that generally a medium scale of change and moderate and significant (adverse) effects do not occur until 1.0KM and extend up to 1.5 km. Generally, beyond 1.5Km we accept that individual impacts will be not significant, however, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.129 **F5 Chignall Smealy:** This Visual Receptor Area is located to the south of the Project, north-west of Chelmsford. It lies broadly between the northern edge of Boyton Cross and east of Pleshey. Representative viewpoints are identified as:

- **Viewpoint 6.04 PRoW, Broad's Green (Great Waltham 85)**
- **Viewpoint 6.12 Pleshey Castle**
- **Viewpoint 6.20 PRoW, Chignall St James (Chignall 30)**
- **Viewpoint 6.24 Chignall Smealy**

5.13.130 Generally, we agree that the Project would be visible in close views from the south-east of the VRA, with the overhead line likely prominent in views and seen against

the sky from parts of Chignall St James (see **Viewpoint 6.20 PRoW, Chignall St James (Chignall 30)** and Broad's Green (see **Viewpoint 6.04 PRoW, Broad's Green (Great Waltham 85)**. There are continued views travelling south along the PRoW. There would be some filtering of views by existing vegetation, but not to the height to screen a large structure completely at odds with the rural scene. The Project would be introduced into views otherwise absent of overhead lines.

5.13.131 We agree that the scale of change would be large, and the effect would be **major and significant (adverse)** in close-to views. However, we consider **major significant adverse effects occur up to 1Km** not 0.5 Km. We consider that generally a medium scale of change and **moderate and significant (adverse) effects** do occur between 1.0KM and extend up to 1.5 km.

5.13.132 Generally, beyond 1.5Km we accept that individual impacts will be not significant, however, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.133 **F6 Chelmsford North-West:** This Visual Receptor Area is located to the south of the Project, broadly between Broomfield and the centre of Chelmsford. Representative viewpoints are identified as:

- **Viewpoint 6.14 PRoW west of Broomfield (Broomfield 12**
- **Viewpoint 6.05 Centenary Circle, north-west of Chelmsford**

5.13.134 We agree the Project would be visible in close views from the north-west of the VRA, and that he overhead line would be prominent in relatively open views, and seen against the sky. The Project would be introduced into views otherwise absent of overhead lines.

5.13.135 We agree that the scale of change would be large, and the effect would be **major and significant** (adverse) in close-to views. However, we consider **major significant adverse effects** occur up to 1Km not 0.5 Km. We consider that generally a medium scale of change and **moderate and significant (adverse) effects** occur between 1.0KM and extend up to 1.5 km.

5.13.136 Generally, beyond 1.5Km we accept that individual impacts will be not significant, however, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.137 **F7 Roxwell:** This Visual Receptor Area is located to the south of the Project, west of Chelmsford. It lies broadly between the A1060 and A414, to the west of Writtle. The sole representative viewpoint is identified as:

- **Viewpoint 6.06 Galleons Hill, Roxwell**
- **Viewpoint 6.08 Cooksmill Green**
- **Viewpoint 6.22 PRoW near Skreens Park (Roxwell 20)**

5.13.138 Generally, we agree that the Project would be visible in close views from the east of the VRA, that the overhead line is likely prominent in views, and seen on the skyline with little filtering, including from PRoW. The Project would be introduced into views otherwise absent of overhead lines. We agree that the scale of change would be large, and the effect would be **major and significant (adverse)** in close-to views. However, we consider **major significant adverse effects** occur up to 1Km not 0.5 Km.

5.13.139 We consider that generally a medium scale of change and **moderate and significant (adverse) effects** do not occur less than 1.0KM and extend up to 1.5 km. **Viewpoint 6.06** Galleons Hill, Roxwell at 1.03Km demonstrates at least moderate adverse effects.

5.13.140 Generally, beyond 1.5Km we accept that individual impacts will be not significant, although the effects on **Viewpoint 6.08 Cooksmill Green** at 1.76Km are arguably still moderate adverse. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.141 **F8 Writtle and Chelmsford West:** This Visual Receptor Area is located to the south of the Project, east of the draft Order Limits. It is centred on Writtle, broadly between the A1060 and A414. There are two representative viewpoints within this Visual Receptor Area.

- **Viewpoint 6.19 Victoria Road, west of Writtle**
- **Viewpoint 6.23 NCN Route 1 / PRoW near Writtle College (Writtle 19)**

5.13.142 Generally, we agree that the Project would be visible in close views from the west of the VRA, with the overhead line prominent in views and likely seen on the skyline with some filtering and screening from existing vegetation and farm buildings / college buildings along Cow Watering Lane. The Project would be introduced into views otherwise absent of overhead lines.

5.13.143 Generally, we agree that the Project would be visible in close views from the east of the VRA, that the overhead line is likely prominent in views, and seen on the skyline with little filtering, including from PRoW. The Project would be introduced into views otherwise absent of overhead lines.

5.13.144 We agree that the scale of change would be large, and the effect would be **major and significant (**adverse) in close-to views. However, we consider **major significant adverse** effects occur up to 1Km not 0.5 Km. We consider that generally a medium scale of change and **moderate and significant** (adverse) effects occur less than between 1.0KM and 1.5 km. **Viewpoint 6.06** Galleons Hill, Roxwell at 1.03Km demonstrates at least moderate adverse effects.

5.13.145 Generally, beyond 1.5Km we accept that individual impacts will be not significant, although the effects on **Viewpoint 6.08 Cooksmill Green** at 1.76Km are arguably still moderate adverse. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.146 **F9 Edney Common:** This Visual Receptor Area is located to the south of the Project, south-west of Chelmsford. It lies broadly between the A414 and Ivy Barns Lane. The sole representative viewpoint is identified as:

- **Viewpoint 6.09 The Causeway Edney Common**

5.13.147 This is another VRA where there are no viewpoints in the wider landscape, so **VP 6.09** is the sole representation of the VRA at 0.75Km. This is a deeply rural landscape in many aspects and should be represented by further viewpoints both closer to and at c1.5Km from the line. While we accept that views are limited to the south of the area beyond 1km due to intervening woodland, we would advise assessing the area west of Edney Common around footpath Highwood 7 where long- distance views are possible.

5.13.148 Generally, we agree that the Project would be visible in close views from the east of the VRA, with the overhead line prominent in views from the north of the VRA and likely to be seen on the skyline. Woodland at Bakers Wood and around Coptfold Hall would screen and filter views towards the Project in the south, as would the tree cover surrounding properties along Nathan's Lane. The Project would be introduced into a landscape otherwise absent of overhead lines.

5.13.149 We agree that the scale of change would be large, and the effect would be **major and significant (adverse)** in close-to views. However, we consider **major significant adverse effects** occur up **to 1Km** not 0.5 Km. We would consider **Viewpoint 6.09 The Causeway Edney Common**, 0.75KM, as representative of this, showing stacking of pylons receding into the distance. We consider, therefore, that generally a medium scale of change and **moderate and significant (adverse) effects** occur between **1.0KM** and 1.5 km.

5.13.150 Generally, beyond 1.5Km we accept that individual impacts will be not significant. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.151 **F10 Hylands Park:** This Visual Receptor Area is located to the south of the Project, south of Chelmsford. It lies broadly between the A414 and A12. The representative viewpoints are identified as:

- **Viewpoint 6.15 A414, Widford, near Hylands Park**
- **Viewpoint 6.26 Hylands Park, near Hylands House**
- **Viewpoint 6.07 A414 south of Writtle**
- **Viewpoint 6.27 Writtle Road, north of Margaretting**

5.13.152 We welcome the addition of the viewpoints within and to the northeast corner of Hylands Park Grade 2* Registered Park and Garden: **Viewpoint 6.15** 2.48K to north east of park, and **Viewpoint 6.26** at 1.41Km from the centre of the park. However, our previous concerns related to indirect impacts on the western boundary, on the wider setting of the park. In lieu of a viewpoint from one of the lanes such as Margaretting Road or Nathan's Lane the closest equivalent is **Viewpoint 6.27** Writtle Road, north of Margaretting at 0.55Km distant from the project line. This demonstrates that **significant major adverse** impacts are likely at that distance. However, west of Hylands Park the project line comes within 400m of the Registered Park, so the adverse effects on the setting of the park will likely be even greater than those on Writtle Road. We are concerned that this will effectively sandwich Hylands Park on three sides with linear infrastructure: Greenbury Way to the north, London Road and the railway to the east and the proposed 50m pylons to the west. Further south the A12 effectively creates a barrier. The landscape to the west is currently the only undeveloped rural landscape that forms part of the setting. We consider this stretch of overhead line should be reconsidered in either alignment or design.

5.13.153 Generally, we agree that the Project would be visible in close views from the east of the VRA, with the overhead line likely prominent in views and seen on the skyline. Woodland, such as King Wood, hedgerows and trees would filter and screen views in places including along parts of Writtle Road. The Project would be visible in a landscape otherwise absent of overhead lines.

5.13.154 We agree that the scale of change would be large, and the effect would be **major and significant** (adverse) in close-to views. However, we consider **major significant adverse effects occur up to 1Km** not 0.5 Km. We consider that generally a medium scale of change and **moderate and significant** (adverse) effects occur between 1.0KM and 1.5 km.

5.13.155 Generally, beyond 1.5Km we accept that individual impacts will be not significant. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.13.156 **F11 Margaretting and Stock:** This Visual Receptor Area is located to the south of the Project, broadly between the northern edge of Margaretting, defined by the A12 and northern edge of Billericay. The representative viewpoints are identified as:

- **Viewpoint 6.11 St Peter's Way, south of Margaretting Tye**
- **Viewpoint 7.10 B1007 Stock Road, south of Stock**
- **Viewpoint 7.12 Ingatestone Road near White Tyrells**

5.13.157 We welcome the additional viewpoints 7.10 and 7.12. The impact from **Viewpoint 7.10** is judged to have **no effect (not significant**). However, we query the location of this viewpoint from a road behind a hedgerow. There are several public rights of way through Stock where the topography appears higher and which could offer further long distance views. We would advise that these are explored.

5.13.158 **Viewpoint 7.12** is judged as **major and significant** (adverse) which is agreed. However, the visualisation is presented as a wireline, whilst we would advise that this should be a photomontage, considering the pylons are proposed within an open landscape. We feel that a photomontage would better represent the significant effects of the introduction of pylons within this viewpoint.

5.14 <u>Visual Receptor Area G (in Brentwood and Basildon)</u>

5.14.1 Theoretical visibility of Project Brentwood and Basildon: The preliminary LVIA identifies Section G covering the Project line broadly between Ingatestone in the north and Basildon to the south-east. The Zone of Theoretical Visibility (ZTV) mapping indicates limited widespread theoretical visibility of the overhead line within the 3 km study area. This indicates localised potential negative landscape and visual effect of the scheme owed to the significant urban settlement limiting intervisibility.

5.14.2 The study also identifies that there would be theoretical visibility of one or more pylons from the majority of the study area, with multiple ones visible, from the more elevated parts of the study area such as Little Burstead, This highlights how widespread the potential negative landscape and visual effect of the scheme are.

5.15 Visual Receptors and Groupings

5.15.1 The preliminary LVIA groups the viewpoints where visual receptors have been grouped according to Visual Receptor Areas. We understand that, as the Project area is so large, the Visual Receptor Areas are a pragmatic way of organising the data, but fear clarity and detail may have been lost as a result. Brentwood falls substantially within Visual Receptor Area G.

5.15.2 We do not agree that the value of the view should be judged substantially on identified viewpoints and promoted views in tourist-focussed documents and that in lieu of local landscape designation and district-wide Valued Landscape Assessments, it should be judged by how it relates to the LCA. We consider the sensitivity of receptors and significance of the effects has been downplayed as a result.

5.15.3 **G1 Ingatestone and Fryerning:** This Visual Receptor Area is located west of the Project, broadly between Mill Green and Hutton. Representative viewpoints are identified as:

- **Viewpoint 6.10 St Peter's Way, east of Millgreen Common**
- **Viewpoint 7.01 Ingatestone Road, Buttsbury**
- **Viewpoint 7.02 Old Church Lane, Mountnessing Hall**
- **Viewpoint 7.09 PRoW near Ingatestone Hall (Ingatestone and Fryerning 39)**
- **Viewpoint 7.11 Church Road, east of Mountnessing**

5.15.4 Generally, we agree that close views of the Project the overhead line could be had from the east of the VRA including from the local road and PRoW network (see Viewpoint 7.01 Ingatestone Road, Buttsbury). The scale of effects in terms of amenity setting for The Parish Church of St Mary, Buttsbury where the church and a

pylon will be viewed within the same field of view from extended approaches appears significant. There would be close views from parts of the A12 and St Peter's Way, from some scattered properties along the local road network including two Protected Lanes. The pylons would be prominent features in close views. The Project would be introduced into a landscape largely absent of existing overhead lines. It would directly affect the Open Access Land at Handley Green.

5.15.5 We agree that the scale of change close to would be large, and the effect would be **major and significant** (adverse). However, we consider **major significant** adverse effects occur up to 1Km not 0.5 Km. We consider that generally a medium scale of change and **moderate and significant** (adverse) effects, therefore occur between 1.0KM and 1.5 km. See **Viewpoint 7.02 Old Church Lane, Mountnessing Hall** at 0.68Km and **Viewpoint 7.09 PRoW near Ingatestone Hall** at 0.83Km

5.15.6 Generally, beyond 1.5Km we accept that individual impacts will not be significant. **Viewpoint 6.10 St Peter's Way** is 1.51Km from the Project and **Viewpoint 7.11 Church Road, east of Mountnessing**. There are consistent views on the approach to the viewpoint, particularly from the edge of Millgreen Common looking east from the PRoW network, where long distance pasture views with a well wooded horizon are available and would incorporate the project.

5.15.7 However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.15.8 **G2 Billericay West:** This Visual Receptor Area is located to the east of the Project, encompassing the north and west of Billericay and the surrounding farmland and woodland. There is one representative viewpoint within this Visual Receptor Area.

- **Viewpoint 7.04 Tye Common Road, Tye Common**

5.15.9 Whilst much of the PRoW network is confined by hedgerows and tree belts, we would have welcomed a viewpoint from footpath Billericay 11 where views beyond 1km are possible across the open agricultural landscape.

5.15.10 Generally, we agree that within 0.5 km of the Project there would be close views of the overhead line from the west of the VRA including the local road and PRoW network, as well as from local properties. The Project would cross PRoWs 305_183, 305_12 and 272_96, local roads the A12 and railway line. The overhead line would be visible above existing vegetation and would be prominent in views

5.15.11 Close-to, the scale of change would be large, and the magnitude of effect would be high. The effect would be **major and significant** (adverse). Whilst we agree that much of this area is unlikely to provide any views of the project due to urbanised development, we also agree that long views are possible over open farmland. We consider that generally a medium scale of change and **moderate and significant (**adverse) **effects** occur from **1.0KM** and extend up to 1.5 km, therefore.

5.15.12 Generally, beyond 1.5Km we accept that individual impacts will not be significant. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.15.13 **G3 Brentwood East:** This Visual Receptor Area is located west of the Project, encompassing the neighbourhood of Hutton in the Brentwood District, and extending to Hall Wood in the south. The sole representative viewpoint within this Visual Receptor area is:

- **Viewpoint 7.03 Church Lane, Hutton**

5.15.14 Generally, we agree that the Project would be visible in close views within the east of the VRA from PRoW and local road networks. The Project would broadly follow the route of the existing 132 kV overhead line which would be undergrounded. The proposed pylons would be larger in scale than the existing. The Project would pass over the A129 and would be visible in close views to people travelling between Hutton and Havering's Grove.

5.15.15 We agree that the scale of change close to would be large, and the effect would be **major and significant** (adverse). However, we consider **major significant** adverse effects occur up to 1Km not 0.5 Km. **Viewpoint 7.03 Hutton** from 0.67Km offers consistent wide views that are considered significant negative. We consider that generally a medium scale of change and **moderate and significant** (adverse) effects occur between 1.0Km and 1.5 km. We accept that it is unlikely to obtain views beyond 1km west of the Project within this area. However further assessment of footpath Brentwood 76 would be advised to confirm this.

5.15.16 Generally, beyond 1.5Km we accept that individual impacts will not be significant. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts

create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.15.17 **G4 Ingrave and Herongate:** This Visual Receptor Area is located to the west of the Project, broadly encompassing the area east of Ingrave to the West Horndon to the south. The landscape is gently undulating, rising in the east towards Botney Hill Farm and to the west towards Ingrave, Herongate and Thorndon Park. In the south the landform transitions to lower-lying fenland around West Horndon

5.15.18 Representative viewpoints are identified as:

- **Viewpoint 7.06 Octagon Plantation, Thorndon Country Park**
- **Viewpoint 7.07 PRoW east of Ingrave (Herongate and Ingrave 49)**
- **Viewpoint 7.08 Dunton Hills Garden Village**

5.15.19 Generally, we agree that the Project would be visible in close views from the east of the VRA, from the local road network, PRoW and properties on Blind Lane. the existing 132 kV overhead lines. Part of an existing overhead line would be removed and undergrounded. Pylons would typically be seen on the skyline and would be framed by woodland in some views. Intervening hedgerows and some tall mature trees would filter some views

5.15.20 Within 0.5 km the scale of change would be large, and the magnitude of effect would be high. The effect would be major and significant (adverse). **Viewpoint 7.08 Dunton Hills Garden Village** is 0.83Km from the Project and is taken from within the proposed development which is presently private land. There are wide elevated open views of south Essex extending to the London skyline. There are profound concerns regarding the likely significant impact of the pylons running through the eastern margin of the Dunton Hills Garden Village. These will significantly affect the quality of both the greenspace through which they are likely to run and the visual amenity of the properties overlooking them. It will likely require a redesign of Dunton Hills Garden Village's draft Supplementary Planning Guidance and draft Framework Masterplan Document. The vision for Dunton Hills includes '*It is a place where people's lives are shaped through understanding the value and protection of the local natural environments'* We don't consider the Project fits with that vision, and we seek review of both the alignment and the choice of an overhead solution.

5.15.21 **Viewpoint 7.06 Thorndon Country Park** is located approx. 2km from the project and while the view currently comprises of some industrial elements in the far distance, it is likely that the Project will increase the intensity of this, and we would still consider this significant in effects. Generally, beyond 1.5Km we accept that individual impacts

will not be significant. However, we consider that the cumulative effect of multiple pylons and the continuous overhead linear nature of the project, means that the collective impacts create an **overall significant adverse effect** within the VRA at both construction and operation**.**

5.15.22 **G5 Little Burstead:** This Visual Receptor Area is located east of the Project, nestled between the southern edge of Billericay and northern edge of Basildon. The sole representative viewpoint within this Visual Receptor area is:

- **Viewpoint 7.05 PRoW south of Little Burstead**

5.15.23 We agree that between 0.5 km and 1.5 km the scale of change would be medium and the magnitude of effect would be medium, and the effect would be moderate and significant (adverse). We accept that views are unlikely to be obtained from beyond 1.5km. Therefore, significance beyond this will likely be minor.

5.15.24 **G6 Basildon:** This Visual Receptor Area is located east of the Project, encompassing the eastern edge of Basildon. There is one representative viewpoint within this Visual Receptor Area.

- **Viewpoint 8.01 Dunton Plotlands Nature Reserve**

5.15.25 We agree that the scale of change close-to would be large, and the effect would be **major and significant** (adverse) See **Viewpoint 8.01 Dunton Plotlands**. However, we consider **major significant** adverse effects could occur up to 1Km not 0.5 Km. We consider that generally a medium scale of change and **moderate and significant** (adverse) effects occur between 1.0Km and 1.5 km. Generally, beyond 1.5Km we accept that individual impacts will not be significant. However, we consider that the cumulative effect of multiple pylons and the continuous overhead nature of the project, means that the collective impacts could create an **overall significant adverse effect** within the VRA at both construction and operation**.**