

East Cambridgeshire District Council
Cambridgeshire County Council
Suffolk County Council
West Suffolk Council

Joint Local Impact Report

Sunnica Energy Farm (EN010106)

OCTOBER

2022

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Glossary of Acronyms

A&ROW	Access & Rights of Way
ACOP	Approved Codes of Practice
AD	Anaerobic Digestion
AEGL	Acute Exposure Guideline Level
AIA	Arboricultural Impact Assessment
AIL	Abnormal Indivisible Loads
ANGSt	Natural England's Accessible Natural Greenspace Standards
AQMA	Air Quality Management Area
BESS	Battery Energy Storage System
BEIS	Department for Business Energy and Industrial Strategy
BNG	Biodiversity Net Gain
BSI	British Standards Institute
C&U	The Road Vehicles (Construction and Use) Regulations 1986
CCC	Cambridgeshire County Council
CCS	Considerate Constructors Scheme
CEEQUAL	Civil Engineering Environmental Quality Assessment and Awards Scheme
CEMP	Construction Environmental Management Plan
CFRS	Cambridgeshire Fire and Rescue Service
CHER	Cambridgeshire Historic Environment Record
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
CO _x	Carbon Oxides
COMAH	Control of Major Accident Hazards
COPA	Control of Pollution Act 1974
CPCA	Cambridgeshire and Peterborough Combined Authority
CS	Forest Heath Local Plan Core Strategy Policy
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Site
DAMS	Detailed Archaeological Mitigation Strategy
(d)DCO	(draft) Development Consent Order
DEFRA	Department for Environment, Food & Rural Affairs
DEMP	Decommissioning Environmental Management Plan
DfT	Department for Transport
DM	Development Management [N.B. West Suffolk Local Plan Policy in most instances]
DMRB	National Highways Design Manual for Roads and Bridges
DMS	Delivery Management System
EA1(N)/EA2	Scottish Power Renewables East Anglia ONE North and East Anglia Two
EC	East Cambridgeshire
ECDC	East Cambridgeshire District Council
ECOW	Ecological Clerks of Works
EN-1	Overarching National Policy Statement for Energy
EN-3	National Policy Statement for Renewable Energy Infrastructure
ENV	East Cambridgeshire Local Plan Environment Policies
ES	Environmental Statement
ExA	Examining Authority
EZ	Enterprise Zone
FCTMP&TP	Framework Construction Transport Management Plan and Travel Plan

FEH	Flood Estimation Handbook
FHCIS	Forest Heath Site Allocation Plan Cumulative Impact Study
FPRF	Fire Protection Research Foundation
FRA	Flood Risk Assessment
FRD	East Cambridgeshire Local Plan Fordham Policy
FRS	Fire and Rescue Service
FSR	Flood Studies Report
FTE	Full Time Equivalent
GEART	Guidelines of Environmental Assessment of Road Traffic
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GPD	Cambridgeshire's General Principles for Development
HA	Highways Act 1980
HB	Home-based
HDD	Horizontal Directional Drilling
HERCS	Cambridgeshire's Housing Estate Road Construction Specification
HGV	Heavy Goods Vehicle
HRA	Habitats Regulations Assessment
HRI	Horseracing Industry
IPC	Infrastructure Planning Committee [N.B. superseded by SoS in most instances]
JDMPD	West Suffolk Joint Development Management Policies Document
LA	Local Authority
LAeq	Equivalent Continuous Sound Level
LDA	Land Drainage Act 1991 S23(1)
LEMP	Landscape and Ecological Management Plan
LGV	Light Goods Vehicle
LHA	Local Highway Authority
LIR	Local Impact Report
LLCA	Local Landscape Character Area
LLFA	Lead Local Flood Authority
LMI	Labour Market Information
LNR	Local Nature Reserve
LOAEL	Lowest Observed Adverse Effect Level
LP	Local Plan
LPA	Local Planning Authority
LTP	Local Transport Plan
LVIA	Landscape and Visual Impact Assessment
MAFF	Ministry of Agriculture, Fisheries and Food
MP	Suffolk County Council Minerals Policy
MSA	Mineral Safeguarding Area
MWPA	Minerals and Waste Planning Authority
NALEP	New Anglia Local Enterprise Partnership
NCA	National Character Area
NDHA	Non-Designated Heritage Asset
NE	Natural England
NG	National Grid
NGO	Non-Governmental Organisation
NMU	Non-Motorised User
NNR	National Nature Reserve
NO _x	Nitrogen Oxides
NOEL	No Observed Effect Level

NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NPS	National Policy Statements
NSIP	Nationally Significant Infrastructure Project
NSP	West Suffolk Emerging Local Plan Non-Strategic Policy
OCTMP	Outline Construction Transport Management Plan
OEMP	Operational Environmental Management Plan
OLEMP	Operational Landscape and Ecological Management Plan
ONS	Office for National Statistics
OS	Ordinance Survey (map)
OTP	Outline Travel Plan
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PM _x	Fine Particulate Matter
PROW	Public Rights of Way
PV	Photovoltaic
QSE	Quick Storage Estimates
RAF	Royal Air Force
RIS3	National Highways Roads Investment Strategy 3 (2025-2030)
ROWIP	Rights of Way Improvement Plan
RPA	Root Protection Area
RR	Relevant Representation
RSPB	Royal Society for the Protection of Birds
RTRA	Road Traffic Regulation Act 1984
SA	West Suffolk Emerging Local Plan Site Allocation
SAC	Special Area of Conservation
SALP	Forest Heath Local Plan Site Allocation Policy
SCC	Suffolk County Council
SCCAS	Suffolk County Council Archaeological Service
SEF	Sunnica Energy Farm
SFRMS	Suffolk Flood Risk Management Strategy
SMART	Specific, Measurable, Ambitious (yet attainable), Relevant and Time-bound
SMWLP	Suffolk's Mineral and Waste Local Plan
SOAEL	Significant Observed Adverse Effect Level
SoCG	Statement of Common Ground
SoS	Secretary of State [N.B. specified by context]
SPA	Special Protected Area
SPD	Supplementary Planning Document
SPR	Scottish Power Renewables
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
STEM	Science, Technology, Engineering and Mathematics
STGO	Road Vehicles (Authorisation of Special Types) (General) Order 2003
SuDS	Sustainable Drainage Systems
SWMP	Suffolk's Surface Water Management Plan
TA	Transport Assessment
TMMS	Traffic Management and Monitoring System
TPO	Tree Preservation Order
USAF	United States Air Force
VESDA	Very Early Smoke Detection Apparatus

VP	Viewpoint
WP	Suffolk County Council Waste Policy
WSC	West Suffolk Council
WSLP	West Suffolk Local Plan

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Overview

1 Executive Summary

1.1 Overall, the position of the Councils is that there are a number of issues with the Sunnica proposal that, to greater or lesser degree, should prevent the project from being consented in its current form despite the desirability of low carbon sources of energy generation. These issues can be grouped by severity:

- Many issues are potentially resolvable if impacts can be clarified with more information being supplied by the Applicant.
- Some, for example most impacts on Ecology and Biodiversity, Transport and Public Rights of Way, require more work to be done by the Applicant on mitigation before impacts are reduced to an acceptable level.
- Some impacts, such as those on Landscape and Visual Amenity as well as some ecological impacts, are fundamental to the nature and geography of the scheme, and are unlikely to be capable of being dealt with without significant revision of the proposal to remove parts of the scheme in the most sensitive areas.

1.2 In Sunnica West there are significant concerns regarding the vast majority of the scheme in that area ; parcels W01-W12 and W17 should be removed from the developable area. In Sunnica East parcel E05 should be removed from the developable area.

1.3 By reference to the mitigation hierarchy – i.e., avoidance in preference to mitigation and, at the last resort, compensation – these most fundamental impacts can be resolved through a change request by the Applicant. It may be acceptable to resolve these through ambitious mitigation or compensation proposals. However, while the Councils can provide advice and comments on a number of mitigation topics, it is for the Applicant to propose alternatives to simply removing those parts of the proposal which cause the most serious impact.

2 Terms of Reference

Introduction

- 2.1 Sunnica Limited, a joint venture between Tribus Clean Energy and PS Renewables, has submitted an application for a Development Consent Order (DCO) for an onshore generating station with a capacity exceeding 50MW together with associated development on land in Suffolk and Cambridgeshire, to be known as Sunnica Energy Farm (SEF). Throughout this report, Sunnica Limited is referred to as “the Applicant”.
- 2.2 This report constitutes the Local Impact Report (LIR) for the purposes of section 60 of the Planning Act 2008 (PA2008) of East Cambridgeshire District Council (ECDC), West Suffolk Council (WSC), Cambridgeshire County Council (CCC) and Suffolk County Council (SCC), referred to jointly as “the Councils”.
- 2.3 In regard to ECDC, at the time of this report being submitted to the Examining Authority, the LIR is the professional view of officers. The Planning Committee on the 3 November 2022 will seek members to note the contents of the LIR when they determine the ECDC’s response via the Written Representation.
- 2.4 On 1 April 2019 WSC was created by parliamentary order, with an administrative area covering that of the former Forest Heath District and St Edmundsbury Borough Councils.
- 2.5 SCC is the upper-tier local authority for the county of Suffolk as a whole, and has a variety of statutory responsibilities to provide services and discharge regulatory functions, which together affect a great many aspects of the built, natural, and social environments. These functions include acting as local highway authority, traffic authority, transport authority, waste planning authority, waste regulation authority, minerals planning authority, county planning authority, lead local flood authority, fire authority (including public safety), public health authority, education authority, and social services authority. SCC also holds responsibility for maintaining the Definitive Map and the Historic Environment Record. CCC is the upper-tier local authority for the county of Cambridgeshire and fulfills the same functions. WSC is the lower-tier authority for the county in Suffolk with responsibility for culture and community development, economic development, housing, licensing, and environmental health, planning and building control, running elections and waste and recycling. ECDC fulfils the same role within the county of Cambridgeshire.
- 2.6 In preparing this LIR, the Councils have had regard to the purpose of LIRs as set out in s60(3) of the Planning Act 2008 (as amended); Ministry for Housing Communities and Local Government guidance for the examination of applications for development consent and the Planning Inspectorate’s (PINS) Advice Note One: Local Impact Reports.
- 2.7 Suffolk County Council has considerable experience of the Nationally Significant Infrastructure Project (NSIP) planning regime. Suffolk County Council is the host authority for the consented East Anglia One, East Anglia Three, and Galloper windfarms, the proposed East Anglia One North and East Anglia Two Windfarms which are currently undergoing Examination, and the consented Lake Lothing Third Crossing (for which SCC was also the

promoter). SCC has also been host to, or is proposed to be host to, other NSIPs in the County: the Ipswich Chord Rail; Bramford to Twinstead Overhead Power Line proposals; Progress Power Gas Power Station; and the Sizewell C Nuclear Power Station proposal.

Purpose and structure of this report

- 2.8 The main content of this report is a description of the impacts of the proposed development on the administrative areas of the Councils.
- 2.9 The proposed Sunnica Energy Farm would comprise of solar photovoltaic panel arrays, battery energy storage system, and National Grid connection infrastructure with a generating capacity exceeding 50MW. The Applicant has not been clear on the generating capacity of the project, the Councils have anticipated this figure to be close to 500MW. The capacity of the battery energy storage system has also not been declared by the Applicant. The project site would span 982ha, predominately of arable land. The Applicant has proposed ecological mitigation land parcels.
- 2.10 This report does not describe the proposed development itself, relying on the Applicant's detailed description of the development as set out in the DCO application documents.
- 2.11 This report provides a description of the area in and around the Order Limits of the draft DCO to contextualise expected impacts.
- 2.12 This report also comments on the mitigation measures proposed by the Applicant, and as and where appropriate, sets out proposals by the Councils for alternative or additional measures to reduce the impact of the scheme.
- 2.13 Section 60 (3) of the 2008 Planning Act defines the purpose of Local Impact Reports as: "a report in writing giving details of the likely impact of the proposed development on the authority's area."
- 2.14 This report describes these impacts under headings by topic. Under each heading the key issues for the Councils and the local community are identified, and commentary is provided on the extent to which the Applicant addresses these issues by reference to the application documentation, including the DCO articles, requirements and obligations, as relevant.
- 2.15 For each topic area, this report sets out:
- National and local policy context;
 - The positive, neutral and negative impacts of the development during the construction phase, as anticipated by the Councils;
 - The positive, neutral and negative impacts of the development during the operational phase, as anticipated by the Councils;
 - Where applicable, the positive, neutral and negative impacts of the development during the decommissioning phase, as anticipated by the Councils;
 - The suitability of the measures proposed by the Applicant to avoid, reduce, mitigate or compensate for the identified impacts;
 - Where applicable, proposals by the Councils for alternative or additional measures to better address the identified impacts;
 - The need for obligations and requirements.

- 2.16 As set out above, this is a joint report by the Councils, and generally reflects the assessment and views of all four Councils. If there is a divergence in specific topic areas, the report clearly sets out the views of each Council on these topic areas. If this is not specified, it can be assumed that the Councils agree.

3 Description of the Area

Natural and Built Environment

- 3.1 The natural and built environment of the area around the proposed development has unique characteristics which draw from the combination of the landscape, geology, ecology, cultural heritage, and historic designations. These are important at international, national, and local levels and it is this complex interlocking background that sets the scene for the key issues upon which the Councils will consider the impact of the development on the area.
- 3.2 The local area is characterised by lowland heathland, fens, and meadows, interspersed with environmentally sensitive and scientifically significant designations. The area has a low population density, lower than the East of England regional and England national averages. The area has a high concentration of important archaeological features, resulting from a long continuity of human settlement. The pattern of settlements is sparse with nucleated villages scattered along river valleys, and dispersed ribbon settlements along the main arterial routes through settled fens.¹
- 3.3 The area local to the development is characterised by three distinctive and contrasting landscapes. In the National Character Area profiles, Natural England (NE) defines the National Character Areas (NCAs) in the local region as: The Fens (NCA46, NE424), The Brecks (NCA85, NE385), and East Anglian Chalk (NCA87, NE529). A map of the precise locations of these landscapes, in relation to the Scheme, can be found in Figure 10.4 of the Applicant's Environmental Statement [APP-195]. The Fens are situated northwest of West Suffolk and the northern portion of East Cambridgeshire, characterised by East Cambridgeshire's Local Plan 2015 as "large open, flat and low-lying fields under wide skies, crossed by numerous waterways and drainage channels". Whilst this land is arable, it is also the land most liable to flood. The Brecks cover the northeast of West Suffolk, known as Breckland, it is considered an environmentally sensitive region and is designated as a Special Protected Area for wild birds. This designation recognises the Brecks importance for nature conservation at an international and national level, valuing its unique habitat found only in East Anglia, which also contains a range of protected flora and fauna species. The Breckland area, in addition to its Special Protected Area designation, is comprised of numerous designations recognised as internationally and nationally important to protect its valuable and vulnerable ecological biodiversity. The East Anglian Chalk area is located southeast of East Cambridgeshire and southwest of West Suffolk, its geology consists of underlying upper cretaceous chalk, covered by surface deposits of ice and river-deposited material laid during the last ice age. The

¹ Natural England, National Character Area Profile: 85 The Brecks; Natural England, National Character Area Profile: 46 The Fens.

landscape is notable for its undulating landscape of gently rolling hills, scattered woodland, and large fields enclosed by low hawthorn hedges; additionally, the original settlements built on this landscape were to take advantage of the natural springs.

- 3.4 Internationally designated sites within the region include large portions of land dedicated to Ramsar (Convention on Wetlands) sites, Special Protected Areas (SPAs), and Special Areas of Conservation (SACs). Nationally designated sites include National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs). Statutory internationally designated sites within 10KM and nationally designated sites with 2KM of the Scheme's Order Limits can be found in Figure 8.1 of the Applicant's Environmental Statement [APP-185]. Local Nature Reserves (LNRs) and County Wildlife Sites (CWSs) are regionally and locally important designations within the local area, notable for their ecological value. County Wildlife Sites are non-statutory designations. Locations of non-statutory designations within 2KM of the Scheme's Order Limits can be found in Figure 8.2 of the Applicant's ES [APP-186]. The Breckland SPA SAC and Fenland SAC cover large swathes of the region, enveloping much of the SSSIs and significant nature conservation sites in the region. East Cambridgeshire District hosts 20 SSSIs, 80 County Wildlife Sites, and 4 internationally significant wildlife sites, markedly Wicken Fen Ramsar SAC NNR SSSI, Chippenham Fen Ramsar SAC NNR SSSI, the Ouse Washes Ramsar SPA SAC SSSI, and Devil's Ditch (or Devil's Dyke, Cambridgeshire) SAC SSSI. The former Forest Heath District contained 1 SPA (Breckland), 3 SACs, 27 SSSIs, and over 70 County Wildlife Sites. A complete list of designations, including cultural and heritage sites and flood risk zones, can be found in the Applicant's ES under Figure 10.3 [APP-193].
- 3.5 The view from the Limekilns Gallops CWS, part of the Newmarket Horseracing training grounds, has been largely unaltered over the last three centuries. The proposed location of Sunnica West Site A will reside north of the Limekilns, as shown in Figure 8.2 of the Applicant's ES [APP-186].
- 3.6 The main rivers within the region include the Lark, the New, Kennett, the Lee Brook, the Snail, the Great and Little Ouse, Burwell Lode, Wissey, and the Tuddenham Stream. The rivers Wissey, Lark, and Little Ouse drain into the level drained peat and silt fens located to the west of the Brecks. The area to the west of the proposed development is defined as primarily Flood Zone 3b (functional flood plain), as defined by the Environment Agency and the local planning authority, much of these zones are protected by flood defences. The cable route passes through areas of Flood Zone 2 and 3. A detailed layout of these rivers and the flood zones can be found in the Applicant's Environmental Statement Figure 9.1 [APP-188].
- 3.7 Regarding groundwater features, the cretaceous chalk which underlies much of the local region is classified as a principal aquifer (see APPENDIX 36). Beneath the chalk, groundwater can also be found in the lower greensand, the overlying crag deposits are also considered to be a principal aquifer in hydraulic continuity with the chalk. The water companies source the majority of drinking water from the chalk aquifer, and it is thus considered to be of high sensitivity for large areas of the region. A detailed map of these features can be found in the Applicant's ES as Figure 9.2 [APP-189].

3.8 In terms of cultural heritage and historic designations, the Sunnica West Site A development intersects with the Grade II registered Chippenham Park (Historic England REF: 1000615), this intersection can be viewed in Figure 7.2b of the Applicant's ES [APP-181]. Furthermore, it is also notable that the scheduled monument of the four Bowl Barrows north of the A11/A14 junction, part of the Chippenham barrow cemetery (Historic England REF: 1015246) is within the scheme's order limits. There is a vast number of further listed buildings, scheduled monuments, and conservation areas in the immediate vicinity (2KM) of the scheme - which can also be recognised in relation to Sunnica East sites in Figure 7.2a of the Applicant's ES [APP-180] and Sunnica West sites in Figure 7.2b of the Applicant's ES [APP-181] - however, these all narrowly skirt the scheme's boundary.

Economic background

3.9 West Suffolk District hosts several economic assets, these include:

- The horseracing industry, centred in and around Newmarket
- RAF Mildenhall and Lakenheath
- The biotechnology sector, centred in the Haverhill area
- The brewing industry, focussed around Bury St Edmunds

3.10 West Suffolk's proximity to Cambridge enables the area to benefit from the "Growth Engine" that is centred around and emanates from Cambridge. The Cambridge sub-region will primarily benefit due to Cambridge's potential to deliver housing and employment growth but lacking availability of development land within the city's limits. Thus, the area within its economic influence could accommodate relocation sites for Cambridge business and attract inward investment or further job growth. Cambridge's economic prospects will enable Suffolk's biotechnology sector to expand, building on the already successful equine sector centring around Newmarket and the food and drinks processing sector around Bury St Edmunds. However, to fully realise this potential West Suffolk is dependent on the transport network as the locational advantages decrease as the distances from Cambridge increase. Hence West Suffolk's economic action plan priorities include the promotion of infrastructure improvements such as remodelling the junction of the A14 and A142 at Newmarket, revamping the east to west/north link to/from the A11 and A14, and upgrading the safety and capacity at the A11 Fiveways/Barton Mills roundabout.

3.11 Furthermore, West Suffolk benefits from its appealing rural landscape and historic towns which alongside its presence in the equine, agriculture, and food and drinks processing sectors attract a robust tourism and visitor economy.

3.12 East Cambridgeshire District's economic assets include:

- The visitor economy, driven by natural countryside, heritage and tourism; including popular destinations such as: Ely's Cathedral, Oliver Cromwell's House, Anglesey Abbey and the National Trust's Wicken Fen Nature Reserve near Soham
- Fast growing local business Enterprise Zone, Ely
- Important economic business zone on A142 between Fordham and Snailwell
- Agritech Innovation Hub near Soham

- Cambridgeshire Business Park accessed via A10 and A142
- 3.13 The historic city of Ely functions as a hub for the district and is categorised as a market town economy by the Cambridgeshire and Peterborough Combined Authority. The city is known as “the ship of the fens” due to its outstanding Cathedral’s notable presence in the otherwise flat landscape. The city is well-connected by a number of modes of transport – most notably, the A10 and A142 trunk roads, passenger rail services with fast London and Peterborough connections, an important multi-modal warehousing / distribution interconnector at Queen Adelaide (Ely) all of which have helped its tourism and business economy grow.
- 3.14 The Ely marina is a popular destination for boaters, attracting boaters to moor along the River Great Ouse and venture into the centre to enjoy the heritage and character of the city.
- 3.15 Parallel to these economic strengths in the districts, there are weaknesses in the local economy:
- In West Suffolk, existing infrastructure is inadequate to promote high levels of growth due to the inability to allocate specific land for development. Investment in local infrastructure will be essential in the coming years.
 - In both districts, outward commuting is a significant challenge with employed residents typically commuting out of the district for work. Despite a labour shortage in the local towns, many commute to service centres deeper in the region. This is particularly due to wages and career prospects; the rural towns typically offer average wages and low-skilled work whereas work outside of the districts offers high wages and high-skilled careers. It will be an ongoing challenge to nurture a thriving local economy in the rural towns to attain net inward commuting.

Social and Demographic

- 3.16 Suffolk has an older population than the regional and national averages (Suffolk has 23.8% population over 65 in 2020 compared with the East region, 20%, and England, 18.5%). West Suffolk District has 21.6% population over 65, as of 2020, and this is projected to increase to 26.9% by 2040.² Concurrently, the proportion of people of working age is projected to decline with educational attainment at GCSE level scoring slightly below the national average in West Suffolk.³ Additionally, the social mobility index indicated there were no social mobility hotspots in West Suffolk, with the Forest Heath area ranking 264 out of 324 (therefore classified as a social mobility coldspot), meaning young people from less advantaged backgrounds may experience limited opportunities.⁴ Regarding employment, ONS data from 2018 states the largest employer by industry in West Suffolk is business support and administration (19.1%), followed by manufacturing (10.6%), health (11.7%), retail (8.5%), and accommodation and food services (7.4%).

² ONS, 2011 Census.

³ ONS Census 2011 and Department for Education.

⁴ Social Mobility Index 2017.

- 3.17 Cambridgeshire has an ageing population, which is projected to considerably increase over the next 20 years. As of 2020, Cambridgeshire has 20% population over 65. East Cambridgeshire District has 20.5% population over 65, as of 2020, which is projected to increase to 27.2% by 2040.⁵ The East Cambridgeshire Local Plan 2015 notes, as of 2010, of the 24,100 jobs within the district, the largest proportion of these was in manufacturing (12.8%), retail (9.9%), business support and administration (9.9%), education (9.1%), and health (7.8%).
- 3.18 Suffolk generally has lower average pay than the national picture. In 2021 the gross average pay in Suffolk was £573 per week while England was £613. Converse to Suffolk, Cambridgeshire has generally higher pay than the national average; the gross average pay was £666 per week in 2021. In 2019, both East Cambridgeshire District (£614) and West Suffolk District (£539) residents earned less than their respective county's gross average pay (£628 in Cambridgeshire, £561 in Suffolk).⁶
- 3.19 A report undertaken for the Suffolk Community Foundation in 2020, Hidden Needs in Suffolk, found that overall Suffolk is not one of England's most deprived local authorities (amongst 40% least deprived), but that compared to England as a whole, the county is not particularly advantaged. Analysis of trends from 2007 to 2019 shows that Suffolk is becoming less advantaged and more deprived. There has been increasing and persistent deprivation in Suffolk's most deprived neighbourhoods and in places where a smaller proportion of the population experienced deprivation, that proportion has increased.
- 3.20 The West Suffolk District houses two military air bases, RAF Mildenhall and RAF Lakenheath, both occupied by United States Air Force (USAF) personnel and their families. Estimates from the Forest Heath District Council's Core Strategy (Local Plan) 2010 suggested that this USAF personnel accounted for 20% of the district's population. As noted in West Suffolk Council's Forest Heath Site Allocations Local Plan 2019, the United States Visiting Forces in Europe had previously indicated in 2015 that they intended to withdraw from RAF Mildenhall by 2024, however, in July 2020 it was confirmed that the relocation of operations would no longer occur.

Transport

- 3.21 The major trunks roads in the region are the A10, A11, and A14 - connecting Norwich, Ipswich, Cambridge, and Ely - the A142 forms a further significant part of the Primary Route Network. The A14/142 Exning junction performs a vital function, linking these regionally important cities to Newmarket, recognised as the international home of horseracing, which attracts significant external investment into the region. This road network also links together the Cambridgeshire sub-region, which seeks to expand and prosper from Cambridge's anticipated economic growth.

⁵ ONS, 2011 Census.

⁶ ONS, 2011 Census.

- 3.22 The A14 is a major strategic east/west route primarily due to it facilitating a direct connection between the Port of Felixstowe and the Midlands and the North. As a result, the A14 carries significant amounts of international freight traffic, whilst also providing a key route for the local and regional commuter, business, and national freight traffic. The Port of Felixstowe, as of 2017, is the largest container port in the United Kingdom as well as the eight largest in Europe.
- 3.23 At A14/142 junction 37, heavy vehicles have to ‘boomerang’ due to constraints at the A11/A14 junction 38 (this means that a vehicle has to proceed to the next exit and re-join the road in the other direction, as there is no connection between A14 westbound and A11 northbound or A11 southbound and A14 eastbound). This junction has a poor safety record with a number of crashes recorded at the junction of the slip roads and the A142 and reported congestion.
- 3.24 The restricted movements at the A11/A14 junction will also result in light vehicles travelling cross country between the A11 and A14 through Red Lodge, Kennett, or Tuddenham as reflected in the Applicants forecast (Transport Assessment Annex F). National Highways are currently under consultation regarding safety improvements to the A11 Red Lodge to Fiveways Roundabout, involving closing gaps in the A11 central reservation (see Cumulative Impacts chapter 19).
- 3.25 Other than these strategic road routes (A11/A14/A142), the Sunnica site is in a rural area served by minor roads, the road network is generally unimproved and often passes through or nearby settlements. This situation leads to “rat-running” through villages along the A14 route, to avoid congestion at peak hours, thus causing localised congestion on roads and settlements that are not designed for strategic traffic and adverse social and environmental impacts. The area requires significant improvements to its road infrastructure in the coming years to cope with increasing economic activity and growth prospects.
- 3.26 The main passenger rail links in the area are the Ipswich to Cambridge, the Norwich to Cambridge, and the King’s Lynn to London King’s Cross lines. Each of these services takes between 1 and 2 hours, run by Greater Anglia and Great Northern, and run frequent services (~20-25) throughout the day with the King’s Lynn to London King’s Cross line providing roughly 43 direct trains each day. The nearest station to the Sunnica site is the Kennett train station, located on the Ipswich to Cambridge line, it is situated 1.5 miles south of the settlement and receives a two-hourly service – it is connected to important local centres of Newmarket, Bury St Edmunds and Mildenhall via the bus network.
- 3.27 The primary rail freight movements occur on the Felixstowe to Nuneaton line, which currently has three rail terminals and will require improvement to increase its capacity as National Rail predicts a 30% increase in rail freight from 2015 to 2025 and up to 140% growth by 2045.
- 3.28 Local authorities in Cambridgeshire, Norfolk, and Suffolk working with the New Anglia Local Enterprise Partnership and East West Rail Consortium have a shared aspiration to create increased rail connectivity between the three counties to improve economic

performance, enable housing growth, and reduce road congestion and journey times. The East West Rail link project seeks to be a strategically important rail route connecting Norfolk and Suffolk (the Eastern Section) with Cambridge and Bedford (the Central Section) and beyond to Oxford and the South West (the Western Section). Whilst the Eastern Section is pre-existing and handles passenger and freight rail services, there is significant scope and demand for more regular services and better connectivity. In the long term, the project hopes to deliver a direct hourly service between Ipswich/Norwich, Bedford, Milton Keynes, and Oxford, achieving a journey time of 120 minutes.

Other relevant developments in the area

- 3.29 This section looks at other schemes in the wider area which could give rise to the possibilities of cumulative impact of different forms. The possible impacts of these schemes will be examined further under the Section on Cumulative Impacts (Section 20).
- 3.30 The Cumulative Impacts chapter also includes other significant schemes that could have a relationship with the Applicant's project, either from the perspective of transport demands, those that will also create a demand for labour, or those where the applicant's project will prevent future development.
- 3.31 The locality nearby the development site is a hotspot for solar and other energy developments due the Burwell station and its open, flat landscape. Energy developments near the development site include: Toggam Farm; Bay Farm Anaerobic Digester Plan (Worlington); Triangle Solar Farm; North Angle Solar Park; and Cadenham Solar Farm among others.
- 3.32 A number of NSIPs in the East of England will also present cumulative impacts, these are detailed in Table 17.
- 3.33 Key non-energy developments include: Kennett Garden Village (500 houses, adjacent to the B1085); land West of Mildenhall (1,300 dwellings, off West Row Road); Western Way Leisure Centre (situated on the western side of Bury St. Edmunds); A11 Red Lodge to Fiveways Roundabout safety improvements (involving closing gaps in the A11 central reservation). Appendix 5A of the ES [APP-055] lists a number of schemes which are considered by the Applicant as part of the cumulative assessment, although a number of the schemes listed above are not included (see the Cumulative Impacts chapter 19 for further information).

4 National Policy and Principle of Development

- 4.1 National policy governing the principle of development for renewable energy proposals within its scope is the National Policy Statement (NPS) for renewables EN-3, which should be read together with the Overarching NPS for Energy, EN-1.
- 4.2 Given that EN-3 does not have any technology-specific policy relevant to solar photovoltaic projects, it is not considered that it has effect for the purposes of section 104 of the Planning Act 2008, as has been recognised by the Applicant. Nonetheless, it is a material planning consideration in the DCO process but not the only policy that the proposal needs to take into account.
- 4.3 A review of the energy NPSs has resulted in the publication of a draft EN-1 and EN-3, which are not yet designated (and therefore also do not 'have effect' for the purposes of section 104), but have clear relevance to the Sunnica project not least due to the inclusion of solar photovoltaic-specific policy in draft EN-3. It is the Councils' view that these NPSs, both current and draft, are likely to be matters the Secretary of State will consider relevant and important.
- 4.4 Section 105 of the Planning Act 2008 states:

105 *Decisions in cases where no national policy statement has effect*

- (1) This section applies in relation to an application for an order granting development consent if section 104 does not apply in relation to the application.
- (2) In deciding the application, the Secretary of State must have regard to –
- (a) any local impact report (within the meaning given by section 60 (3)) submitted to the Secretary of State before any deadline specified in a notice under section 60 (2),
 - (b) any matters prescribed in relation to development of the description to which the application relates, and
 - (c) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.

- 4.5 This LIR may refer to the NPSs, primarily EN-1 and EN-3, to highlight potential compliance issues in some of the topic areas but the Councils are mindful of the role section 105 of the Planning Act 2008 plays in this process.
- 4.6 There are a number of relevant local policies which the Examining Authority (ExA) and/or the Secretary of State may consider relevant and important.
- 4.7 Each of the issue specific sections sets out an overview of key policy documents.

5 Statutory Development Plans

5.1 The following key Plan documents have policies relating to the Sunnica development site from a local perspective. Where appropriate they will be referred to throughout this report.

Forest Heath Local Plan

5.2 On 1 April 2019 Forest Heath District Council and St Edmundsbury Borough Council were replaced by a single authority, West Suffolk Council. The development plans for the previous local planning authorities were carried forward to the new council by regulation. The development plans remain in place for the new West Suffolk Council (WSC) and, with the exception of the Joint Development Management Policies document (which had been adopted by both councils), set out policies for defined geographical areas within the new authority. It is therefore necessary to consider this application with reference to policies set out in the plans produced by the now dissolved Forest Heath District Council.

5.3 The current development plan for the former Forest Heath Area comprises;

- Forest Heath Core Strategy (2010);
- Forest Heath area Single Issue Review of Core Strategy Policy CS7 Overall Housing Provision and Distribution (2019);
- Forest Heath area Site Allocations Local Plan (SALP) (2019);
- Joint Development Management Policies Document (2015); and
- Newmarket Neighbourhood Plan (2020).

5.4 WSC is in the process of producing a new Local Plan for the District of West Suffolk, which will supersede the policies contained within the current suite of development plan documents that apply to the former Forest Heath and St Edmundsbury Areas. The new local plan has been subject to a Regulation 18 consultation and it is expected that the plan will progress to the final submission (Regulation 19) stage by mid-2024. As the new local plan is still subject to further consultation and examination it has limited weight in any decision making at this time.

5.5 The Development Plan Policies relevant to the consideration of this application are set out below:

Forest Heath area Core Strategy (CS) (2010) (APPENDIX 1):

- Policy CS1 – Spatial Strategy
- Policy CS2 – Natural Environment
- Policy CS3 – Landscape Character and Historic Environment
- Policy CS4 – Reduce Emissions, Mitigate and Adopt to future Climate Change
- Policy CS5 – Design Quality and Local Distinctiveness
- Policy CS12 – Strategic Transport Improvement and Sustainable Transport
- Policy CS13 – Infrastructure and Developer Contributions

Joint Development Management (DM) Policies Document (2015) (APPENDIX 2):

- Policy DM1 Presumption in Favour of Sustainable Development
- Policy DM2 Creating Places Development Principles and Local Distinctiveness

- Policy DM5 Development in the Countryside
- Policy DM6 Flooding and Sustainable Drainage
- Policy DM8 Low and Zero Carbon Energy Generation
- Policy DM10 Impact of Development on Sites of Biodiversity and Geodiversity Importance
- Policy DM11 Protected Species
- Policy DM12 Mitigation, Enhancement, Management and Monitoring of Biodiversity
- Policy DM13 Landscape Features
- Policy DM14 Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards
- Policy DM15 Listed Buildings
- Policy DM17 Conservation Areas
- Policy DM19 Development Affecting Parks and Gardens of Special Historic or Design Interest
- Policy DM20 Archaeology
- Policy DM44 Rights of Way
- Policy DM45 Transport Assessments and Travel Plans
- Policy DM48 Development affecting the Horseracing Industry

West Suffolk's Emerging Local Plan

5.6 The West Suffolk Preferred Options Local Plan consultation (regulation 18) runs from 26 May to 26 July 2022. The plan sets out the parameters for strategic and local policies to enable and guide the delivery of sustainable growth to 2040, along with development allocations to meet the district's housing and employment needs.

5.7 While the plan is not yet at the final submission (regulation 19) stage, which is planned for mid-2024 (see APPENDIX 33), the preferred options establish the district's direction of travel in respect of strategic and local policy guidance and site allocations. Under current planning regulations this plan has little weight at present due to it being in the early stages of preparation, but it is considered important to highlight a number of policies and relevant site-specific allocations.

Part Two – Non-Strategic Policies (NSP)

5.8 Part two of the preferred options plan (APPENDIX 4) sets out detailed policies for specific areas and types of development. This part of this plan will include policies to be used in day-to-day decision making and at this stage have been drafted as policy parameters which sets out the purpose of each policy, what each policy intends to allow or restrict and key points and criteria.

5.9 Policy NSP07 Renewable and low carbon energy sets out parameters to encourage and guide proposals for renewable and low carbon energy-generating and storage assets and distribution networks. This can include new solar farms and battery storage (see APPENDIX 4). While still an emerging policy, the direction of travel should be noted as they are

consistent with the requirements of national guidance (NPPF 2019), and open dialogue maintained through the examination as the final submission policy is prepared.

Part Three – Site Allocations (SA) (adopted and emerging)

5.10 Part Three of the preferred options plan (APPENDIX 5) sets out proposed site allocations to meet the district's need to 2040. There are no site allocations within the preferred options plan in, or directly adjacent to, the Sunnica Order limits, but a number of adopted and emerging sites do lie in close proximity:

- 3.06a (existing policy reference SA10a) Land north of Acorn Way, Red Lodge. 27.4 hectares for 300 dwellings, 8ha of employment land and 3ha of land for a new primary school. The site is also allocated in the 2019 former Forest Heath area Site Allocations Local Plan.
- 3.06b (existing policy reference SA9(e) Land off Turnpike Road and Coopers Yard, Red Lodge. 9.07 ha for 132 dwellings. The site is also allocated in the 2019 former Forest Heath area Site Allocations Local Plan.
- 5.07a Land at Fordham Road, Freckenham. 0.6ha for 10 dwellings. A new preferred site allocation located approximately 0.5km from the Order limits.

5.11 In addition, attention should be given to the strategic site SA4 Land West of Mildenhall, which is currently allocated for 1300 dwellings in the adopted Site Allocations Local Plan (2019) and is being carried forward in the West Suffolk preferred options local plan under reference 2.04a. While this site lies approximately 1.5km from the order limits, ongoing discussions with infrastructure providers will need to establish the delivery of any highways mitigation required, such as the provision of and improvement to roads. The delivery of the allocation will make a significant contribution towards meeting the district's housing requirement, and it is imperative that any required highways measures are not constrained by the delivery of the Sunnica scheme.

East Cambridgeshire Local Plan

5.12 East Cambridgeshire District Council Local Plan (APPENDIX 6) was adopted on the 21 April 2015 and covers the period up to 2031. The relevant policies are:

- GROWTH 2: Locational strategy
- GROWTH 3: Infrastructure requirements
- GROWTH 4: Delivery of growth
- GROWTH 5: Presumption in favour of sustainable development
- EMP6: Development affecting the horse racing industry
- ENV1: Landscape and settlement character
- ENV2: Design
- ENV4: Energy and water efficiency and renewable energy in construction
- ENV6: Renewable energy development
- ENV7: Biodiversity and geology
- ENV8: Flood risk

- ENV9: Pollution
- ENV11: Conservation Areas
- ENV12 Listed Buildings
- ENV13: Local Register of Buildings and Structures
- ENV14: Sites of archaeological interest
- ENV15: Historic parks and gardens
- COM5: Strategic green infrastructure
- COM7: Transport impact
- COM8: Parking provision
- FRD4: Employment allocation, land south of Snailwell Road
- FRD5: Employment allocation, land north of Snailwell Road
- FRD6: Employment allocation, land at Horse Racing Forensic Laboratories
- FRD7: Employment allocation, land north of Turners
- FRD8: Employment allocation, land south of Landwade Road

5.13 East Cambridgeshire District Council has adopted the following SPDs that are considered to be relevant to this proposal:

- Design Guide
- Contaminated Land
- Cambridgeshire Flood and Water
- Renewable Energy Development (Commercial Scale)
- Natural Environment
- Climate Change
- County Wildlife Sites
- Burwell North Street Conservation Area Appraisal

5.14 The following made Neighbourhood Plans are considered to be relevant:

- Isleham Neighbourhood Plan
- Fordham Neighbourhood Plan

Suffolk County Council Minerals and Waste Local Plan

5.15 The current development framework for minerals and waste development is the Suffolk Minerals and Waste Local Plan adopted in 2020 (APPENDIX 7). This document provides a spatial strategy for minerals and waste development in the county and contains policies governing decisions about applications for planning permission.

5.16 The Suffolk Minerals and Waste Local Plan also contains policies affecting other kinds of development to the extent to which they affect safeguarded minerals and waste development or potential minerals reserves. In particular, Policies MP10 and WP18 respectively seek to protect mineral resources from sterilisation and waste management facilities from other forms of competing development.

Cambridgeshire and Peterborough Minerals and Waste Local Plan

- 5.17 The current development framework for minerals and waste development in Cambridgeshire is the Cambridgeshire and Peterborough Minerals and Waste Local Plan adopted in 2021 (APPENDIX 8). This document provides a spatial strategy for minerals and waste development in the county and contains policies governing decisions about applications for planning permission.
- 5.18 The Cambridgeshire and Peterborough Minerals and Waste Local Plan also contains policies affecting other kinds of development to the extent to which they affect safeguarded minerals and waste development or potential minerals reserves. Policies 5 and 16 respectively seek to protect mineral resources from sterilisation and waste management facilities from other forms of competing development.

Neighbourhood Plans

- 5.19 Four neighbourhood plan areas lie within or within close proximity to the Order limits.
- 5.20 The Newmarket neighbourhood plan (APPENDIX 9) was ‘made’ on 25 February 2020 and is part of the statutory development plan for West Suffolk. This should be a material consideration in respect of the application. Sunnica West A will be directly visible from the Limekilns which is identified in the neighbourhood plan as a historic and protected view. This is discussed in further detail later in this report (See Chapters 7 and 8).
- 5.21 A neighbourhood area designation for Freckenham was confirmed on 2 November 2018 (APPENDIX 10). Part of this area falls within the Order limits. The parish are in the process of preparing their plan for its first round of consultation under regulation 14 of The Neighbourhood Planning (General) Regulations 2012.
- 5.22 Fordham Neighbourhood Plan (APPENDIX 11) was made on the 18 December 2018 and is part of the statutory development plan for East Cambridgeshire District Council. This should be a material consideration in respect of the application. Sunnica West B (W01, W02 and ECO4) is adjacent to the Neighbourhood Plan and the cable line goes through the Fordham Neighbourhood Area.
- 5.23 Isleham Neighbourhood Plan (APPENDIX 12) was made on the 19 May 2022 and is part of the statutory development plan for East Cambridgeshire District Council. This should be a material consideration in respect of the application, as E05, ECO1 and ECO2 are on the boundary of the Isleham Neighbourhood Area and the Neighbourhood Plan makes reference to Sunnica.

6 Other Relevant Local Policy

6.1 All four councils have declared a climate change emergency. All Councils have targets and objectives in relation to this.

Local Transport Plans

6.2 SCC's Suffolk Local Transport Plan (Part 1 (APPENDIX 13); Part 2 (APPENDIX 14)) sets out the long-term strategy for the Council's transport network and importantly how to support future sustainable economic growth.

6.3 A high priority for SCC is to support the growth of businesses and the strategy recognises the importance of transport in this by reducing delay and the costs associated with the movement of goods.

6.4 The strategy for the rural areas within the county is set around five objectives:

- better accessibility to employment, education and services;
- encouraging planning policies to reduce the need to travel;
- maintaining the transport network and improving its connectivity, resilience and reliability;
- reducing the impact of transport on communities;
- supporting the county council's ambition of improving broadband access throughout Suffolk.

6.5 The Cambridgeshire and Peterborough Combined Authority are the Strategic Transport Authority for Cambridgeshire and Peterborough. The Cambridgeshire and Peterborough Local Transport Plan (January 2020), is the current Local Transport Plan until the adoption of the final Local Transport and Connectivity Plan. The Local Transport Plan sets out the vision, goals and objectives that define how transport will support the Cambridgeshire & Peterborough Combined Authority's Growth Ambition, and approach to meeting these objectives.

6.6 The vision for the Local Transport Plan is to deliver a world-class transport network for Cambridgeshire and Peterborough that supports sustainable growth and opportunity for all. The vision is intended to capture the aspirations for Cambridgeshire and Peterborough's transport network, reflecting our ambition to provide:

- a. 'A world-class transport network' – Cambridgeshire and Peterborough aspire toward a transport system of the highest quality on a global stage, which meets the needs of residents, businesses, and visitors.
- b. 'Sustainable growth' – the network will support the delivery of future economic and housing growth across the region that enhances overall quality of life, supports the transition to a net zero carbon economy and protects or enhances the environment.
- c. 'Opportunity for all' – the network should support access to jobs, services and education for all, irrespective of income, age, ability, location, or access to a car.

Green Access Strategy (Rights of Way Improvement Plan)

- 6.7 The Green Access Strategy (APPENDIX 15) outlines future plans and management plans for Public Rights of Way in Suffolk 2020-2030. It identifies green access as important for health and wellbeing and explains the impact that green access can have on growing and managing tourism.
- 6.8 It assesses the extent to which local rights of way meet the present and likely future needs of the public, opportunities provided by local footpaths and byways for exercise and open-air recreation, and the accessibility of local rights of way.
- 6.9 The Strategy identifies the improvement of the public rights of way network as a significant political and strategic objective and aligns with existing strategies including the Health and Wellbeing Strategy, the Sustainable Modes of Transport Strategy, and the Growth Strategy. The Plan will seek out opportunities to work collaboratively with internal and external stakeholders to deliver shared outcomes effectively.

Cambridgeshire County Council Rights of Way Improvement Plan

- 6.10 The Rights of Way Improvement Plan (ROWIP) (APPENDIX 16) forms part of the Local Transport Plan. The Plan is set out as a strategy document with the vision of improved countryside access in Cambridgeshire builds on the rights of way network to bring benefits addressing transport, tourism, the rural economy, social integration, health and the environment.
- 6.11 It recognises that demand for access to the countryside is growing, and is becoming increasingly important due to its importance to the rural economy, public health and well-being.
- 6.12 Delivery of the Plan will require a range of functions and organisations to work in partnership to achieve the strategic plans of the ROWIP.

Suffolk County Council Travel Plan Guidance

- 6.13 SCC's document Suffolk Travel Plan Guidance (APPENDIX 17) identifies the process for delivering travel plans in the County, this sets out that a Travel Plan should:
- Be fully assessed prior to its approval in accordance with SCC's methodology.
 - Contain measures and targets which are secured for implementation by agreement between the Council and the developer/ applicant (by means of a s106 Legal Agreement or, if appropriate, planning condition).
 - Ensure that the outputs of the Travel Plan (normally trip levels and mode split) are annually monitored against the agreed targets and objectives.
 - Be reviewed annually to assess whether it is delivering its anticipated outputs.

Suffolk Guidance for Parking

- 6.14 SCC's document 'Guidance for Parking' (APPENDIX 18) sets out the relevant guidance for developers for different types of parking provision. It also covers the need for secure, convenient and high-quality cycle and motorcycle parking, in line with the standards set out including at park and ride sites.

- 6.15 The Guidance identifies the need to provide suitable charging tariffs for commercial developments based on an individual assessment with relevant justification of the appropriate provision.
- 6.16 The Guidance identifies that disabled persons' parking bays should be provided at 4 bays plus 4% of the total capacity. It also includes standards for the number of spaces with electric vehicle charging that should be made available depending on the land's use class.
- 6.17 The Guidance sets out the required specification for the size of car parking bays.

New Anglia Local Enterprise Partnership (NALEP) Economic Strategy for Norfolk and Suffolk 2017

- 6.18 NALEP works with businesses, education providers, and local authority partners to encourage growth and enterprise across Suffolk and Norfolk. It seeks to raise the level of education, skills, and training opportunities that are available and to support the outstanding economic assets and variety of businesses operating in Suffolk.
- 6.19 NALEP published 'The Economic Strategy for Norfolk and Suffolk' in 2017 and updated its strategy in 2022 (APPENDIX 19). The document sets out the ambition for Norfolk and Suffolk to be a centre for the UK's clean energy sector and identifies the social and economic challenges, strengths and opportunities which are needed to support clean, inclusive and productive growth.

Integrated Transport Strategy for Norfolk and Suffolk

- 6.20 The NALEP Integrated Transport Strategy for Norfolk and Suffolk (APPENDIX 20) has the aim of driving business growth and productivity by improving accessibility between our economic centres. The strategy sets out that improved transport connectivity between areas within the region will support growth. To enable a more connected region the strategy has the objectives of delivering a reliable Major Road Network with improved, more resilient and more reliable journey times between the priority places.

Suffolk County Council Energy Infrastructure Policy

- 6.21 SCC's Cabinet approved on 23 February 2021 its Energy Infrastructure Policy (APPENDIX 21). In this policy, SCC recognizes that the delivery of Net Zero carbon emissions in the UK by 2050, is required to limit the future impacts of climate change, and that this will result in a succession of electricity generation and connection projects in Suffolk. The purpose of the policy is to outline how, in principle, SCC will engage and influence other parties to ensure adverse impacts to our communities are understood and addressed by future decisions.
- 6.22 The policy sets out that, whilst recognising the importance of projects to deliver Net Zero, the Council considers it is essential that projects do not lead to avoidable, unmitigated or uncompensated detriment to the communities and environment of Suffolk, and its existing businesses. It also seeks to maximise the benefits to Suffolk's economy and supply chains, employment opportunities, skills, and training provision

Other policies, strategies and reference documents referred to in the LIR

6.23 The LIR refers in the issue specific sections to a number of policies and strategies in addition to those listed above. These are clearly referred to in the relevant sections, and all of these documents are included in the Appendices to the LIR.

Impacts by Issue

7 Cultural Heritage

Summary

- 7.1 Within Cambridgeshire and Suffolk, the proposal areas for Sunnica Energy Farm (SEF) West and East are located in an area rich in designated sites such as Listed Buildings and, Scheduled Monuments. Historic buildings are concentrated in the centres of the settlements with many being designated Conservation Areas. There are further isolated buildings found throughout the countryside. These occur alongside a wide array of non-designated below ground and surface scatter archaeological sites, together denoting multiple periods of human occupation, conflict and industry.
- 7.2 Within Cambridgeshire, these assets are listed in the Cambridgeshire Historic Environment Record, a dynamic, comprehensive source of information on designated and non-designated heritage assets and investigative fieldwork events managed by the county council's Historic Environment Team. The equivalent in Suffolk is the Suffolk Historic Environment Record. In addition, the British Museum's Portable Antiquities Scheme database records the locations of numerous artefact discoveries made in the locality by the general public, further attesting to myriad human activities in the East Cambridgeshire chalkland. These databases formed the basis of the Cultural Heritage chapter of the Environmental Statement (APP-039 Chapter 7, APP-059 and APP-060) and the field evaluation programme for the scheme (APP-075 and APP-076) that provided detailed evidence on which to base mitigation strategies in both Cambridgeshire and Suffolk.
- 7.3 The cable trench corridor to Burwell and cable corridors between the solar fields have not yet been evaluated, as agreed with the Sunnica team and their consultants. This component will be evaluated and added to the mitigation strategy should the scheme gain consent.

Table 1: Summary of impacts – Cultural Heritage					
Ref No.	Description of Impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligat ion)	Policy context
	Archaeological sites will be safeguarded from construction impacts and future damage from root systems of proposed new tree planting.	C/O	Neutral DRAFT	Managed Grassland in EC05, W03, W08, W09 and EC01 and part of W01 will remain protected during the life of the energy farm. Requirement/obligation Environmental Management Plans should include a section for Heritage Management.	The Ancient Monuments and Archaeological Areas Act 1979 West Suffolk Policy DM20 states that development will not be acceptable if it would have material adverse effect on Scheduled Ancient Monuments or other sites of archaeological importance, or their settings. NPPF paragraphs 200, including footnote 68, and 205 ECDC Policy ENV 14
	Archaeological assets of medium significance to be mitigated.	C	Neutral	Requirement/obligation Archaeology Mitigation Strategy to be provided and agreed with the LAs	West Suffolk Policy DM20 states that development will not be acceptable if it would have a material adverse effect on Scheduled Ancient Monuments or other sites of archaeological importance, or their settings. NPPF paragraph 205 ECDC Policy ENV 14

1a	Chippenham Park complex (Grade II registered park, Grade II* & II listed buildings, non-designated heritage asset) - changes to immediate & wider rural setting of park, interruption of established views	O	Negative	Fundamental proximity conflict – screening cannot mitigate extensive development of this type and may exacerbate impacts eg by blocking views	ECDC Policies • ENV 12 • ENV 13 • ENV 14 • ENV 15 NPPF Section 16 paragraph 200 footnote 68
1b	Other listed buildings, conservation areas, non-designated heritage assets within East Cambridgeshire.	O	Neutral DRAFT	No specific conflicts identified – no action/ general screening only	ECDC Policies ENV 11 ENV 12 ENV 13 NPPF Section 16
1c	Snailwell Fen - Integrated ancient landscape straddling a river and its floodplain that will be negatively affected by development. The setting of the scheduled Roman villa to the west of the river and the DCO area will be seriously harmed as will the relict relief of the river floodplain forming the setting of the non-designated, contemporary settlement associated with the Roman villa on the river bank. These two associated sites will be detrimentally harmed by the proposed development in this sensitive area.	C/O/D	Negative	Fundamental proximity conflict – screening cannot mitigate extensive development of this type and may exacerbate impacts by blocking views to and across the River Snail and its floodplain. Solar development in Snailwell Fen SEF W01 should be omitted from the scheme. Use as an ecology zone, sensitive to the flood plain, is recommended.	NPPF Section 16 paragraphs 199 and 200, including footnote 68. ECDC Policy ENV 14

	Pile foundations for PVs damages preserved palaeoenvironmental and archaeological organic evidence.				
1d	Settings of non-designated heritage assets (NDHAs) outside of conservation areas Although an assessment of the proposals on NDHAs, including historic buildings, is mentioned in the Cultural Heritage chapter of the ES, sections 7.6 and 7.7 which deal with this assessment only refer to the impact on archaeology. No mention is made of the any NDHAs outside the conservation areas. Clarification is required as to whether this is an omission, in which case details are required, or the fact that there are no NDHAs	C? O D?	No information about the presence or otherwise of any NDHAs has been provided. Cannot assess the impact without details of the locations of any NDHAs	Not known	Paragraph 203 of the NPPF requires that the effect of an application on the significance of NDHAs should be taken into account in determining the application JDMPD DM16 Local Heritage Assets West Suffolk Policy DM16 Local Heritage Assets recognises the importance of buildings that make a contribution to the character and appearance of the area in which they are located.
1e	The Limekilns This is an open space located in East Cambridgeshire and used for the exercise of racehorses and for recreation. The impact of the development would not directly affect any built	O	Negative	Significant reduction if not removal of all solar development south of Chippenham.	East Cambs District Council Local Plan Policies: ENV1 and ENV15

	heritage or views from the conservation areas within West Suffolk, but would have implications for landscape, ecology and archaeology				
1f	U6006 Badlingham Lane This unclassified road is possibly associated with a route of the Icknield Way. Although it has no relationship with any built heritage within WS. The section of Badlinham Lane in West Suffolk has been fossilised as a current track and C road between Worlington and the River Kennet north of Badlingham Manor. A series of long distance roughly parallel linear ditches or boundaries, mostly undated but which seem to be associated with Iron Age and Roman sites, or which contain Medieval pottery, may represent successive route markers along the broader Icknield Way corridor. Without daring and investigation, it is not possible to claim any particular accurate date for such linear features.		Neutral in terms of the built heritage and archaeology	None required in respect of built heritage Construction impacts should be limited along Badlinham Lane or 'Street Way'. Archaeological mitigation of impact areas can be designed.	NPPF paragraph 205 ECDC Policy ENV 14

	It also possesses landscape, ecology and archaeological interest which would be affected by the development.				
1g	Settings of Listed Buildings within settlements and in open countryside (Suffolk) The settings of the listed buildings have been assessed by WSC and, due to reasons of topography, orientation, screening/vegetation and/or intervening development, by WSC it is concluded, that there would be no harm caused by the development to the settings of listed buildings in Suffolk	O	Neutral DRAFT	None required	S.66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 requires the LPA to have special regard to the desirability of preserving the setting of listed buildings when considering planning applications Paragraph 202 of the NPPF requires that any harm to the significance of a designated heritage asset should be weighed against the public benefits of the proposal. Policy DM15 seeks to ensure development proposals affecting a listed building or its setting should, inter alia, contribute to the preservation of the building and respect its setting, including inward and outward views.
1h	Settings of the Conservation Areas in Worlington, Freckenham, Exning, Barton Mills and Newmarket	O	Neutral	None required	S.72 of the Planning (Listed Buildings and Conservation Areas) Act 1990 requires the

	The settings of the conservation areas have been assessed by WSC and, due to reasons of topography, orientation, screening/vegetation and/or intervening development, it is concluded by WSC that there would be no harm caused by the development to the settings of the conservation areas in West Suffolk		DRAFT		LPA to pay special attention to the desirability of preserving or enhancing the character or appearance of conservation areas Paragraph 202 of the NPPF requires that any harm to the significance of a designated heritage asset should be weighed against the public benefits of the proposal JDMPD DM17 Conservation Areas WSC Policy DM17 seeks to ensure development proposals within, adjacent to or visible from a Conservation Area should, inter alia, preserve or enhance the character or appearance of the Conservation Area or its setting, and views into, through, and out of the area.
1i	DCO areas within the Freckenham and Exning Conservation Areas These areas are identified where the AIL would overhang private land. It is a temporary measure required when the loads pass through and no	C/D	Neutral	None required	WSC Policy DM17 seeks to ensure development proposals within, adjacent to or visible from a Conservation Area should, inter alia, preserve or enhance the character or appearance of the

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	permanent changes would be made in these areas				Conservation Area or its setting, and views into, through, and out of the area.

DRAFT

Policy context

National Policy Statements

- 7.4 Relevant legislation, policies and supporting guidance for cultural heritage are as listed and described in the Applicants submission at ES Chapter 6.2 Appendix 7a (APP-057) where relevant NPS requirements for the cultural heritage assessment are usefully shown in Table 2-1, with relevant Draft NPS requirements for the cultural heritage assessment shown in Table 2-2.
- 7.5 These policies respond to the requirements of The Ancient Monuments and Archaeological Areas Act 1979 (Ref. 1) (amended by the National Heritage Act 1983 (Ref. 2) and 2002 (Ref. 3)).
- 7.6 Section 2.1.4 of APP-057 indicates the duties of the Secretary of State in the DCO process having regard to the preservation of designated sites and monuments, listed buildings and conservation areas.

Local Plan Policy

- 7.7 Local Plan Policies are as shown in Table 3-1 APP-057

East Cambridge District Council Local Plan (April 2015)

- 7.8 Policy ENV11: Conservation Areas
- 7.9 Policy ENV12: Listed Buildings
- 7.10 Policy ENV13: Local Register of Buildings and Structures
- 7.11 Policy ENV14: Sites of archaeological interest
- 7.12 Policy ENV15: Historic parks and gardens

Forest Heath District Council Core Strategy (2010)

- 7.13 Policy CS3 in relation to Landscape Character and the Historic Environment

Forest Heath and St. Edmundsbury Local Plan: Joint Development Management Policies Document (updates February 2015)

- 7.14 Policy DM15: Listed Buildings
- 7.15 Policy DM16: Local Heritage Assets and Buildings Protected by an Article 4 Direction
- 7.16 Policy DM17: Conservation Areas
- 7.17 Policy DM19: Development Affecting Parks and Gardens of Special Historic or Design Interest
- 7.18 Policy DM20: Archaeology

Other Relevant Local Policy

Fordham Neighbourhood Plan (December 2018)

- 7.19 Policy 7

Construction Phase impacts

Positive

- 7.20 None identified or anticipated.

Neutral

- 7.21 The proposed areas for development are set within rural agricultural farmland mostly comprising large fields alongside trunk roads or in village hinterlands. Below ground archaeological assets of low significance can be considered to have been adequately investigated during the evaluation process and require no further work. Archaeological remains of medium

significance will be mitigated by inclusion in an Archaeological Mitigation Strategy, still to be developed and agreed, the implementation of which should leave no residual issues. This will involve localised areas for excavation, particularly in areas of cable trenching within the solar fields.

- 7.22 Geophysical survey results and trench-based evaluations of the solar farm fields identified areas of significant archaeological evidence comprising settlement areas, long distance ditched routeways that persisted in the landscape for many centuries and funerary monuments. The best of the archaeological sites will be safeguarded from construction impacts and future damage from root systems of proposed new tree planting.
- 7.23 The mitigation of temporary and permanent construction impacts is planned through the avoidance of key archaeological sites of high to medium significance in the solar fields by placing these areas under managed grassland, also by placing solar panels on ballast foundations (“concrete shoes”) in localised areas and by the exclusion of tree planting in sensitive areas of archaeological activity.
- 7.24 See the parameter plans (APP-135 and APP-136) for the locations of the areas destined for archaeological preservation in situ by placement under grass. Area with pink vertical shading apply.

Negative

Snailwell Fen

- 7.25 The former and currently partial wetland area of Snailwell Fen (EC04 and W01– see APP-131) to the south-west of Chippenham Fen Local Nature Reserve once formed part of the setting of the designated Roman villa to the south on the west side of the River Snail (National Heritage List Entry 1006868, Table 1.3 Gazetteer of Scheduled Monuments APP-058). The Roman villa site together with the previously known cropmarked site (CHER reference MCB20063) recently evaluated in W01 for the Sunnica scheme yielded earlier and contemporary evidence, including an area of settlement on a land spur surrounded by channels and the floodplain, part of which are still seasonally wet. This evidence forms an integrated ancient landscape straddling a river and its floodplain that will be negatively affected by development.
- 7.26 The ES for Cultural Heritage (Chapter 7, APP-039) summarises the trench-based archaeological evidence in the area of Sunnica W01 (paragraphs 7.7.117 – 7.7.125), highlighting the character of the evidence and the difficulties of dating the features, some of which rapidly filled with water during the trench evaluation conducted in May 2021, making excavation very difficult and, therefore, rapid. High groundwater levels are due to the floodplain location. Section 3.4 of 6.2 Environmental Statement - Appendix 7I - Sunnica West Sites A and B Archaeological Trial Trenching Report (APP-076) provides greater detail. The fields in this area were only partly cultivated with a large area of scrub/set aside in the former wetland areas to the north and west.
- 7.27 While a significant central area of the archaeological site in W01 was assigned for mitigation by avoidance for all construction impacts and managed under grass on the basis of the initial geophysical survey evidence (see Fig G4 APP-070 and APP-136, Sunnica West A and B Parameter Plan), the evaluation trenches opened later identified that further remains, not all evident in the

geophysical survey results, extended beyond that zone and were partly waterlogged. The insertion of a multitude of mini pile foundations into these deposits will introduce oxygen into them as sediment dries and shrinks away from the mini piles, which will lead to the desiccation of waterlogged deposits at depth and the loss of preserved palaeoenvironmental and archaeological organic evidence.

7.28 The double impact of the loss of rural setting for the villa site to the south (immediately west of the light green retained woodland shading on Fig 3-2 of APP-136) along with the risk of desiccation of the wetland character and its buried channels and pools in Snailwell Fen (SEFW01) cannot be suitably mitigated as the excavation costs would be prohibitively high.

7.29 Furthermore, the parameter plan indicates that solar panels would surround the settlement site of W01 in the west, south and east sides creating an 'island' of ancient settlement ameliorated to some extent by grassland/native planting developed within the ancient wetland but separated from its wetland context. Protecting sites divorced from their landscape context is not best practice.

Operational phase impacts

7.30 The councils have significant concerns about the timescales proposed for construction ([APP-035 ES 6.1: Chapter 3 (Scheme Description) Section 3.6 Construction]). This is particularly true for areas yet to be fully archaeologically evaluated, including several fields in Suffolk, and the cable route corridor and the Burwell NG Substation expansion site in Cambridgeshire, as the extent and complexity of archaeological remains within these parts of the scheme is currently unknown. From recent experience of similar projects, the suggested timescales significantly underestimate the amount of time that will be necessary to complete the archaeological evaluation and mitigation ahead of construction.

Positive

7.31 None identified or anticipated.

Neutral

7.32 Archaeological areas agreed for protection under managed grassland in EC05, W03, W08, W09 and EC01 will remain protected during the life of the energy farm.

7.33 The boundaries of the conservation areas in West Suffolk are typically drawn around the built-up centres of settlements and contain a concentration of historic buildings and structures. Trees and woodlands around the outskirts of the settlements provide green screens which contribute to the setting of the conservation areas and limit views of the wider countryside and Sunnica sites beyond. The isolated listed buildings lying outside the conservation areas are typically surrounded by their own boundary walls, fences and planting which define and enclose their settings. The Sunnica sites do not contribute to the settings or significance of the West Suffolk conservation areas or listed buildings. It is therefore considered that the development would have a neutral impact on them.

*Negative**Chippenham Park*

- 7.34 Some areas of the proposed development lie close to sensitive historic environment landscape assets and historic wetland areas. Chippenham Park, the registered Park and Garden of Chippenham Hall (Cambridgeshire Historic Environment Record Reference number MCB8994; W03 EC05, W06, W08, W10 – see Fig 3-2 APP-136 and see Table 1.4 ES 6.2 Appendix 7B: Known Assets Table, APP-058) will be surrounded by solar fields to the south, south-east and south-west sides. The proposal will be located on either side of the Grade II historic park (List Entry: 1000615) and that will lead to, as the developer has acknowledged, an adverse impact upon the setting of the registered park.
- 7.35 Given that the designated area of the historic park extends beyond the environs of Chippenham Hall as far as the A1304, the industrial nature of the energy farm will profoundly change the rural setting of all the designated heritage assets concerned: the hall, its associated ancillary buildings and its registered park. Furthermore an undesignated asset, High Lodge, located at the south-western end of the avenue, adjacent to the A1304, has recently been assessed through the current Cambridgeshire Local Heritage Project in the light of its architectural quality, and a recommendation for inclusion in the ECDC register of buildings of local interest is pending.
- 7.36 The presence of High Lodge, and the processional avenue from Newmarket which extends some 3km beyond the park boundary, highlights Chippenham Park's influence over its wider surrounding landscape. Parcels W03 – W12 will for example sever the connection between the Limekilns and the historic park, a relationship which is especially valued locally, even if it is fortuitous rather than specifically designed. Further tree planting in order to screen the proposed development will in fact add to the harm to the historic park by distracting from the dominance of the park within the landscape, competing with the avenue, and by interrupting long established visual relationships between the park and cherished viewpoints such as the Limekilns.

Snailwell Fen

- 7.37 If SEF W01 at Snailwell Fen is developed this will cause desiccation of peat filled Roman ditches, channels and potential buried old ground surfaces in ways that cannot be mitigated through excavation in advance as the areas are too extensive. This will be extremely harmful to sensitive organic artefacts and palaeoenvironmental evidence of the wetland edge of the River Snail. The severance of the setting of the scheduled Roman Villa on the west side of the River Snail with views remaining to open countryside and the relict floodplain earthworks will be significantly harmed, contrary to the policies of NPPF 200 that states such impacts should be “wholly exceptional”.

Required mitigation

- 7.38 The only way to avoid damage and preserve the heritage asset would be to omit the development of Snailwell Fen SEF W01 from the scheme or to use it as part of an environmental strategy to off-set the impacts of the development. The creation of a local nature reserve in which the archaeological remains are sensitively managed would be an ideal mitigation strategy for the scheme.

Archaeological Mitigation

7.39 The archaeological mitigation strategy is incomplete. However, the scheme will adopt the ‘Rochdale Envelope approach’, which allows sufficient flexibility in the approach to mitigation and fixing the design after submission of the DCO application. This approach is appropriate for Sunnica Solar Energy Farm (SEF), specifically for archaeology, for three reasons:

- The evaluation reports for the scheme had not been completed by the time of the submission of the DCO application. While the trenching fieldwork has been completed for most of the scheme area in Suffolk, there are several fields that have currently only had limited trenched evaluation. While the work undertaken to date may be considered sufficient to establish the principle of development, it is insufficient to fully characterise the archaeological resource and inform the exact nature of further archaeological investigations and extent of mitigation areas.
- The cable routes within the solar farm do not yet have fixed locations and there is subsequent scope to alter the design and layout of the panel strings to accommodate preservation in situ, if warranted.
- There is also scope to consider alternate approaches to the mechanism for installation of the cable crossing point of the historic routeway between Worlington and Rectory Farm, which is an undesignated heritage asset recorded on the County Historic Environment Record. Whilst on balance the archaeological impact of a single crossing point SCCAS believe can be adequately managed through appropriate archaeological mitigation, SCCAS would not wish to see large portions of this feature impacted through ground disturbance or alteration of its historic landscape value, for example, to upgrade surfaces or clear vegetation to provide access along this route.

7.40 While the archaeological mitigation strategy is still in development, the trench-based evaluation results will be assessed alongside the geophysical survey plots to validate or change the scope and areas where a range of archaeological mitigation work is needed. A number of areas needing further archaeological investigation to mitigate development impacts are indicated by the results of the evaluation so far undertaken. The councils look forward to discussions with the applicant to determine an acceptable level of mitigation for such areas. Currently areas for protection have only been developed from geophysical survey data.

7.41 Relevant documents in the submission pack will need to be revised once an agreed mitigation strategy has been developed: for example, APP-257 Schedule of Environmental Mitigation, and APP-123 ES Appendix 16C Framework Construction Environmental Management Plan and Travel Plan.

7.42 Positive Embedded Design Mitigation for archaeology includes the removal of ten areas of significant (high value) archaeological sites from construction impacts: seven in Cambridgeshire and three in Suffolk (APP-039 7.6.2). Although they constitute non-designated heritage assets, the character of some of the sites (particularly in ECO5) suggests that they may be of equivalent status to designated heritage assets. An Historic Environment Management Plan should be prepared to

provide a mechanism by which these sites will be suitably protected under pasture, managed and maintained - indicating by whom throughout the life of the solar farm, along with proposals for what will happen to them should the site be decommissioned and dismantled.

7.43 According to APP-039 (6.1 ES Chapter 7 - Cultural Heritage), a Detailed Archaeological Mitigation Strategy (DAMS) will be prepared and will respond to the requirements of the local authority archaeology brief (see 7.6.8). Design Briefs for the outstanding evaluation trenching, and areas of mitigation (following completion of the trenching), will be provided by the councils upon request. The councils would prefer to see the draft DAMS further developed, so that a mitigation strategy that takes into account the knowns and unknowns can be developed and agreed prior to determination.

7.44 At this stage as the mitigation concept is vague and requires further development, so no further comment can be provided yet.

Requirements and Obligations

7.45 The post-consent programme of archaeological investigation, monitoring, assessment, reporting, archiving and publication will need to be secured through DCO Requirements. While the Requirement wording (Archaeology 13.) submitted covers many of the important points, it does not currently take into account the second phase of archaeological trenching required on a number of the fields in Suffolk, or secure timescales for delivery of the Post-Excavation Assessments and an Updated Project Design. The councils would welcome discussions with the Applicant to resolve these issues.

7.46 Environmental Management Plans should include a section for Heritage Management. Sites that are to be protected under grass should include appropriate schedules of cutting and de-scrubbing to prevent invasive roots or matting to occur that would require future invasive mitigation need, the avoidance of which is desirable.

DCO and Work Plans

APP-019 Draft Development Consent Order

Part 4 Supplemental Powers: Section 15 (Removal of Human Remains)

7.47 This section does not currently cover human remains identified in an archaeological context, which would normally be more than 100 years old. The Applicant is advised to revise this section to reflect the handling of archaeological human remains, including reference to the need to acquire relevant exhumation licences from the Ministry of Justice.

Part 4 Supplemental Powers: Section 17 (Authority to Survey and Investigate the Land)

7.48 The councils are pleased to see authorisation for archaeological investigation work and to demarcate areas for long term protection of archaeological sites and monuments under Part 1 (a) and (c). However, we would wish to see access to areas of archaeological protection included to facilitate ongoing future management and maintenance of the archaeological sites. Who will be responsible for the management of these areas is to be clarified.

8 Ecology and Biodiversity

Summary

8.1 The Development Site is within, contains or is close to a number of sites designated for their nature conservation importance, including:

- Fenland Special Area of Conservation (SAC)
- Chippenham Fen Ramsar and National Nature Reserve
- Chippenham Fen and Snailwell Poor's Fen SSSI
- Breckland Special Protection Area (SPA)
- Worlington Heath County Wildlife Site (CWS)
- Badlingham Lane CWS
- Havacre Meadows and Deal Nook CWS

The baseline survey work appeared on the whole to be thorough in terms of breadth, but the Councils have concerns about particular aspects:

- Stone Curlew surveys have not always spanned the whole breeding season and have not covered all of the 500m buffer zone around the order limits.
- No invertebrate surveys (terrestrial or aquatic) have been completed to inform a robust assessment and evaluation of the potential for both construction and operational impacts on Chippenham Fen and local populations.
- Hedgerow surveys are not complete.
- Surveys of arable field margins not completed for all arable fields
- Badger territory mapping has not been carried out
- Phase 1 habitat mapping is inaccurate in places.

8.2 The Ecology and Nature Conservation chapter of the ES [APP-040] and its associated Addendum reports [APP-077 to APP-091] and Habitats Regulations Assessment [APP-092], identify a range of potential impacts arising from the proposed development on a suite of ecological receptors.

8.3 Whilst in many cases mitigation and/or compensation measures are proposed to address these impacts, the Councils consider that in a number of cases these measures are either inadequate, too vaguely defined or inadequately secured by the proposed DCO to give certainty that all ecological impacts can be satisfactorily addressed as part of the development proposal including in the long-term post decommissioning.

8.4 The Councils note that several ecological assessments are not fully comprehensive and do not allow for clear conclusions on the level of impact expected and the suitability of the mitigation proposals.

8.5 Ecological receptors where the Council suggest that the ExA require the applicant to supply further clarification and/or information during the examination:

- Fenland SAC / Chippenham Fen Ramsar / Chippenham Fen & Snailwell Poor's Fen SSSI – re cabling route and hydrology
- Stone Curlew – disturbance to Stone Curlew during construction

- Havacre Meadows and Deal Nooks County Wildlife Site, Badlingham Lane CWS and Worlington Heath CWS
- Phase 1 habitat surveys, hedgerow surveys and tree surveys
- Acid grassland
- Arable flora and associated terrestrial invertebrates
- Veteran trees
- Watercourses
- Breeding bird assemblages
- Wintering bird assemblage
- Wintering skylark
- Wintering linnet
- Badgers
- Bats
- Overall biodiversity losses / gains (Biodiversity Net Gain)

8.6 Ecological receptors where the Council suggest that the applicant should bring forward changes to the application as part of the Examination and/or provide further clarification:

- Fenland SAC Chippenham Fen Ramsar, Chippenham Fen and Snailwell Poor's Fen SSSI - lack of information on the effects of the solar panels on aquatic macroinvertebrates requires a precautionary approach and the panels should be removed from Sunnica West B
- Stone Curlew – lack of confidence in the effectiveness and amount of offsetting land provided requires a precautionary approach and panels should be removed from parcel E12 (and potentially parcels E05 & E13) which should be retained as Stone Curlew habitat. Additional and alternative Stone Curlew mitigation measures should also be identified.
- Notable arable flora – lack of confidence in the effectiveness of and location of proposed compensation for impact to arable flora. High quality arable field margins of W09 should be retained. Compensation areas for loss of arable field margins should be expanded across the scheme.

8.7 The Councils do not agree that there would be no significant residual effects to ecological receptors during construction and operation of the proposals. The sections below set out the Councils concerns in relation to specific ecological receptors where we consider that impacts remain insufficiently assessed and/or inadequately mitigated / compensated for. It is also essential that adequate monitoring provisions are put in place and secured, during the construction, operation and decommissioning phases, to ensure that mitigation and compensation measures are being / have been implemented successfully and retained in the long term. It is essential that these matters are addressed prior to a decision being reached in the examination of this proposal, otherwise the consented development is likely to result in avoidable ecological impacts.

Table 2: Summary of impacts – Ecology and Biodiversity					
Ref No.	Description of impact	Construction (C)/ Operation (O)/ Decommissioning (D)	Negative /Neutral /Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
	Fenland SAC / Chippenham Fen Ramsar	C/O	Negative	Change: Ensure cabling route on ECO4 does not affect hydrology of protected site Mitigation: Secure mitigation measures through design of proposals, CEMP and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: international sites to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Fenland SAC /Chippenham Fen Ramsar	O	Negative	Change: re-design to remove solar arrays at Sunnica West B.	NPS EN-1: international sites to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from

					the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Chippenham Fen and Snailwell Poor's Fen SSSI	O	Negative	Change: re-design to remove solar arrays at Sunnica West B.	NPS EN-1: SSSI to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. East Cambridgeshire Local Plan Policy ENV7:

					Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Habitats Regulations Assessment (HRA) – potential impacts on Breckland SPA	C/O	Negative	Defer to Natural England for specific avoidance, mitigation and compensation needs	NPS EN-1: International Sites. Identifies most important sites for biodiversity are those identified through international conventions and European Directives. SSSIs are also designated as sites of international importance and will be protected accordingly. Where proposed development is within an SSSI and is likely to have an adverse effect (individually or in combination) development consent should not normally be granted unless benefits of the development outweigh impacts after mitigation. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures.

					Policy DM10 sets out criteria against which development proposals are assessed in relation to the impact of development on sites of biodiversity and geodiversity importance. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Population of breeding Stone Curlew: Physical displacement from land functionally linked to Breckland SPA	C/O	Negative	Change: Remove development from areas that have been found to be used by Stone Curlew for breeding, parcels E12, E13 and E05.	NPS EN-1 (para 5.3.7) sets as a general principle, that “development should aim to avoid significant harm to biodiversity and geological conservation

				Mitigate: provide as a minimum, 16ha of demonstrably suitable habitat and 2x 2ha nest plots per pair of Stone Curlew, based on the minimum of 3 years complete survey data and demonstrate clearly no in combination effects Mitigate: Secure offsetting land and its appropriate long-term management through the DCO requirements Monitor: Monitor Stone Curlew within the mitigation land and within 500m annually for the lifetime of the project through the DCO requirements. Mitigate: Include requirement for remedial action/alternative offsetting land in case the habitat initially provided does not provide the conditions to support the baseline Stone Curlew population. Secure through DCO requirements	interests, including through mitigation and consideration of reasonable alternatives (...); where significant harm cannot be avoided, then appropriate compensation measures should be sought.” Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM10 sets out criteria against which development proposals are assessed in relation to the impact of development on sites of biodiversity and geodiversity importance. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development.

					East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Population of breeding Stone Curlew: Noise and visual disturbance up to 500m from the site.	C/O	Negative	Change: Include the monitoring of Stone Curlew within 500m of any construction and operational activities. Avoid construction within 500m of offsetting land or nesting Stone Curlew within the breeding season. Avoid/minimise maintenance operations within 500m of nesting Stone Curlew. Mitigate: to be secured through the CEMP and OEMP Monitor: Monitor Stone Curlew annually pre-construction, during construction and for the lifetime of the project	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM10 sets out criteria against which development proposals are assessed in relation

					to the impact of development on sites of biodiversity and geodiversity importance. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Havacre Meadows and Deal Nooks County Wildlife Site	C/O	Negative	Change: Provide detailed design of the proposed cable route crossing at W3 (County Wildlife Site) demonstrating no construction works within 30m of the County Wildlife Site and no impact to habitats / hydrology from tunnelling. CEMP to be updated to include monitoring of CWS.	NPS EN-1: due consideration should be given to adverse effects of development on regional / local biodiversity designations, which have a fundamental role to play in meeting overall national biodiversity. Mitigation measures should be included as an integral

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				Mitigation: Secure mitigation measures through design of proposals and monitor during construction through the CEMP. Provide management details for the CWS for the lifetime of the project Monitor: Terrestrial Ecology Monitoring Plan - Requirement	part of the proposed development. East Cambs Local Plan policy ENV 7: habitats to be protected from the adverse effects of development. Proposals that cause harm to County Wildlife Sites will not be permitted unless the need for, and benefits of development in that location outweigh the potential harm to nature conservation.
	Badlingham Lane County Wildlife Site and Worlington Heath County Wildlife Site	C/O	Negative	Mitigation: Secure protection of CWS and monitor during the construction through CEMP Avoid: Amend landscape masterplan and Works Plan to show the CWS as retained habitat Mitigate: Provide management details for the CWS for the lifetime of the project Monitor: Terrestrial ecology Monitoring Plan - requirement	NPS EN-1: due consideration should be given to adverse effects of development on regional / local biodiversity designations, which have a fundamental role to play in meeting overall national biodiversity. Mitigation measures should be included as an integral part of the proposed development. West Suffolk CS2: Areas of biodiversity and geodiversity interest and local distinctiveness within the district will be protected from harm. West Suffolk JDMPD: Proposals which would result in significant harm to biodiversity, having

					appropriate regard to the 'mitigation hierarchy', will not be permitted.
	Adverse effects on habitats including grassland, hedgerows, scrub and treelines underestimated due to inaccurate phase 1 habitat surveys	C	Negative	Change: Review phase 1 survey results and undertake additional surveys to determine their importance, condition, and the presence of priority habitats.	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Terrestrial invertebrates	C	Negative	Change: Ensure panel arrays in E13 and E31 avoid losses of acid grassland, to retain habitats of County to Regional importance to terrestrial invertebrates.	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse

				Mitigate: Secure identified mitigation measures through design of proposals, CEMP and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy DM10 sets out criteria against which development proposals are assessed in relation to the impact of development on sites of biodiversity and geodiversity importance. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain.

					This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Aquatic invertebrates – physical displacement by solar arrays	O	Negative	Change: remove solar arrays at Sunnica West B. Mitigate: Secure research / monitoring into effects of solar farms on these species through LEMP / requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Notable arable flora – degradation of habitat and loss of species	C	Negative	Change: Re-design and re-locate compensation habitat such that it forms connected and functional areas that can be managed appropriately long-term.	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using

				Mitigate: Secure identified mitigation measures through design of proposals, CEMP and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Semi-improved Acid Grassland	C	Negative	Change: Ensure panel arrays in E13 and E31 avoid losses of all areas of acid	NPS EN-1: protected species and habitats to be protected from the

				grassland, to retain this Habitat of Principal Importance. Mitigate: Secure identified mitigation measures through design of proposals, CEMP and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain.

					This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Adverse effect on woodland, trees and hedgerows assessed by applicant as being non-significant but subject to proposed mitigation being successful	C	Negative	Mitigate: Secure measures to avoid/minimise losses in CEMP Monitor: Terrestrial Ecology Monitoring Plan: Requirement	Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Potential adverse effect on veteran trees not assessed by applicant	C/O	Negative	Mitigate: identify veteran trees within and immediately adjacent to the study area and avoid adverse effects (CEMP, LEMP and Work Plan)	NPPF 180c 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.

					Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Adverse effects on watercourses subject to proposed mitigation being successful but not assessed by the applicant	C	Negative	Change: Update ES to include assessment of impact on watercourses Mitigate: Secure measures to avoid/minimise losses in CEMP Monitor: Terrestrial Ecology Monitoring Plan: Requirement	Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide

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					appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD). In addition Policy ENV9 seeks to protect against water pollution.
	Adverse impact on breeding Quail, Hobby and Ringed Plover assessed by applicant as being non-significant but subject to proposed mitigation being successful	C	Negative	Mitigate: Secure measures to avoid/minimise disturbance in CEMP Mitigate: Identify habitat to be managed for Quail and Ringed Plover and provide management prescriptions within the LEMP Monitor: Terrestrial Ecology Monitoring Plan: Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM10 sets out criteria against which development

					proposals are assessed in relation to the impact of development on sites of biodiversity and geodiversity importance. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Adverse impact on breeding bird assemblage: finding of non-significant effects reliant on proposed outline mitigation being successful, insufficient	C/O	Negative	Mitigate: Secure measures to avoid/minimise disturbance in CEMP Mitigate: Identify habitat to be managed for breeding farmland birds including skylark and provide management prescriptions within the LEMP	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using

	consideration of risks involved			Monitor: Terrestrial Ecology Monitoring Plan: Requirement	requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).

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	Adverse impact on winter bird assemblage: non-significant effects reliant on proposed outline mitigation being successful, insufficient consideration of risks involved	C/O	Negative	Mitigate: Secure measures to avoid/minimise disturbance in CEMP Mitigate: Identify habitat to be managed for wintering farmland birds and provide management prescriptions within the LEMP Monitor: Terrestrial Ecology Monitoring Plan: Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide

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					appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Bats – loss of bat roost and disturbance to commuting routes	C	Negative	Avoid: Avoid/minimise loss of trees Mitigate: revisit assessment of impacts on bats at detailed design Mitigate: secure environmental protection measures through CEMP	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM11 sets out local requirements in relation to protected species.

					Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Badgers – loss of access to foraging land / connectivity across clan territories	O	Negative	Change: Update ES to include assessment of impact to badger foraging area and connectivity of clan territories, including bait marking surveys (unless impacts can be avoided) Mitigate: revise design of security fences to allow full access to all fields with native grasslands. Monitor: secure through LEMP and re-word fencing requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and

					their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Adverse effects on protected species and habitats during construction	C	Negative	Secure measures to avoid and minimise effects in the CEMP including establishing tasks and reporting for the ECoW	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and

					their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM11 sets out local requirements in relation to protected species Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Fragmentation of habitats for wildlife through implementation of site security fencing	C/O	Negative	Mitigate: Design of the security fences to facilitate permeability for wildlife to be secured – requirement or obligation	Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged

					and sought through a variety of measures. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Adverse effects on habitats and protected species during decommissioning: finding of non-significant effects reliant on proposed outline mitigation being successful, insufficient consideration of risks involved	D	Negative	Change: secure ecological surveys prior to decommissioning: requirement or obligation Mitigate: secure mitigation measures in the DEMP – requirement or obligation	Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM10 sets out criteria against which development proposals are assessed in relation to the impact of development on sites of biodiversity and geodiversity importance. Policy DM11 sets out local requirements in relation to protected species.

					East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Demonstrate biodiversity net gain for the proposed development	0	Not yet demonstrated – would be positive	Change: provide Defra matrix and associated plans to demonstrate BNG can be achieved through measures delivered in addition to mitigation and compensation Monitor: Terrestrial Ecology Monitoring Plan: Requirement	Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM10 sets out criteria against which development proposals are assessed in relation to the impact of development on sites of biodiversity and geodiversity importance. Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development.

					East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).
	Adverse long-term loss to biodiversity through lack of mechanism to secure mitigation and compensatory habitats post decommissioning	Post D	Negative	Change: Measures to secure the continuing nature conservation management all the mitigatory/compensatory habitats beyond 40 years should be a requirement.	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development. Policy CS2 seeks to, inter alia, ensure that areas of biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Policy DM11 sets out local requirements in relation to protected species

					Policy DM12 focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development. East Cambridgeshire Local Plan Policy ENV7: Seeks to ensure all development that protect biodiversity, provide appropriate mitigation and maximise biodiversity gain. This is supported by the Natural Environment – Supplementary Planning Document (SPD).

Policy Context

National Policy Statements

Overarching National Policy Statement for Energy (EN-1)

- 8.8 NPS EN-1 (para 5.3.7) sets as a general principle, that “development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (...); where significant harm cannot be avoided, then appropriate compensation measures should be sought.”
- 8.9 NPS EN-1 identifies the importance of receptors, including International Sites (at para 5.3.9, as well as recognising that SSSIs ‘should be given a high degree of protection’ (see para 5.3.10 of EN-1). It states where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted (Paragraph 5.3.11). Where a residual adverse effect on the site’s notified special interest features is likely, consent should only be granted where the benefits (including need) of the development at this site clearly outweigh both the impacts on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs.
- 8.10 NPS EN-1 notes (see paragraph 5.3.13) that due consideration should also be given to regional and local biodiversity and geological designations this is because these sites have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education.
- 8.11 These are all highly relevant considerations for the Sunnica proposal.
- 8.12 On protected habitats and species, NPS EN-1 states that it should be ensured these “are protected from the adverse effects of development by using requirements or planning obligations” and that substantial weight should be given “to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development” (para 5.3.17).

Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)

- 8.13 The Councils consider that it is important that the applicant demonstrates compliance with the draft EN-3, on the following matters:
- Paragraph 2.4.2 requires that Proposals for renewable energy infrastructure should demonstrate ‘good design’ to mitigate effects on ecology.
 - Biodiversity and nature conservation considerations specific to solar photovoltaic generation are dealt with in section 2.50.
 - Paragraph 2.50.2 requires that the applicant’s ecological assessment should identify any ecological risk and sets out how this might be achieved through desk and field studies, evaluation of likely impacts and measures required to avoid harm.
 - Earthworks are considered in paragraph 2.50.3 which requires that where soil stripping occurs topsoil and subsoil should be stripped, stored, and replaced separately in order to minimise soil damage and to provide optimal conditions for site restoration.

- Paragraph 2.50.4 covers the design of security and lighting must minimise impacts on habitats. Paragraph 2.50.5 deals with site boundaries, buffers and permeability of boundaries. The section is clear that removal of hedges/scrub should be informed by surveys.
- Paragraph 2.50.7 deals with flood risk and suggests that given the temporary nature of solar PV farms, sites should be configured or selected to avoid the need to impact on existing drainage systems and watercourses. Culverting existing watercourses/drainage ditches should be avoided. Where culverting for access is unavoidable, it should be demonstrated that no reasonable alternatives exist and where necessary it will only be in place temporarily for the construction period.
- Paragraph 2.50.8 deals with the need for enhancement, management, and monitoring of biodiversity, making the point that solar farms have the potential to increase the biodiversity value of a site, especially if the land was previously intensively managed.
- Mitigation is dealt with in 2.50.10 and section 5.4 of EN-1 and sets out the ambition to achieve environmental and biodiversity net gain in line with the ambition set out in the 25 Year Environment Plan through maintaining or extending habitats and potentially creating new important habitats. Examples include the need to instating cultivated strips/plots for rare arable plants. The paragraph advises that an ecological monitoring programme is developed to monitor impacts upon the flora of the site and upon any particular ecological receptors (e.g., bats and wintering birds). Results of the monitoring will then inform any changes needed to the land management of the site, including, if appropriate, any livestock grazing regime.

National Planning Policy Framework

- 8.14 Paragraph 174 states that planning policies and decisions should contribute to and enhance the natural and local environment including by minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- 8.15 The NPPF sets out in paragraph 180 that proposals which would result in significant harm to biodiversity, having appropriate regard to the 'mitigation hierarchy' should be refused. This includes the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees). The paragraph goes on to require that 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.
- 8.16 Paragraph 182 states that the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Plan Policies

- 8.17 Within West Suffolk local landscape policies are included in the Core Strategy for the former Forest Heath Council area of West Suffolk and the Joint Development Management Policies Document (JDMPD).
- 8.18 Policy 'CS2 Natural Environment' of the Core Strategy aims to protect and restore the environment through a number of measures including:
- appropriate management of valuable areas such as County Wildlife Sites.
 - minimising the fragmentation of habitats, creation of new habitats and connection of existing areas to create an ecological network.
 - promotion of Green Infrastructure enhancement and/or provision on all new developments.
 - promotion of agri-environment schemes which increase the landscape, historic and wildlife value of farmland, increase appropriate public access and reduce diffuse pollution
- 8.19 The policy requires that particular attention will also be paid to initiatives which will improve the natural environment where it is poor or lacking in diversity.
- 8.20 The policy is clear that where mitigation measures are employed, they will result in a net gain of biodiversity for the district.
- 8.21 Policy 'CS4 Reduce emissions, mitigate and adapt to future climate change' requires that development must also seek to adapt to the negative impacts from climate change including change upon biodiversity by protecting the rural districts natural capital and applying an ecological network approach – re-enforcing and creating links between core areas of biodiversity.
- 8.22 Policy 'DM10 Impact of development on sites of biodiversity and geodiversity Importance' sets out criteria that the Council would have regard to in deciding planning applications, including in relation to any mitigation and compensatory measures. The policy requires that the provision of replacement habitat or features is viewed as a last resort. Where compensation has been established as an acceptable approach, it will be necessary to provide replacement areas of at least equivalent value to that lost, and that these should normally be in place to a satisfactory standard before the original habitats are lost.
- 8.23 Policy 'DM11 Protected species' sets out local requirements in relation to protected species including that disturbance should be reduced to a minimum and in the first instance mitigation /compensation be provided on site.
- 8.24 Policy 'DM12 Mitigation, enhancement, management and monitoring of biodiversity' focuses on the requirements for all developments to enhance biodiversity at a scale commensurate with the development.
- 8.25 Within East Cambridgeshire, local natural environment policies are included in the East Cambridgeshire Local Plan (adopted 21 April 2015) supported by Natural Environment Supplementary Planning Document (adopted 24 September 2020). As well as Neighbourhood plans for Fordham (made on 18 December 2018) and Isleham (made on 19 May 2022).
- 8.26 East Cambridgeshire Local Plan 2015's policy 'COM 5: Strategic green infrastructure' sets out local requirements for protection of existing strategic green infrastructure, including existing designated sites for biodiversity.

- 8.27 Policy 'ENV 6: Renewable energy development' requires renewable energy development to be determined against policy ENV 7.
- 8.28 Policy 'ENV 7: Biodiversity and geology' sets out local requirement for all development proposal to protect biodiversity and geological interest through:
- minimise harm to and loss of environmental features
 - appropriate mitigation measures, reinstatement or replacement of features
 - compensatory works that will enhance or recreate habitats on or off-site
 - maximising opportunities for creation, restoration, enhancement and connection of natural habitats as an integral part of development proposals
 - appropriate management of designated sties and other features
- 8.29 The policy is clear that proposals which adverse impact on site of international, national and local importance, as well as irreplaceable habitats and important species, will not normally be permitted (unless adequately compensated etc.).
- 8.30 East Cambridgeshire Natural Environment Supplementary Planning Document 2020 provides further advice on policy requirements relating to the natural environment. Development schemes will be refused unless:
- avoidance / adequate mitigation measures to ensure no adverse effect on integrity of international designated sites (either alone or in-combination) protection of international sites (policy 'SPD.NE1')
 - suitable compensation strategy for loss or deterioration of irreplaceable habitat on local wildlife sites (policy 'SPD.NE3')
 - appropriate surveys, mitigation and/or compensation for impacts on protected species (policy 'SPD.NE5')
- 8.31 Policy 'SPD.NE6 Biodiversity Net Gain' requires all development to deliver measurable net gain in biodiversity, which will significantly exceed the pre-development biodiversity value of the onsite habitat.
- 8.32 Policy 'SPD.NE7: Contributing to the strategic target of doubling land for nature' sets out how strategic scale development could help demonstrate that it meets Local Plan Policy ENV 7 by:
- setting aside minimum of 20% of the application site area as land for rich wildlife habitat that have clear proposals for creation and long-term management (excluding any habitat that already is rich wildlife habitat); or
 - create new rich wildlife habitat off-site (currently not rich wildlife habitat), on land broadly equivalent in size to the land area of the application site, with clear long-term management proposals
- 8.33 Policy 'SPD.NE9: Landscaping and Biodiversity' requires planting to be integral to the design and not an afterthought, include use of appropriate species.
- 8.34 Policy 'SPD.NE10: Taking the most appropriate natural environment opportunities' requires developers to demonstrate that a proposal has taken the most appropriate opportunities for delivering natural environment infrastructure. Including provision to support priority or protected species known to be present in the local area.

8.35 Adopted Neighbourhood Plans form part of the development plan and are given the same status as the weight as the East Cambridgeshire Local Plan. ‘Policy 8: Wildlife & Habitats’ of the Fordham Neighbourhood Plan and ‘Policy 7: Biodiversity & Habitats’ of the Isleham Local Plan require proposed development to:

- avoid significant adverse impact to protected sites, including Chippenham Fen
- protect, or adequately mitigation adverse effects on wildlife habitats
- enhance connectivity of green networks
- achieve net gain in biodiversity

Context

An Ecological Vision and Ambition for the Sunnica Energy Farm

8.36 In early 2022, the host Councils’ ecologists began meeting with nature conservation NGOs and the Government’s statutory nature body, Natural England, to discuss matters of ecology in relation to the Sunnica Energy Farm proposals with the collective aim of securing the best outcomes for wildlife and the natural environment from the design, construction, operation, and decommissioning of the scheme.

8.37 This group has drafted an ecological vision and ambitions for the Sunnica Energy as a basis for engagement with Sunnica and their consultants in ecological matters (**ANNEX A**) The document is endorsed by the Suffolk Wildlife Trust, the Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire, the RSPB, Natural England and officers of the Council in their role as ecologists on this project.

8.38 The vision, set out in the document is that Sunnica Energy Farm should be an exemplar of ecology-led design, construction, operation, and decommissioning to restore and enhance nature, healthy functioning ecosystems, and ecological connectivity. It should leave the natural environment in a measurably better state and make a significant and meaningful contribution to the creation of a Nature Recovery Network in East Cambridgeshire and West Suffolk.

8.39 The document goes on to set out three clear principles which should be applied; the application of the mitigation hierarchy, protection of statutory and non-statutory wildlife sites, and that Sunnica should have a positive impact on biodiversity and ecology. The groups ambition for the project, concerns and opportunities for conservation and wider ecosystem benefits are also covered.

8.40 The document also sets out that a long-term partnership with an ecological advisory group comprising ecologists from relevant NGOs, Natural England and local authorities should be secured, to scrutinise monitoring data and adapt habitat management / site conditions and working practices where necessary to meet the ambition for the Scheme, as set out in that document.

East Cambridgeshire Interim Nature Recovery Network

- The Wildlife Trust is preparing an overall Interim Nature Recovery Network for East Cambridgeshire District Council. The Interim Nature Network will help guide developers to meet the requirements of East Cambridgeshire Planning Policy ENV7 to “maximise

opportunities for creation, restoration, enhancement and connection of natural habitats as an integral part of development proposals.” However, this document is still being drafted and is not publicly available at the current time.

- On behalf of East Cambridgeshire District Council the Wildlife Trust for Beds, Cambs and Northants have also provided ecology advice specifically in relation to Sunnica. An element of this is the production of the Nature Network Priorities in relation to Sunnica Solar Farm October 2022 (see ANNEX B). It also helps to support government’s goal to develop a Nature Recovery Network within their Government’s 25 Year Environment Plan. The Nature Recovery Network comprises “a core network of designated sites of importance for biodiversity and adjoining areas that function as stepping stones or wildlife corridors, areas identified for new habitat creation and up to 25 nature recovery areas for targeted action” (paragraph 012, Nature Conservation section, Planning Policy Guidance - Reference ID: 8-012-20190721). In accordance with the draft EN-1 (para 5.4.5) “The Secretary of State should have regard to the aims and goals of the government’s 25 Year Environment Plan and any relevant measures and targets.”

- 8.41 As part of this work, strategic opportunities for the enhancement of nature and creation of habitat networks have been identified following the Lawton principles of More, Bigger, Better and More Connected. These have been termed ‘Priority areas for nature enhancement’ and the relevant areas in relation to the Sunnica development are shown on the accompanying map (ANNEX C).
- 8.42 Two areas are particularly impacted by the Sunnica proposals, as detailed in ANNEX B. The first is the Chippenham Fen and River Snail priority area. The second is the Breckland Edge priority area. The Chippenham Fen priority area includes the shallow valley catchment within which this internationally important site sits. As one of four internationally important nature sites within East Cambridgeshire, it represents one of the top priorities for nature enhancement, providing a landscape scale stepping stone from the Brecks to the Fens. The aim should be to create high quality priority habitats around and to restore the landscape setting of the historic fen, as well as secure a long-term sustainable water supply.
- 8.43 The Breckland Edge priority area contains a number of County Wildlife Sites which support typical Breckland flora (and invertebrates). These are an extension of and complementary to the main Breckland SSSI, SPA and SAC. The area is also home to many species which otherwise don’t occur in Cambridgeshire such as smooth rupturewort. Rare arable plants, Breckland flora and Breckland invertebrates are the main biodiversity features of interest.
- 8.44 At a landscape-scale, the area forms a natural landscape connection between the Brecks and the Fens, and any large-scale development should not compromise the achievement of a connected nature recovery network and should be actively contributing to the conservation and enhancement of the area’s biodiversity.

Construction Phase Impacts

Positive

- 8.45 No positive effects are predicted during the construction phase as a result of the proposals. The construction works may provide the basis for future benefits through the conversion of arable to grassland but can only do so if the restoration objectives are clearly understood, and methods of achieving them are properly embedded into the construction programme, rather than being an adjunct to it, or an afterthought.

Neutral

- 8.46 No neutral effects are predicted during the construction phase as a result of the proposals.

Negative

- 8.47 The Applicant's assessment of effects does not predict any significant residual effects to ecological receptors during the construction of the scheme. The Councils consider that there is a lack of clarity as to how this conclusion is justified, as it relies too heavily on unsubstantiated management plans. There is an inadequate characterisation of impacts. It is unclear why some ecological features have been excluded from detailed assessment, i.e.: Chippenham Fen Ramsar / Fenland SAC and Ramsar site, Snailwell Meadows SSSI, Havacre Meadows and Deal Nooks County Wildlife Site, Badlingham Lane CWS and Worlington Heath CWS, wintering bird assemblage, wintering skylark, wintering linnet, aquatic macroinvertebrates, watercourses, veteran trees, badgers, bats and construction impacts on Stone Curlew.
- 8.48 The Councils consider that it is essential for all ecological receptors where adverse impacts have been identified that the mitigation hierarchy is implemented.
- 8.49 This is set out in National Planning Policy Framework (NPPF), 2021 para. 180 a) and in the Draft Overarching National Policy Statement for Energy (EN-1). Impacts should be avoided in the first instance and if this is not possible then mitigation and, in the last instance compensation measures should be applied. As discussed below, the Councils consider that the mitigation hierarchy has not been fully implemented for all ecological receptors.
- 8.50 Given the type of development, it is considered that more could have been, and should be, done within the scheme layout to adhere to the Mitigation Hierarchy, particularly in relation to Stone Curlew, arable flora, acid grassland and associated terrestrial invertebrates, and Chippenham Fen.
- 8.51 Whilst it is understood that the ES conclusions are based on the assumption that the identified compensation measures are successful, little recognition is given in the assessment to the difficulty in creating some of the required habitats; this is the reason why avoidance is preferred over mitigation and compensation.
- 8.52 There is insufficient adherence to the Precautionary Principle which is highly relevant to this application because the mitigation of identified impacts relies so heavily on the delivery of compensatory habitats, which carries with it an inherent uncertainty and element of risk. The heavy reliance on the Framework CEMP, Framework OEMP and LEMP is an area of significant concern because these documents are lacking clarity, detail and in some cases are inconsistent. Following published guidance (CIEEM, 2019), where uncertainty exists, it must be acknowledged in

the ecological impact assessment and where it is not possible to robustly justify a conclusion of no significant effect, a significant effect should be assumed.

Fenland SAC and Chippenham Fen Ramsar Site

- 8.53 The Stage 1 Screening for Likely Significant Effects completed for the scheme identified likely significant effects on habitats within Chippenham Fen (component of Fenland SAC) and Chippenham Fen Ramsar site as a result of habitat loss / degradation during construction but failed to consider potential impacts arising from the cabling for Grid Connection Route B.
- 8.54 Cabling for Grid Connection Route B is shown on the Works Plans through ECO4 (sheet 15 & 16, [APP-007]), which lies immediately south of Chippenham Fen. It is understood from the Ecology and Nature Conservation chapter of the ES that laying the cabling will require digging a 2m deep trench which is then backfilled with gravel (page 8-94, [APP-040]). There appears to have been no assessment in the HRA [APP-092], or the Flood Risk, Drainage and Water Resources chapter of the ES (page 9-39, [APP-041]), as to how this could affect drainage at Chippenham Fen Ramsar / Fenland SAC (which drains in a southerly direction), which is crucial to the preservation of the rare fen habitats for which it was designated. The HRA needs to demonstrate that the groundwater flow which supports the fens will not be adversely affected by the Scheme.
- 8.55 In addition, in relation to the Grid Connection Route B cabling, there appears to have been no consideration as to how the groundworks required could affect the peat which is present in this area.

Wider Landscape Considerations – Chippenham Fen

- 8.56 As set out above, Chippenham Fen and the River Snail form a priority area in the emerging Nature Recovery Network for East Cambridgeshire and provide a landscape scale steppingstone between the Fens and the Brecks. The development of an industrial scale solar farm within the immediate catchment of the historic fen, will severely compromise the achievement of a nature recovery network and nature priorities likely to be set out in a Cambridgeshire Local Nature Recovery Strategy. The value of this area, including and around Chippenham Fen and the River Snail should be recognised for the role they have offering a prime opportunity for the restoration of biodiversity at a landscape scale within Cambridgeshire. To include this area in development proposals jeopardises the unique opportunity to aid nature recovery and restoration and provide an enormously valuable link between the Fens and the Brecks.

Stone Curlew and Breckland SPA

- 8.57 The Habitats Regulations Assessment – report to inform an Appropriate Assessment (APP-092) stage 1 screening identified the potential for likely significant effects during construction to land that is functionally linked to Breckland SPA and its population of Stone Curlew (physical displacement from functionally linked land and noise, visual and non-physical disturbance). The Councils consider that the scheme should be designed to avoid the destruction of confirmed Stone Curlew habitat and minimize disturbance to it in line with the mitigation hierarchy.
- 8.58 Based on the information currently submitted, the Councils do not share the applicant's high degree of confidence that the offsetting measures would be effective (APP-092) section 5.3.14. The concern is that there is insufficient detail about the proposed offsetting measures in relation to the

habitat creation, methods of delivery, long term management, monitoring and opportunity for remedial actions to robustly offset the adverse effects of the proposals.

- 8.59 Stone Curlew are known to be sensitive to both human disturbance and to built development. There is a lack of evidence in the public domain to ascertain whether Stone Curlew avoid nesting or foraging near solar panels. However, research has found that Stone Curlew are highly susceptible to disturbance with active responses being recorded at distances of up to 500m.
- 8.60 Stone Curlew are reported on in Appendix 8I, Annex D of the ES. Stone Curlew surveys, undertaken in 2019, 2020 and 2021, evidenced that five pairs of Stone Curlew are breeding within the order limits or adjacent to it; noting that the survey was not consistently undertaken for the whole of the breeding season nor for all the areas within 500m of the order limits (see ES Appendix 8I 3.2.19-27) and therefore may not be an accurate representation of the use of the area by Stone Curlew. The Councils agree that a minimum of 16ha of suitable habitat is required per pair of Stone Curlew ([APP-258] 4.1.2) and that 2 x 2ha bare ground plots per pair is required (4.1.4).
- 8.61 The compensation measures proposed for Stone Curlew are for a series of 2ha bare ground plots to be created within a larger areas of grassland habitat totaling 108ha. Further evidence in the ES chapter and LEMP state that 'a maximum of 10x2ha plots will be created' which gives no certainty as to how many will be provided. Based on the current survey effort and taking a precautionary approach, a minimum of at least ten Stone Curlew plots should be provided.
- 8.62 From the evidence submitted, it is not entirely clear which land would be managed for Stone Curlew as there is some inconsistency in the submission. The 'Offsetting Habitat Specification' (APP-258) suggests that the Stone Curlew plots would be created in ECO1, ECO2 and ECO3, with four plots located within ECO3 and the balance split between ECO1 and ECO2. However, this distribution does not reflect the distribution of Stone Curlew across the two sites. 'The Work Plans' (APP-007) confirm that ECO1, ECO2 and ECO3 would comprise Work No 10 – works to create and maintain Stone Curlew reserves, however they also comprise Work No 6, which would allow other activities many of which will conflict with the establishment and use for offsetting land. Within ECO3, the 2ha Stone Curlew plots should not be located on the areas of existing acid grassland habitat. The Offsetting Habitat Specification (APP-258) indicates that within Sunnica East site B, semi-natural grassland characteristic of grassland heaths in the Brecks would be created (although this is contradicted elsewhere). It goes on to state that within Sunnica East A the offsetting area will be sown with a chalk grassland mix which will be maintained as a close-cropped sward. No detail has been supplied to demonstrate how a close-cropped sward will be maintained long-term.
- 8.63 The Offsetting Habitat Specification (APP-258) sets out how the Stone Curlew plots would be managed in ECO1 and ECO3 with a separate specification for plots in Archaeological Areas at ECO2. However, the parameter plan indicates that the archaeological mitigation area is ECO1. The Councils are concerned that there are conflicts between the management of the archaeological areas and the Stone Curlew habitat in particular the Stone Curlew plots, three of which would be located within the archaeological mitigation grassland.

- 8.64 It is not clear what the intention is for the wider areas of grassland around the plots, in terms of sward height / density, and how the requirements of other species will be managed alongside those of the Stone Curlew (additional comments on the Outline Landscape and Ecological Management Plan are made below).
- 8.65 The Offsetting Habitat Provision document (APP-258) suggests that the new plots will be provided in advance of the loss of existing habitat and ahead of the breeding season prior to construction commencing. However, there is no confirmation that the 108ha of grassland would also be created prior to any habitat loss.
- 8.66 The potential for construction disturbance on Stone Curlew within 500m of nesting locations or newly created habitats during the breeding season is recognised in section 5.3.16-17 (APP-092). However, the measures proposed are focused on Stone Curlew within the DCO site and do not attempt to mitigate effects on Stone Curlew which may nest within 500m of the DCO site.
- 8.67 The Councils welcome the proposal to monitor Stone Curlew during construction (APP-092) section 6.1.2. Monitoring should include use of the Stone Curlew offsetting areas and the condition of these habitats, in the context of providing optimal nesting and foraging habitat. The monitoring should additionally include those areas within 500m of the construction site where there is suitable nesting habitat during the breeding season and should follow the RSPB guidance. These measures will also need to be secured in the CEMP (APP-123).

In Combination Effects – Stone Curlew

- 8.68 The Councils are aware of planning applications in the immediate area of the development that should be considered in-combination with this application because of the potential for effects on Stone Curlew.
- 8.69 Forest Heath District Council Site Allocations Local Plan policy SA4 - Land to the West of Mildenhall is allocated in the Forest Heath Site Allocations Local Plan for strategic housing development (policy SA4). This site is located 1.2km north of the closest part of the Sunnica DCO site which is shown to be set aside as part of Work No 10 – works to create and maintain Stone Curlew reserves (APP-007). A study has shown that the density of Stone Curlew nests on arable land is affected by distance from settlements. Sharp et. al., 2008 revealed that the average density of nests per year on arable land of suitable soil type increased with distance up to 2.5km from any settlement and is significant to 1.5km. Research by Clarke and Liley (2013) provided further evidence on the effects that built development has on the Stone Curlew population in Breckland. The concern is that the proposed offsetting for the DCO site is concentrating Stone Curlew within the sphere of influence of the proposed allocated site (ie into areas that are within 1.5km of the allocated site). This may, in the long-term, have consequences for the suitability of the DCO offsetting land for Stone Curlew. It may also impact on the deliverability of the allocated SA4 development because of the potential for effects on Stone Curlew within the DCO offsetting land which would then need to be further offset as part of the SA4 development.
- 8.70 Other planning applications due to be determined by WSC as the local planning authority are being held due to the presence of Stone Curlew and the need to secure appropriate mitigation: Planning application DC/21/0217/FUL Commercial polyhouses with office and welfare area;

hardstanding and loading bays, car parking, reservoir, landscaping and associated works; new access. This site is located immediately to the south of parcels E28 and E29. The information submitted in relation to this application indicates that likely significant effects cannot be screened out. The applicant has submitted potential options for offsetting however these are not currently considered to be suitable and therefore a planning permission remains uncertain. The issue here is the potential displacement of Stone Curlew using the DC/21/0217/FUL application site during the construction and operation phase of Sunnica. Monitoring of potentially suitable areas within a 500m buffer zone of the Sunnica development is essential to understand how the Sunnica development interacts with other developments coming forward in the local area. A mitigation strategy is needed to cover disturbance effects within the 500m buffer zone, and this has not yet been supplied.

- 8.71 DC/21/1621/HYB - Land Required for Bexwell to Bury St Edmunds Anglian Water Pipeline For Anglian Water, Moulton Road, Gazeley. This is a 70km pipeline and associated infrastructure project that will pass adjacent to the west of Sunnica East A, ECO1 and ECO2 and within 500m of these parcels where Stone Curlew offsetting land is planned. The report to inform the HRA for DC21/1621/HYB has highlighted the potential for temporary disturbance to Stone Curlew during construction through the presence of site personnel, contractors and operational vehicles, working at night and the use of lighting. The report states that to avoid impacts on Stone Curlew no works will be undertaken within 500 meters of known, active Stone Curlew nests or dependent young. This would be controlled by condition. However, in-combination effects could occur if construction of this pipeline proceeds during the breeding season close to the Sunnica mitigation areas such that it discourages use of these mitigation areas by Stone Curlew. At the time that application DC/21/1621/HYB was submitted, it was anticipated that enabling works would start in March 2022, with the main construction commencing in June/July 2022. The pipeline is expected to be fully operational by December 2024. However, it appears that the construction period has slipped.

Havacre Meadows and Deal Nooks County Wildlife Site

- 8.72 The Works Plans (sheet 8, [APP-007]) show the proposed cable route A will go through Havacre Meadows and Deal Nook County Wildlife Site. The County Wildlife Site supports semi-improved grassland, woodland, scrub and open water, as well as willow carr.
- 8.73 ES Chapter 8: Ecology and Nature Conservation of state that the “construction of the Scheme for the Grid Connection will utilise boring, micro-tunnelling or moling methods and as such, will not directly impact habitats within this CWS, through loss of habitat” (page 8-102, [APP-040]). However, insufficient evidence has been provided to demonstrate this will be the case.
- 8.74 A 30m buffer zone will be applied to the Havacre Meadows and Deal Nook County Wildlife Site as embedded mitigation set out in the Schedule of Environmental Mitigation (ID 106, page 18 [APP-257] and set out in the Framework Construction Environment Management Plan (page 16C-18, [APP-123]).
- 8.75 However, the ES Chapter 3: Scheme Description only lists this crossing point as a “potential locations of Trenchless Crossings along Cable Route” (ref. W3, Table 3-3, page 3-36 [APP-035]).

- 8.76 The Councils require confirmation as to whether or not the embedded mitigation of a 30m buffer zone will be breached by the proposed cabling works. If a trenchless crossing is to be utilised, the Councils seek a detailed drawing to demonstrate how the 30m buffer zone will be implemented. For example, where will moling and any construction areas be located? Will there be any junction boxes within the county wildlife site?
- 8.77 The Councils also seek evidence as to how deep the tunnel will be and whether this will impact the habitats present, including hydrology.
- 8.78 Given the ambiguity on the proposed works to this County Wildlife Site, the Councils require monitoring of the construction impacts on the Havacre Meadows and Deal Nook County Wildlife Site to be incorporated into the Framework Construction Environment Management Plan [APP-123].

Badlingham Lane CWS and Worlington Heath CWS

- 8.79 The assessment in the ES states that both Badlingham Lane CWS and Worlington Heath CWS will be retained habitats and will remain undeveloped. However, this is not clear from the Works Plan which shows Worlington Heath CWS to be within Work No 6B and 10 and parts of Badlingham Lane CWS to be within Works No 1Biii, 6B and 10. In addition the Landscape masterplan shows these sites to be washed over with native grassland planting. Clarification is required. The assessment of non-significant effects is reliant on measures within the CEMP being implemented including the site security fencing and buffering to the sites. It is not clear from the CEMP how much of a buffer will be provided and how the site security fencing will prevent ingress by construction activities into these sites. Clarification is also required on this point.
- 8.80 The Councils require monitoring of the construction impacts on these County Wildlife Sites to be incorporated into the Framework Construction Environment Management Plan.

Phase 1 Habitat mapping

- 8.81 The Councils are concerned about the accuracy of the baseline phase 1 habitat mapping, which will impact on the accuracy of the ecological impact assessment and the biodiversity net gain assessment. The 'Accompanied Site Visit' to Sunnica West Site B on 29 September 2022 confirmed that areas of grassland have been misidentified as arable and defunct / gappy hedgerows have been missed.
- 8.82 It is also unclear why areas identified as priority habitats on Defra's Priority Habitats Inventories (accessed on Magic.gov.uk on 30 September 2022) within Sunnica West Site B have not been taken forward for more detailed botanical surveys. The road verges along Chippenham Road support chalk grassland indicator species, which have not been recognised in the assessment. In addition, a basic review of aerial photography has also shown that other areas of grassland have been potentially mis-identified as arable throughout the scheme and a number of hedge / tree-lines (see also comments below in relation to hedgerows) and trees were not recorded as part of the Phase 1 survey. The areas of concern include parcels E05, E30/E31, W01, W05, W09, ECO3, ECO4, Burwell Substation, Grid Connection Route A and Grid Connection Route B.
- 8.83 The Councils seek that Phase 1 habitat survey results are reviewed, with detailed botanical surveys undertaken of potential grasslands to determine their importance, condition and the

presence of priority habitats. Phase 2 botanical surveys should be undertaken of the habitats shown within the priority habitat inventories. If this cannot be achieved, it should be assumed, as a precautionary principle, that all grassland areas support priority habitats of good condition, unless evidence is provided to the contrary.

Terrestrial Invertebrates

- 8.84 The surveys focused on habitats with potential to support assemblages notable to Breckland habitats, because these are of particular significance in the local area. The report acknowledges that there are other habitats within the scheme that will have value for invertebrates, but these were not subject to survey. The Terrestrial Invertebrate Survey Report concludes that compartments 'A', E12 and E13 are 'Favourable' in condition for the invertebrate assemblages associated with bare sand and chalk, and that further to this, the open short sward habitats at compartments 'A' and E13 are also 'Favourable', but less significantly so. The marginal grassland that flanks the eastern edge of E13 is likely to be approaching regional importance, due to the presence here of 41 Breck-associated invertebrate species of designated status 'Nationally Scarce' or 'Rare', and to this grassland also supporting one of only two British populations of the leafhopper *Arocephalus languidus*. The north margin of E13 and sites A and E12 should be considered of County value.
- 8.85 The scheme proposals show E12, E23 and A, which are mapped on the Phase 1 Habitat map as unimproved and semi-improved acid grassland, as being within proposed native grassland planting (in ECO3); clarity should be provided within the LEMP as to what management is planned for this habitat. The ES chapter refers to 'positive management' but no information is supplied as to what is meant by this.
- 8.86 The ES chapter reports that 0.8 ha of semi-improved acid grassland will be lost to construction (see section below on Acid Grassland). No detail is supplied as to whether any of this habitat, which has been found to be of County to Regional value for invertebrates, will be retained. Notably, the marginal grassland that flanks the eastern edge of E13 is reported in Appendix 8D to be likely approaching regional importance for terrestrial invertebrates and the northern margin is of County importance. The locations and extent of acid grassland in E13 and E31, as shown on Phase 1 habitat maps (Figure 8.3B from the ES and Figure 2.2 from Appendix 8C), are linear areas of habitat at the margins of the Order limits and at the edge of the solar panel arrays. Therefore, it is the Councils' view that the solar panels should be removed from these areas and so the grassland and associated invertebrates are retained. There is no detailed assessment of how the impacts will affect the conservation status of the species / assemblages present.
- 8.87 The ES chapter states that mitigation for loss of acid grassland will include translocation of turves to elsewhere in Sunnica East Site B. However, there is no mention of this mitigation within the LEMP. There is no consideration of the risks involved in this type of habitat translocation, with no detail supplied as to how the chances of success can be maximized, relevant evidence / research into the efficacy of acid grassland translocation, how long establishment will take and what the implications are if the translocation fails. The Councils request that further detail be supplied.

Arable Habitat and Notable Flora

- 8.88 The Councils query why arable field margins (a priority habitat) are not identified on the Phase 1 Habitat survey plans [APP-187] or reflected in the Biodiversity Net Gain Assessment [APP-259]. The presence of arable field margins within the study area is significant in relation to the level of mitigation required but also to the consideration of arable habitats in the BNG calculation.
- 8.89 The Councils also query the geographical extent of the field surveys for arable flora that was undertaken. The Preliminary Ecological Assessment listed arable field margins as notable habitat (table 4-8) [APP-078] that was recorded across the whole site. However, large areas of the arable land appear to have been excluded from the detailed arable flora surveys (figure 2, [APP-079]). Without this detailed information, it is not possible to determine the location or importance of the arable field margins habitat and the level of impact of the scheme on this priority habitat.
- 8.90 The Councils query why only Sunnica East Site B is included in this assessment of effects when Sunnica West Site A contains a field supporting County importance arable flora (Field ref W09 from Parameter Plans [APP-136] / AF11 from page 7, Appendix 8C report [APP-078]).
- 8.91 The southern half of this field is proposed to be native grassland planting with a winter bird cover crop (ref Fig 3.2 Parameter Plan) and the northern section to be under solar panels. There is no consideration of how these changes to the current land use will affect this field supporting County importance arable flora. It is also not clear why the habitats could not have been avoided, following the mitigation hierarchy.
- 8.92 Para 8.10.7 says that land has been embedded within the Scheme for creation of habitats for arable flora. This area of land needs to be quantified and a comparison made with what will be lost. The individual areas of replacement habitat for arable flora are proposed within the LEMP to be very small strips in areas E17, E30 and W09:
- Sunnica East Site B: 4 3x20m wide strips in field E30 and 4 3x10m wide strips in field E17/18
 - Sunnica West Site A: 3 3x10m wide strips in field W09.
- 8.93 The Councils do not believe that these will create viable habitats. Their small sizes and lack of connectivity are highly unlikely to result in long-term viable habitats for scarce arable plants; connectivity would allow movement of seeds in the soil and make long-term management easier. Furthermore, arable flora needs hot sun to reduce competition, because they can survive these conditions when other plants cannot. Therefore, it would not be appropriate to put these strips amongst the panels, where shading will be an issue.
- 8.94 Para 8.10.7 discusses the possibility that construction activities will create ground disturbance that may benefit arable flora. There is no detail as to which aspects of the construction activities are expected to give rise to this benefit. Furthermore, the Councils are unclear about what happens when construction is complete, and there is no more disturbance to the ground.
- 8.95 The Councils consider that areas for scarce arable plants need to be created in a joined-up way around the margins of fields, in areas away from solar panels, with an associated commitment to appropriate long-term management that can realistically be implemented. This is not currently being offered as a compensatory solution to the loss of important arable habitats.

Acid Grassland

- 8.96 The ES chapter reports that 0.8 ha of semi-improved acid grassland will be lost to construction. The ES chapter does not describe which areas of the semi-improved acid grassland comprise this 0.8ha loss. It appears to be from within E13 and the southern boundary of E31, both of which are proposed for solar panel arrays. Within E31, the area of acid grassland is a 10-12m wide field margin at T12 (Figure 2.2 from Appendix 8C). No details of the semi-improved acid grassland within E13 is supplied in the submitted documents. Acid grassland is a Habitat of Principal Importance that will be lost under the current scheme layout.
- 8.97 The Councils consider that the scheme design should follow the mitigation hierarchy and avoid impacts to this habitat. The locations and extent of acid grassland in E13 and E31, as shown on Phase 1 habitat maps (Figure 8.3B from the ES and Figure 2.2 from Appendix 8C), are linear areas of habitat at the margins of the Order limits and at the edge of the solar panel arrays. Therefore, it is the Council's view that these areas should be removed from the solar panel areas and retained.
- 8.98 The scheme proposals show E12, E23 and A, which are mapped on the Phase 1 Habitat map as unimproved and semi-improved acid grassland, as being within proposed native grassland planting (jn ECO3); clarity should be provided within the LEMP as to what management is planned for this habitat. The ES chapter refers to 'positive management' but no information is supplied as to what is meant by this.
- 8.99 The ES chapter states that mitigation for loss of acid grassland will include translocation of turves to elsewhere in Sunnica East Site B. However, there is no mention of this mitigation within the LEMP. There is no consideration of the risks involved in this type of habitat translocation, with no details supplied as to how the chances of success can be maximized, relevant evidence / research into the efficacy of acid grassland translocation, how long establishment will take and what the implications are if the translocation fails. The Councils request that further details be supplied.

Trees, Woodland and Hedgerows

- 8.100 The ES predicts that there would be no potential for significant impacts on woodlands and explains that all woodland will be retained. The BNG report (APP-259) does not indicate loss of woodland. However, this is reliant on measures embedded in the scheme design and implementation of the CEMP (APP-123). The assessment in the ES is clear that some trees will be removed for access however there is no detail relating to the removal of trees. The Councils request clarification of this.
- 8.101 The ES predicts a temporary negligible affect as a result of direct loss of hedgerows across the DCO limits. The BNG report indicates that 264m of hedges would be removed. The ES confirms that this would be to facilitate access routes, grid connection cables and new fence lines. The assessment is reliant on the implementation of measures within the CEMP and on the replacement of hedgerows. The Councils request clarification of the length of hedgerow to be planted, and that restoration of hedgerows would be undertaken prior to operation of the solar farm.
- 8.102 The hedgerow survey (figure 3.1, [APP-079]) is not complete. For example, not all of the hedge / tree-lines identified within the Preliminary Roost Appraisal (figures 2.1-2.9, [APP-087]) are shown

on the hedgerow survey. Clarification is sought as to why the following hedgerows have been omitted, including some that will be affected by the proposed works / sites access works:

Table 3: Hedgerows missing from Figure 3.1 of the Hedgerow survey but identified within the Report on Surveys for Bats [APP-087]		
Location	Preliminary Roost Appraisal [APP-087] figure	Figure 2.1-2.9 [APP-087] Hedgerow reference
Sunnica East Site A	Figure 2.1	647, 1117
Sunnica East Site B	Figure 2.2	573, 582, 583
Sunnica East Site B	Figure 2.4	573, 1125, 1126, 1127
Grid Connector Route A	Figure 2.5	627,
Grid Connector Route B	Figure 2.7	1103, 1100
Grid Connection Route B	Figure 2.8	All hedgerows (1086, 1087, 1091, 1095)
Grid Connection Route B	Figure 2.9	All hedgerows (1083, 1084)
Burwell Substation	Figure 2.9	All hedgerows (1, 7, 9, 11, 12, 13, 14, 20, 21, 22)

Veteran Trees

8.103 The potential for impact on veteran trees has not been adequately assessed within the Chapter 8, - Ecology and Nature Conservation [APP-040]. Clarification is sought as to why the two sightings of veteran trees shown upon the High Level Tree Constraints Plan (sheet 36, page 46, Appendix 10B - Tree Constraints Report [APP-101]) has not been assessed. Veteran trees are considered to be irreplaceable and based on the mitigation hierarchy any impacts should be avoided in the first instance.

Watercourses

8.104 The network of ditches and rivers across the DCO site is considered to be of County importance for biodiversity in the ES. However, the assessment does not sufficiently assess the impact of the proposals. Effects on riparian mammals, aquatic macrophytes and macro-invertebrates are dismissed as not significant because all waterbodies will be retained, and measures are embedded in the scheme design and formalised in the CEMP to protect retained habitats. However, the BNG report (APP-259) indicates that the proposed development would not deliver a net gain for rivers and indicates that there would be intrusive river crossings (W7 and W14) and also culverts for access at E01-E02 and at W01. Chapter 9 of the ES (APP-041) indicates that crossing at W13 would be intrusive. EN-3 para 2.50.7 is clear that culverting of existing watercourses and drainage ditches should be avoided unless there is no alternative and where this is the case removed following construction. The Councils are concerned that the effects of these proposals have not been fully considered as, for example, surveys recorded evidence of riparian mammals within the waterbodies in both locations. Clarification is required.

Breeding Bird Assemblages

8.105 The assessment of effects highlights impacts on a variety of breeding bird species, including quail, barn owl, hobby, little ringed plover, yellowhammer, linnet, reed bunting and skylark. The

assemblage of breeding birds using the site is considered to be of County importance in the ES [APP-040]. Construction activities will result in the direct loss of arable habitat, and this will result in effects on many of these species. These effects are assessed to be temporary, short term adverse effects. These findings are based, to a large extent, on the delivery of compensation habitat.

8.106 Specific measures implemented during construction include avoidance of the bird nesting period between March to August (inclusive) for vegetation clearance, which is welcomed. According to section 8.10.29 (APP-040) significant areas of grassland habitats will be retained and protected during construction with their quality improved (through positive management), which will help mitigate in the short-term for the loss of other areas of habitat.

8.107 However, there is no detail supplied regarding the compensation habitat in relation to:

- clarification as to which areas of land these are, their size, or current condition
- what positive management is proposed to ensure the suitability of the compensation habitat for the affected species
- which breeding bird species will benefit from these compensation areas

8.108 Longer term, the delivery of compensation habitat for breeding birds is also unclear. It is not stated whether the areas underneath, or between the rows of solar panels are included in this package of compensation, and if so evidence to demonstrate that breeding birds will nest in these locations. It is not distinguished in the evidence submitted which of the newly created grassland 'ECO' areas will provide habitat for the breeding birds adversely affected by the loss of arable habitat. These ECO areas need to deliver compensatory habitat for a range of ecological receptors and insufficient detail has been supplied as to which parts will be managed for the specific species in question.

8.109 The Councils consider that there is insufficient evidence provided to demonstrate how the conclusions in relation to significance of effect are accurate and robust. Neither is it clear that the effects on breeding birds associated with the loss of arable land will be temporary for the duration of the construction period and will not actually persist into the operational phase, particularly for species such as skylarks (of which there were 98 confirmed breeding territories 2021 and 83 in 2019/20).

Wintering Birds

8.110 The assemblage of wintering birds across the DCO site is also assessed to be of County importance and an important feature due to the wintering population of skylarks and linnet. The ES reports that the loss of arable habitat will lead to the displacement of the wintering bird species reliant on this habitat and suggests that it will be mitigated through the creation of new grassland and cover crops. However, it is not clear how adverse effects will be avoided given the significant loss of arable land.

Bats

8.111 The Councils consider that the magnitude / significance of the effect of the construction phase on bats has not been adequately assessed within Chapter 8: Ecology and Nature Conservation of the ES [APP-040]. The level of impact on bats is not clear within the documentation. In addition, a

number of trees and hedgerows have been omitted from the surveys and assessment. It is therefore not possible to determine the level of effect of the scheme on bats.

8.112 The Report on Survey of Bats [APP-087] states that bat roosts are confirmed in trees T3 and a “tree between T8 and T9” (in table 4-1). However, this is contradicted in the survey results provided at Annex D, which lists T3 and T22 (page 8J-70) as the location of the bat roosts. The Councils seek clarification.

8.113 The Preliminary Bat Roost Appraisal (Figures 2.1-2.9, [APP-079]) does not include 31 hedgerows identified within the hedgerow survey, namely hedgerows H1, H2, H3, H4, H5, H6, H8, H9, H10, H11, H16, H17, H18, H19, H20, H21, H22, H23, H24, H25, H26, H30, H31,, H36, H39, H42, H43, H44, H48, H51 and H54 (figure 3.1, Terrestrial Habitats and Flora Report [APP-079]). The Council seeks clarification of the value of these hedgerows to bats.

8.114 The Sunnica East and Sunnica West Site Accesses Review identifies tree / hedgerow remove or cutting back as part of the site access works for Sunnica East site access A, B, C and Sunnica West site access A (Annex C1, Appendix 13C – Framework Construction Traffic Management Plan and Travel Plan [APP-118]). It also appears likely that tree works will be required as part of Sunnica West site access B, D and Cable Route site access M (figures 30, 37 and 33, respectively). None of these affected hedgerows/tree-lines or trees have been identified within the bat survey report [APP-087] and therefore the impact of these works on bats has been adequately assessed.

8.115 A tree identified a high potential for roosting bats (tree 657, Figure 2.5, [APP-087]) appears to be affected by the proposed junction work for site access C for Sunnica West (Figure 36, Annex C1, Framework Construction Traffic Management Plan and Travel Plan [APP-118]). However, the potential impacts to this tree have during construction is not considered within the ecological assessment (Table 8-10, page 8-122, Chapter 8 [APP-040]).

8.116 It is also understood that tree works (removal of branches) will be associated with alteration of streets work AS-36, which is shown upon sheet 21 of the Access and Rights of Way Plans (page 24, 2.3 Access and Rights of Way - Rev 1 - Accepted at the discretion of the Examining Authority, [AS-005]). However, the tree at this location is not identified within the bat survey report [APP-087].

8.117 It is stated that construction will avoid features used by roosting and foraging/commuting bats and that there will be no loss of habitats identified as being important for bats anywhere within the order limits. There has been no consideration of construction impacts including lighting of works / compounds / substation. The Councils consider that there is insufficient evidence to support the conclusion that other roosts and potential roost features will not be impacted upon. Dependent on the roost resource available in the wider area and the actual number of known roosts or trees with potential roost features to be lost, the actual impact for bats may be greater than predicted.

8.118 The Councils are concerned that reference is made to keeping areas as dark as is ‘reasonably practicable’ and that no parameters for acceptable lights levels have been set out. It remains unclear how, in practical terms, unacceptable levels of lighting will be defined and mitigated during construction. Information is not suitable to be used by an Ecological Clerk of Works as part

of a Method Statement. No information is presented in relation to noise disturbance during construction.

- 8.119 The potential for impacts on bat roosts and foraging and commuting routes should be revisited once the extent of removal of existing habitat features has been established. Detail on measures that will be taken to avoid lighting bat migration corridors, potential roost features, confirmed roosts, and foraging habitat must be provided in the CEMP as the report states that the site is of 'up to county importance for bats'. This must include during construction, operation, and decommissioning phases.

Badgers

- 8.120 The magnitude / significance of the effect on badgers has not been adequately assessed within Chapter 8: Ecology and Nature Conservation of the ES [APP-040]. The Councils are unclear how many setts will be impacted by the proposed scheme, and how the mitigation measures will be effectively implemented, and therefore it is not possible to determine the level of impact of the scheme on Badgers.
- 8.121 Chapter 8: Ecology and Nature Conservation of the ES states there are nine active badger setts (Table 8-7, page 8-94, [APP-040]), while a total of eight setts (including disused setts) were identified in Appendix 8K: Annex 8A Results of Badger Survey (table 4-1, [APP-089]). There is also inconsistency within Appendix 8K: Annex 8A Results of Badger Survey [APP-089] with sett 4 identified as both within the order limit (table 4-1, page 7) and outside of the order limit (table 5-1, page 8). It is also unclear where sett 14 is located because it is missing from figure 2 [page 19, APP-089]. The Council seek clarification as to what figures are correct, and where sett 14 is located.
- 8.122 The Badger Mitigation Strategy [APP-090] anticipates that six of these setts will be retained and avoided, with buffers of 30 or more metres set out in the Framework CEMP (page 16C-18, [APP-123]). However, the Councils are concerned that these buffer zones have not been embedded into the Works Plan (revision 1) [AS-004], with some proposed solar panel areas (works no. 1B/1C) or temporary laydown compounds, including lighting and hard standing, (work no. 7C) appearing to be located within 30m of the setts. The Councils seek clarification, including a drawing showing the 30m buffer zones on the Works Plan, as to how there will be no impacts within 30 metres, particularly where there are proposals for fence lines, piling/drilling and laying of hardstanding area etc.
- 8.123 It is not clear whether there will be access for badgers into the solar parcels for foraging during construction and this should be clarified. If it is the case that access for badgers will not be facilitated.
- 8.124 The applicant has undertaken no survey work to demonstrate the location of the different Badger clans and as such, it is not possible to determine how the different social groups will be affected by such a significant barrier to dispersal routes and foraging habitat. The Council believes further survey work is required to understand the territories of the local badger population. The Badger Mitigation Strategy [APP-090] and Framework CEMP [APP-123] should be updated to include bait marking surveys as part of pre-commencement works. See also comments on the operational effects on badgers.

Construction Environmental Management Plan

- 8.125 There is no commitment to a regular reporting process from the Ecological Clerk of Works (ECoW) to the planning authorities, which on a scheme of this scale and proximity to sensitive sites (including internationally important sites), would be expected, and has been implanted on other large-scale projects. This creates accountability on the construction site and clarity regarding ongoing adherence to measures committed to in the CEMP. In addition, there is no indication of how regularly the ECoW will be present at the site during the construction phase or confirmed presence at key aspects of the construction work such as in the vicinity of Chippenham Fen or Worlington Heath. There is no commitment to monitoring of cabling works within close proximity to Havacre Meadows and Deal Nook CWS to ensure the works do not impact the habitats. The habitats within this and other CWS should be monitored throughout the construction phase.
- 8.126 There is no commitment to identifying which areas of vegetation will require precautionary clearance methods to avoid killing or injuring of wildlife such as amphibians and reptiles. Even if not produced at this stage (and left for the detailed CEMP) it should be clear that maps will be produced, showing various ecological constraints to guide construction managers and operatives in the planning, phasing and carrying out of vegetation clearance. Over such a large area (that covering the Order limits) a clear plan of ecological constraints would be very valuable in ensuring that commitments within this framework CEMP can be reliably and consistently translated into timings and actions across the site.
- 8.127 It is considered that a 1 metre depth for excavations necessitating escape routes / covers overnight seems deep; the Applicant has not demonstrated consideration of hedgehogs, reptiles, amphibians, small mammals in this decision. Especially considering that on a site of this size, excavations are unlikely to be checked daily, resulting in a potentially significant risk of mortality over the lifespan of the construction phase.

Operational Phase Impacts

Positive

- 8.128 No positive effects are predicted during the operational phase as a result of the proposals.

Neutral

- 8.129 No neutral effects are predicted during the operational phase as a result of the proposals

Negative

- 8.130 In both creating and managing high quality habitats, ongoing expert ecological land management advice will be needed. This may be different from the ecological expertise required to ensure compliance with protected species or the CEMP and ecological clerk of work requirements. The Draft Overarching National Policy Statement for Energy (EN-1) highlights that the decision-maker will need to consider what appropriate requirements should be attached to any consent in order to ensure that any mitigation or biodiversity net gain measures, if offered, are delivered and maintained. The Councils are concerned that Section 1.9 Roles & Responsibilities of the LEMP (APP-108) does not include the responsibilities for ongoing management during the operational stage of the development.

Post-Construction Monitoring

- 8.131 Given the extent of the DCO site, and the sensitivity of some of the habitats and species, monitoring surveys for the first ten years post construction, as outlined in section 1.8.29-34 of the LEMP (APP-108) is considered to be inadequate. The importance of ecological monitoring and use of the results to inform any changes needed in management is highlighted in the Draft National Planning Policy Statement for Renewable Energy Infrastructure EN-3.
- 8.132 Habitat monitoring should continue for the full lifespan of the project, to effectively demonstrate the success of the mitigation/compensation and achievement of a Biodiversity Net Gain. Therefore, additional monitoring periods every five years should be added to the grassland, arable flora, woodland and hedgerow habitat monitoring. Undertaking periodic comprehensive species surveys for key species groups such as birds and invertebrates will also be essential both to demonstrate success and inform ongoing land management.
- 8.133 Further, the Stone Curlew offsetting land should be monitored annually throughout the lifetime of the project; the monitoring should follow RSPB guidance on Stone Curlew survey methodology.
- 8.134 The Councils consider that the findings of the monitoring should be reported based on the monitoring frequency so that, where the results from monitoring show that conservation aims and objectives of the LEMP are not being met, contingencies and/or remedial action can be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme.
- 8.135 The Councils fully support the proposal that a long-term partnership with an ecological advisory group comprising ecologists from relevant NGOs, Natural England and local authorities should be secured, to scrutinise monitoring data and adapt habitat management / site conditions and working practices where necessary to meet the ambition for the Scheme, as set out in the ecology stakeholder members 'Ecological vision and ambitions for the Sunnica Energy Farm'. The Councils seek clarification of how this can be secured through the DCO process.

Fenland SAC and Chippenham Fen Ramsar Site

- 8.136 The Stage 1 Screening for Likely Significant Effects completed for the scheme identified no likely significant effects on habitats or species within Chippenham Fen (component of Fenland SAC) and Chippenham Fen Ramsar site during the operational phase (Page 8M-59, [APP-092]). However, it is considered that the applicant has not provided sufficient evidence to demonstrate that there will be no physical displacement on designatory invertebrate species of Chippenham Fen Ramsar.
- 8.137 Some of the designatory aquatic invertebrate species for Chippenham Fen Ramsar are *Dolichopodidae*, which lay eggs in water. Research has found that the polarising light of solar arrays can disrupt the behaviour of aquatic species that lay eggs in water, resulting in eggs being laid on the solar arrays. The Councils are concerned that the applicant has provided no evidence / research to support their claims that *"these species are unlikely to fly at heights where the solar panels are and when considered in the context that the solar panels will be located approximately 200m from areas of wetland within Chippenham Fen, be south facing, i.e. away from the fen and there is an existing mature tree line between the Order land and fen, there are no pathways for*

significant effects on invertebrates associated with Chippenham Fen Ramsar”(page 8M-60, [APP-092] / page 8-97 [APP-040]). The Councils seek further evidence from the applicant to demonstrate that the assessment is based on robust data.

8.138 In the absence of information / lack of research on the effect of solar arrays on these invertebrates, it is considered that the Precautionary Principle should be applied and therefore, the Council considers that the scheme has the potential to result in a likely significant effect on designatory invertebrate species of Chippenham Fen Ramsar site. The ES / HRA should be updated accordingly, and the mitigation hierarchy followed. Based on the information available, avoidance of the potential impact, as the first priority in the mitigation in the mitigation hierarchy, appears to require removal of all solar arrays from Sunnica West B.

8.139 This would also help deliver the proposed “*positive response to the adjacent RAMSAR site*” for Sunnica West B, as set out in the Landscape and Ecology Management Plan (paragraph 1.7.9a, [APP-108]) and feed into long-term aspirations for nature conservation at a landscape scale, by respecting and participating in the emerging local nature recovery strategy. In addition, it would also compliment the Councils’ recommendations to remove solar panels from W01 for archaeological reasons.

Chippenham Fen and Snailwell Poor’s Fen SSSI – Aquatic Invertebrates

8.140 Chippenham Fen and Snailwell Poor’s Fen SSSI is a site of national importance for its wide range of wetland habitats and associated birds and invertebrate populations, including many rare species of spiders and moths.

8.141 The Councils are concerned that insufficient evidence has been provided to demonstrate there will be no likely significant operational impacts on aquatic invertebrates, as stated at Page 8-155 of the ES [APP-040]. There has been no consideration of physical displacement of invertebrates, particularly those with egg laying behaviours that could be affected by polarising light, and the subsequent impact this could have of the survival of those species in the local area.

8.142 There has been no acknowledgement of the Fens Biodiversity Audit (**APPENDIX 34**). The Fens Biodiversity Audit quantifies the importance of the Fens of Eastern England, including Chippenham Fen, for biodiversity. It catalogues over 13,00 species (including 1,932 priority species). It analyses the ecological and management requirements for these species to deliver strategic conservation planning and management. The Fens are important for many invertebrate groups associated with particular environments. The three remaining historic fens of Wicken, Woodwalton and Chippenham account for a majority of the relic fen species. Over 9,000 species have been recorded from Wicken Fen, and while Chippenham Fen has not been subject to the same level of recording effort, this gives a flavour of the importance of these rare fenland habitats for invertebrates. As an internationally important wetland site, including important for wetland invertebrate species, the precautionary principle should take precedence, where there is a risk to the site and its species.

8.143 No aquatic macroinvertebrate surveys were undertaken of Chippenham Fen and Snailwell Poor’s Fen SSSI. Given the importance of these sites for invertebrates and the close proximity of the solar arrays, these sites should have been surveyed to determine the presence of any species

or invertebrate assemblages of national, county, regional and/or local importance that might be impacted by the solar arrays. In addition, no consideration has been given to historic records of species.

- 8.144 Given the lack of information provided on the impact on aquatic invertebrates, it not possible to determine the level of magnitude of impact on aquatic invertebrate species / assemblages. Consequently, given the importance of this area for aquatic invertebrates, the precautionary principle must be applied. It must be assumed that there will be a significant effect on aquatic invertebrate populations of up to international importance as a result of physical displacement. Unless robust evidence can be provided to the contrary, the Councils believe that, to avoid any impact on species associated with nearby habitats, all solar panels should be removed from Sunnica West B (W01 & W02).

Aquatic Invertebrates - Watercourses

- 8.145 Some aquatic macroinvertebrate surveys were undertaken on some of the watercourses as part of the Aquatic Scoping and Ditch Surveys [APP-081], which recorded species with local distribution including diving beetle *Ilybius quadriguttatus* (Sunnica West B), Hairy Dragonfly and caddisfly *Agrypnia pagetana* (Sunnica East Site A). However, no consideration has been provided as to whether these species are likely to be impacted during the operational phase due to physical displacement.

Stone Curlew and Breckland SPA

- 8.146 The Habitats Regulations Assessment – report to inform an Appropriate Assessment (APP-092) stage 1 screening identified the potential for likely significant effects during operation to Stone Curlew nesting outside of Breckland SPA (noise and visual disturbance). The Appropriate Assessment and the LEMP (APP-108) set out mitigation required.
- 8.147 The LEMP (APP-108) says that the Framework OEMP (APP-126) has requirements for toolbox talks for workers who need to be within 500m of Stone Curlew habitat but a review of the OEMP has found no reference to this mitigation measure. The requirement to reduce maintenance activities within 500m of Stone Curlew suitable nesting habitat immediately adjacent to the DCO site should equally apply. For clarity, the area of the scheme that would ordinarily be affected by this restriction should be indicated on a plan within the OEMP. Furthermore, it is unclear what actions toolbox talks would implement and how these would be reliably enforced so as to ensure that Stone Curlew are not unacceptably disturbed. Further clarification is required.
- 8.148 The Councils do not agree that because ‘the areas embedded in the scheme design for offsetting impacts on Stone-curlew utilise the species’ current and historical distribution across the Order limits’, this replicates the conditions the birds are already utilizing. The scheme proposals will introduce additional disturbance factors including additional public access routes, solar infrastructure including solar panels and solar stations and will also change the character of the land to ‘open’ grassland which may encourage informal access where it would have previously been discouraged because of the arable use. Increase in woodland in the vicinity to screen the visual effects of the solar infrastructure may also have an adverse effect on the effectiveness of the offsetting land. Whilst it is acknowledged that Stone Curlew have locally been recorded nesting or

attempting to nest in areas closer to roads and paths than may be expected, it is considered that, in combination with the potential for disturbance from operational activities at the site, some areas chosen for compensation may not be suitable.

8.149 The Councils consider that the proposed monitoring of Stone Curlew is not adequate and believe that Stone Curlew plots and offsetting land should be monitored annually throughout the lifetime of the project.

8.150 In addition, given the uncertainties about the effects on Stone Curlew, and the importance of the Stone Curlew population, it would be best practice to have some alternative options available, in case the habitats do not deliver the required conditions to support the baseline Stone Curlew population. This could be in the form of changes to the habitat management, changes to the operational activities on the site or alternative locations for habitat creation for Stone Curlew.

Badlingham Lane CWS

8.151 There is no information in relation to the future positive management of Badlingham Lane County Wildlife Site which lies partially within and partially adjacent to the DCO extents. Confirmation is required on who will be responsible for this site during operation of the solar farm.

Arable Flora

8.152 The LEMP references plans to cultivate arable flora strips once per year but the Council query how feasible this is, in amongst solar panel arrays. In order to present a genuine beneficial impact, evidence is required with regard to the likelihood of it actually occurring. The arable flora plots require annual disturbance of the ground. This has the potential to throw up loose stones which could damage the solar panels. The Councils are aware of another solar farm where the applicants used the risk of damage to the panels from loose stones as the reason for refusing to undertake an annual hay cut. If disturbance of the ground to create arable flora plots close to solar panels is deemed an operational risk, then it is unlikely to occur during the operational phase. Under such circumstances it would be better to make alternative provisions for mitigation of the arable flora losses, ideally on land that remains in arable cultivation and where there is a realistic prospect of this continuing for the foreseeable future. Rotavating these strips has been proposed in the LEMP but this approach could encourage the spread of perennial weeds. The Councils suggest that ploughing would be a better technique in this situation.

8.153 The Councils seek areas for scarce arable plants to be created in a joined-up way around the margins of fields, in areas away from solar panels, with an associated commitment to appropriate long-term management that can realistically be implemented. This is not currently being offered as a compensatory solution to the loss of important arable habitats.

Bats

8.154 The Councils consider that the magnitude / significance of the effect of the operational phase on bats has not been adequately assessed within Chapter 8: Ecology and Nature Conservation of the ES [APP-040]. The level of impact on bats is not clear within the documentation. In addition, a number of trees and hedgerows have been omitted from the surveys and assessment. It is therefore not possible to determine the level of effect of the scheme on bats.

Badger

- 8.155 The magnitude / significance of the effect of operational phase on badgers has not been assessed within Chapter 8: Ecology and Nature Conservation of the ES [APP-040].
- 8.156 The majority of the DCO site supports habitat suitable for badger, including arable farmland, woodland, hedgerows, tree lines and ditches. At least six separate Badger social groups are present within or within 50m of the Order limits (page 8-74, Chapter 8 of ES [APP-040]), with badger setts, snuffle marks, latrines and runs recorded during the Preliminary Ecological Appraisal [APP-078] and Badger Survey work [APP-089].
- 8.157 The Landscape Masterplans [APP-210], [APP-211], [APP-212] & [APP-213] shows that boundary fencing will be erected around large areas of the DCO site. The fence will prevent badger access onto the farmland and therefore, result in the loss of significant areas of foraging habitat and loss of connectivity across their territories. Fragmentation of territories may result in conflict with other badger clans competing for resources or displacement into other clan territories.
- 8.158 Given the scale of fragmentation of the landscape, the Councils expect the territories for all the different badger clans to be mapped to identify the effect on the local badger population and embed appropriate mitigation to retain key pathways within either badger territory and avoid isolation. This would also inform the design to compensate for loss of foraging habitat. However, such mapping has not, to date, been provided.
- 8.159 In the absence of detailed survey work, as a precautionary principle, it must be assumed that there will be significant adverse effects on Badger as a result of fragmentation of the landscape and loss of foraging habitat. The mitigation hierarchy should be implemented to address this issue. In the first instance, this impact should be avoided. The Councils believe these effects could be mitigated by allowing unrestricted access to the majority of the Order limit by designing a gap at the bottom of the entire length of boundary fence around areas of native grassland (as implemented on other solar farm developments). This would also help connectivity for other species across the site.
- 8.160 If this is not possible, the Councils believe that bait marking surveys should be undertaken prior to the determination of this application, so that the level of impact of the scheme on this protected species can be taken into account of the decision-making process.

Ecological Connectivity / Fragmentation

- 8.161 The Councils request further details be supplied in relation to the permeability of the fencing around the site, in terms of access for wildlife. The Councils believe that, given the significant extent of the application site, allowing access for all wildlife must be a pivotal part of the strategy to create a biodiverse landscape within the solar farm setting. For example, all wire fencing should be raised off the ground to allow full permeability of the site to wildlife.

Decommissioning Phase Impacts

- 8.162 The end of the project and the extent to which the site will return to its original state is a particular concern to the Councils in terms of ecology, particularly because of the scale of the DCO area across East Cambridgeshire and West Suffolk. There is no clarity regarding the fate of the compensatory and BNG habitats, although it is noted that according to the DEMP, habitats will be

protected and re-instated as part of the decommissioning process (DEMP p16E-12, [APP-125]). It will be important for ecological survey work to be undertaken prior to decommissioning to identify all habitats, or habitats supporting species, of district / county or national importance so that these areas are retained, and this is secured in the DEMP [APP-125].

- 8.163 There remains a lack of information on the long-term survival (i.e. beyond 40 years) of the habitats created as mitigation and compensation as required in the ES and HRA. The end of the project and the extent to which the site will return to its original state, is very much a crucial part of the decision-making process (as indicated in the Draft National Policy Statement for Renewable Energy Infrastructure (EN-3), and not something that should be left out of the assessment or avoided through discharging the responsibility back to the individual landowner.
- 8.164 If the management of the compensatory habitat areas are not secured beyond the decommissioning of the solar farm, then it is very possible that the proposed scheme will create a net loss to biodiversity. Given the huge scale of the project and the landscape scale at which effects could operate, this could result in a significant loss of biodiversity from West Suffolk and East Cambridgeshire.
- 8.165 The Councils consider that this is a real possibility. Under the proposed scheme, post decommissioning, any land management will be withdrawn by Sunnica from these habitats and there is no requirement, hence no guarantee, that the landowners will continue to manage these habitats once they gain back control of their land. If this is a possibility, then it needs to be fully considered in the decision-making process. Measures to secure the continuing nature conservation management all the mitigatory/compensatory habitats beyond 40 years should be a requirement.

Required Mitigation

Landscape and Ecology Management Plan (LEMP):

- 8.166 A clearer presentation of the strategy for the proposed habitats in ECO1, ECO2, ECO3, ECO4 and ECO5 is needed, so that interested parties can understand how these areas will deliver the necessary compensation for the various ecological receptors, which have varying requirements.
- 8.167 The submitted LEMP is lacking in clarity in many areas and contains many inconsistencies relating to the creation and long-term management of habitats. This is particularly evident in the proposals for grassland creation and subsequent management and for arable flora. These concerns raise a significant element of doubt as to the applicant's ability to design, implement and manage the proposed habitats in the long-term, and therefore achieve the promised mitigation of impacts and biodiversity benefits. The assessments in the ES of likely impacts and significance of effects relies heavily on the mitigatory and compensatory measures in the LEMP and this document must be accurate and robust. The Councils consider that, at present, there are too many inconsistencies and uncertainties for the LEMP to effectively delivery the mitigatory and compensatory measures.

Grassland Creation

- 8.168 There are inconsistencies and contradictions throughout the document as to whether particular land parcels will be calcareous grassland, neutral grassland or acid grassland. The green

infrastructure paragraphs 1.7.7 to 1.7.9 suggest calcareous grassland will be created in multiple areas including ECO areas and on archaeological areas, yet the descriptions later in the text and within the table in Annex C often do not match the LEMP text.

8.169 The habitat objective for ECO1 and ECO2 is described in Table C1 as ‘Other neutral grassland’ but in para 1.7.7 the report says these areas will be ‘native chalk grassland’. The proposed outcome needs to be clarified.

8.170 It is believed that ECO3 is to be acid grassland, but this is contradicted in para 1.7.7 where it is referred to as chalk grassland.

8.171 The proposals to use chalk soils and topsoil where nutrient conditions are not suitable appear overly ambitious and unrealistic over tens / hundreds of hectares of grassland creation. The following additional questions arise from this section:

- What level of nutrients are too high?
- Where will the 150 mm of chalk come from and how much will be required across the site as a whole (potentially thousands of tonnes), and what will the additional construction impacts be?
- How will the applicants ensure that the topsoil to be mixed with the chalk will be weed free?
- What other nutrient reduction techniques have been considered, or does there even need to be any? Perhaps grass mixes and target habitats should be determined and modified in response to accurate field soil nutrient data?

Management of Stone Curlew mitigation areas

8.172 The aim of the mitigation areas should be to create Breck heath, rather than sheep grazed grassland with cultivated plots. Rabbits are crucial in the management of Brecks heath both through grazing and the creation of disturbed ground. The Councils suggest that the mitigation sites are monitored for the presence of rabbits on site and nearby and an assessment made of whether rabbit numbers could be increased and maintained to help manage the sites (in combination with sheep grazing and stone-curlew plots).

8.173 If rabbits are absent in the area then the stone-curlew plots could be moved around the site on an annual rotation as a heathland management tool.

8.174 If rabbit numbers reach high enough levels it may be possible to reduce or cease sheep grazing and mechanical disturbance – however given the natural fluctuations in rabbit numbers all three techniques are likely to be required to varying degrees over time.

8.175 Some of the compensatory habitat is located within archaeological mitigation areas. The Councils are concerned that there may be conflicts between these two disciplines. The applicant must demonstrate how optimal ecological offsetting can be delivered on archaeological mitigation areas.

ECO4 and ECO5

8.176 There are no details supplied within the LEMP about habitat areas ECO4 or ECO5, as shown on the Landscape Masterplan and Parameter Plans included with the submission. ECO4 is located adjacent to Chippenham Fen Ramsar site and Fenland SAC and is a strategically important parcel of land, in the context of habitat connectivity and functioning networks for biodiversity, as well as an internationally important fen habitat. It is elsewhere (para. 1.7.13) said that ECO4 will be left for

natural regeneration but it is the Councils opinion, that this is likely to result in a field with a high weed burden of undesirable species such as thistles, due to the long-standing agricultural use of the area. The proposals are therefore unlikely to achieve their desired objectives, without some intervention such as use of low growing native grass seed mix, perhaps supplemented with spreading of green hay collected from Chippenham Fen and Snailwell Poor's Fen SSSI or Snailwell Meadows SSSIs.

Grassland Management and Monitoring

8.177 The Councils have concerns relating to:

- Lack of clarity over long term management of grasslands
- Lack of commitment to grazing and no consideration of scheme design to allow grazing to be feasible
- No discussion of how shading from panels could affect grassland diversity/type
- No consideration of how variations in created grassland condition will affect the ability of this grassland to deliver the required compensation set out in the ES
- Insufficient consideration of grassland seed mixes to be used, and whether these will deliver the intended habitats, that can survive amongst the panels long-term
- A need to include grassland monitoring surveys in the long-term monitoring plans, with details as to how remedial actions will be instigated, if required

8.178 The effectiveness of the mitigation across the DCO site is entirely dependent on management which must be undertaken for the lifetime of the project. Management including of grasslands is covered in section 1.8 of the LEMP. There is no commitment in the text on management of the solar farm by grazing nor is there a method statement for this type of management beyond the table of 'management after establishment' and short note on conservation grazing (LEMP Annex C). this is contradicted in the LEMP text (section 1.8.1) which states that 'the management regime for species rich grassland within the solar farm is not yet defined'. There is also a lack of provision of infrastructure that would allow sheep grazing of the various parcels, and although the need for grazing troughs is mentioned, these are not committed to. No other additional infrastructure is considered. The use of sheep within the solar farm is likely to require additional internal fencing, to create compartments for the livestock. Consideration will be needed as to how the presence of sheep and other livestock could affect infrastructure such as cabling and the panels themselves. This would require consideration as part of the scheme design as there may be requirements relating to panel heights, casing for cables and additional fencing. There is also potential for conflict with motion-sensitive security cameras and lighting. Clarification on the future management of the grassland within the DCO extents is required and a commitment to this should be demonstrated.

8.179 The conditions for growth beneath the solar panels are likely to be shady compared to the inter-panel rows and the grassland is likely to reflect these different conditions. Monitoring of grassland at another solar farm in West Suffolk, found that all herbs were lost from under the panels and that shade tolerant grasses, particularly creeping and tillering varieties, dominated such that the

grassland beneath could only be described as modified grassland⁷. This was in contrast to the inter-panel grassland which was diverse as a consequence of management through grazing. These findings, demonstrate that the realities of grassland diversity under the panel arrays will be contrary to the expectation that is set in paragraph 1.7.26 of the LEMP. The LEMP needs to carefully consider the conditions that will be created by the installation of the solar farm, the opportunities and the constraints, and accurately reflect these in the habitats that are stated for delivery as part of the scheme. The Councils consider that the LEMP does not consistently do this when setting out plans for grassland creation.

8.180 The Councils are concerned that it is not clear whether, when or how the grazing will be delivered, and are also concerned that the proposed grass seed mixes have not been clearly justified as appropriate to the site and local conditions. In addition, the Councils consider that the applicant has not demonstrated that the grassland areas will provide the required mitigation for the breeding bird and wintering bird assemblages that will be displaced as a result of the proposals.

8.181 Grassland habitats should be monitored as part of the terrestrial ecology monitoring plan. There should be a clear process for how remedial actions will be implemented, should surveys find that grasslands are not developing as expected.

8.182 The BNG calculation should take into account the likely variations in grassland, reflect the proposed management of the grassland, and should not include the areas of grassland which will be provided as mitigation/compensation within the net gain.

Arable Flora

8.183 The individual areas for arable flora mitigation are understood to be small strips in areas E17 and E30. However the Councils consider that insufficient mitigation has been provided and that the proposed areas would not be viable based on their size, and the proposed method of management. Connectivity will allow a movement of seeds in the soil and make long-term management easier. Areas for arable plants need to be created in a joined-up way around the margins of fields. Management should be focused within fields that have already been identified as supporting notable arable plant. The practicality of providing annual disturbance by ploughing to arable flora areas in close proximity to solar panels is also a concern. If disturbance of the ground to create arable flora plots close to solar panels is deemed an operational risk, then it is unlikely to occur during the operational phase. Under such circumstances it would be better to make alternative provisions for mitigation of the arable flora losses, ideally on land that remains in arable cultivation and where there is a realistic prospect of this continuing for the foreseeable future.

Stone Curlew Plots

8.184 The timing of the creation of grassland habitats and Stone Curlew plots in ECO1, ECO2 and ECO3 is not clearly set out. It is unclear how the grassland will be created alongside the Stone

⁷ UK Habitats definition of Modified Grassland – vegetation dominated by a few fast growing grasses on fertile, neutral soils. It is frequently characterised by an abundance of rye grass and white clover.

Curlew bare ground plots, and whether it will be sown before or after the creation of the Stone Curlew plots. If after, then this will result in disturbance during the Stone Curlew nesting season and potentially render the plots unsuitable for that year. It is also not clear how the translocation of acid grassland turfs will be implemented alongside the management of the area for Stone Curlew.

Turtle Dove & Other Farmland Birds

- 8.185 The Councils consider that the scheme could deliver a far more ambitious scheme for compensating impacts to farmland birds, including populations of district and county importance for wintering and breeding birds. As well as providing opportunities for enhancement of key farmland bird for the area identified by the RSPB's Bird Conservation Targeting Project, including tree sparrow, corn bunting, grey partridge and turtle dove.
- 8.186 The Councils support proposals to create disturbed open bare ground areas to promote annual seed-bearing plants to benefit farmland birds such as Turtle dove. However, this must be complimented by providing nesting resources for farmland bird species. For example, all hedgerows are proposed to be managed 2-3 metres in height (para 1.8.10) and are therefore not suitable for Turtle Doves which nest in areas of scrub or dense hedgerow (minimum of 3m tall and 4 metres wide). The Councils seek more varied management of the habitats (including hedgerows /scrub) so that there is targeted management for turtle doves and other key farmland bird species, to help off-set adverse impacts.
- 8.187 However, the Councils require the removal of winter bird cover crop from W09 (paragraph 1.7.32) because the field is of county importance for arable flora and as such management should be focused on protecting the indigenous flora and allowing it to thrive as part of the scheme. Wild bird cover crop should be sown in less sensitive locations.

Biodiversity Net Gain

- 8.188 Habitat creation proposals are lacking in detail, including how they link to form a coherent nature network and their long-term management regimes.
- 8.189 The Councils consider that it has not been demonstrated that net gain will be achieved through measures delivered in addition to mitigation and compensation for protected species.
- 8.190 Notwithstanding this, it would appear that Biodiversity Net Gain (BNG) is being committed to only for the 40-year life span of the energy farm. However, given the presence of highly valuable ecological receptors within the zone of influence of the scheme, and the landscape scale over which the scheme is operating and influencing habitat and species distribution, this should be reconsidered, in at least some critical locations. The contribution that energy projects can make towards Nature Recovery Networks is referenced in the Draft Overarching National Policy Statement for Energy (EN-1).
- 8.191 There are no plans showing where the habitats that form the BNG assessment are, to show how these are distinct (in terms of contributing to net gain) from the areas of compensatory / offsetting habitat, whilst also showing how they form a coherent and linked network of functioning habitats across the landscape, in combination with the compensation habitats. A plan should be submitted for clarification.

8.192 The Defra Metric spreadsheet has not been submitted. This makes it difficult to assess the predicted BNG or assumptions used by the applicant, and also limits the ability of consultees to review and comment on those assumptions. It is not clear whether the habitats in Annex C of the LEMP align with the Biodiversity Net Gain Assessment. For example, it is not clear where the areas of 'Fairly Poor Grassland – other neutral grassland' occur as distinct from 'Moderate'.

Requirements and Obligations

Development Consent Order (APP-019):

8.193 The Councils request clarity or changes to the wording of the following from the draft Development Consent Order:

8.194 Table 3.3 of the CEMP states that a draft DCO will specify the requirement for updated ecology surveys to inform mitigation plans and protected species licenses, but this is not present in the Draft Development Consent Order.

8.195 The Councils have concerns about the wording used in Part 4 and Part 6 of the DCO, and request more clarity is sought as to how these will be implemented:

- Part 4 – may use any watercourse for drainage of water in connection with operation or maintenance of the authorised development
- Part 6 – may fell any tree or shrub near any part of the authorised development (including those with TPOs)

8.196 Schedule 2 - Says '*No part of 1A, 1B, 2A 2B 3A 3B 6A 7A 7B 8A 8B 10 can start until offsetting provision for Stone Curlew is provided*'. The Councils query why No 4 is not included, as this is the grid connection through Stone Curlew habitats in Site East B. We also highlight that No 10 *is* the Stone Curlew habitat provision and therefore should not be included in this list.

8.197 Schedule 1 of the Draft Development Consent Order (DCO) Defines the areas for habitats as:

Nos 6 A-D '*landscape and biodiversity enhancement measures*'. However, these areas are also compensation habitats and therefore should be labelled as such within the DCO.

8.198 Details of how the perimeter fence will provide adequate permeability for wildlife should be included within Section 11 of Schedule 2 of the DCO.

8.199 The Councils consider there should be a requirement for the applicant to access or delegate responsibility to a competent, professional, expert conservation land manager or ecological advisory group to ensure the success of:

- a) Stone Curlew mitigation and management measures; and
- b) grassland creation and management including conservation grazing and monitoring / adaptive management.

8.200 The Councils propose this requirement to be delivered by inclusion within the legal requirements for the scheme (Development Consent Orders), which should also include a mechanism for ensuring appropriate remedial actions are taken, as identified by the land manager / advisory group as a result of monitoring surveys.

- 8.201 The absence of a commitment to monitoring surveys within the draft DCO should be re-addressed. The Councils have made recommendations (above) regarding the surveys they believe are necessary to ensure the long-term success of compensatory measures (which underpin a large portion of the impact assessment findings) as well as habitat enhancement measures.
- 8.202 As stated within the Framework CEMP, the DCO should include a requirement to ensure that updated ecology surveys will be conducted prior to works starting, to inform mitigation requirements and protected species licenses. (Table 3-3 of the CEMP).
- 8.203 Chapter 3 Scheme Description, section 3.8, Decommissioning, Works Nos 6 and 10 will be 'left in situ as they could contain protected species and so licenses would be required for any changes'. The Councils believe this wording should be amended to make a firm commitment to the retention of mitigatory and compensatory habitats created as part of the scheme.

9 Flood Risk, Drainage and Water Resources

Summary

- 9.1 The Lead Local Flood Authorities (LLFAs), Cambridgeshire County Council and Suffolk County Council, expect any proposal to have appropriate surface water drainage infrastructure which prioritises the use of Sustainable Drainage Systems (SuDS) and does not increase surface water flood risk.
- 9.2 As the County Councils have a statutory role as LLFA, they require sufficient evidence to be provided to demonstrate that a suitable drainage solution can be delivered for all sites both during construction and operation.
- 9.3 The Councils are not the responsible authorities for flood risk resulting from fluvial flooding, so they defer to the Environment Agency or where relevant the Internal Drainage Boards in this area. However, these aspects of flood risk remain important for local communities, so the Councils give an overview in this section.

Table 4: Summary of impacts – Flood and Water					
Ref No.	Description of Impact	Construction (c) / operation (o)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
	It is stated that an unspecified number of watercourses will be crossed by the cable route and/or other necessary infrastructure via either intrusive or non-intrusive means	C	Negative	Change of proposals to minimise intrusive crossings and incorporate appropriate mitigation where intrusive crossings cannot be avoided to manage impacts on the water environment both now and in the future	NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
	Dependent on the final positioning of the panels and supporting infrastructure, access to existing surface water features for essential maintenance/remedial works may be restricted	C/O	Negative	Change of proposals to ensure access is maintained throughout both the construction and operational phases	NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
	It is stated that some of the supporting infrastructure may require the installation of septic tanks or similar rather than connecting into the foul sewer network to manage foul effluent, which has the potential to increase risk of pollution to watercourses if not properly installed and managed	O	Negative	Change of proposals to ensure the risk of pollution is not increased. The approach in design would be ideally in order of priority (1) connect to sewer (which we acknowledge is not necessarily possible in this instance), (2) mini sewer treatment plant, (3) septic tank.	Local Plan Policy WSLP DM6: Flooding and Sustainable Drainage, states that proposals for all new development will be required to submit schemes appropriate to the scale of the proposal. East Cambridgeshire Local Plan Policy ECDC ENV 8: New development to contribute to an overall flood risk reduction and Policy ENV9 that seeks to protect against water pollution.
	The drainage strategy must be supported by infiltration	O	Negative	Additional survey/investigations to be undertaken with respect to	Local Plan Policy WSLP DM6: Flooding and Sustainable Drainage, states that proposals for

	testing where infiltration based features are proposed as geological mapping is proposed on a national scale and unlikely to be an accurate representation of local conditions. Features designed to incorrect or assumed ground information may not function as expected. The assumed rate of 1×10^{-5} m/s is relatively high and is unlikely to be representative of the geology locally. The proposed SuDS are not in accordance with the requested design parameters included in the Suffolk SuDS guidance document.			underlying geological conditions and their suitability for the proposed type of drainage features. Could be secured by requirement.	all new development will be required to submit schemes appropriate to the scale of the proposal. East Cambridgeshire Local Plan Policy ECDC ENV 8: New development to contribute to an overall flood risk reduction. Cambridgeshire Flood and Water Supplementary Planning Document (SPD) NPPF Section 14 states that major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems should take account of advice of the Lead Local Flood Authority. This advice includes the Suffolk County Council SuDS Guidance document.
	All watercourses must be considered as part of the application, failure to consider seasonal or dry watercourses may result in increased flood risk.	C/O	Negative	Change of scope of assessment to include all watercourses to manage impacts on the water environment both now and in the future	NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. Cambridgeshire Flood and Water Supplementary Planning Document (SPD)

	Areas at medium to high risk of pluvial flooding should be fully considered, however isolated they are to ensure the proposal does not increase flood risk.	C/O	Negative	Change of scope of assessment to include all significant areas of pluvial flood risk even if they do not form part of a wider flow path to manage impacts on the water environment both now and in the future	NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. NPS EN-1: Where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, by reducing flood risk overall.
	Whilst measures to manage the quantity of surface water runoff have been proposed, there is less information on how the sustainable drainage features will address the other 3 pillars of SuDS; water quality, amenity and biodiversity. Furthermore, the allowance for climate change has recently been updated and 40% uplift to allow for increases in peak rainfall intensity may no longer be applicable. A 1.2m distance should be left between the base of an infiltration feature and maximum groundwater rather than 1.0m as stated.	C/O	Negative	Change of proposals to implement SuDS compliant measures in all locations – change to design.	NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. Local Plan Policy WSLP DM6: Flooding and Sustainable Drainage, states that proposals for all new development will be required to submit schemes appropriate to the scale of the proposal. Local Plan Policy ECDC ENV 8: New development to contribute to an overall flood risk reduction. Cambridgeshire Flood and Water Supplementary Planning Document (SPD) NPS EN-1: In determining an application for development consent, the IPC should be

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	FEH rainfall data should be used in preference over FSR as it has been shown to be more conservative and thus has a greater safety factor associated with it.				satisfied that where relevant: priority has been given to the use of sustainable drainage systems (SuDS)
	Temporary changes in flood risk from changes in surface water runoff (e.g. exacerbation of localised flooding due to deposition of silt, sediment in drains, ditches). Changes in flood risk due to the construction of any part of the Scheme within an area at risk of flooding.	C	Negative	Change of proposals to ensure the risk of pollution/sedimentation is not increased and sufficient mitigation measures put in place.	Local Plan Policy WSLP DM6: Flooding and Sustainable Drainage, states that proposals for all new development will be required to submit schemes appropriate to the scale of the proposal. Local Plan Policy ECDC ENV 8: New development to contribute to an overall flood risk reduction. Cambridgeshire Flood and Water Supplementary Planning Document (SPD) NPS EN-1: In determining an application for development consent, the IPC should be satisfied that where relevant: priority has been given to the use of sustainable drainage systems (SuDS)

Policy Context

National Policy Statements

- 9.4 Flood risk is addressed as a generic impact in Section 5.7 of NPS EN-1. It notes while flooding is a natural process, its effects and severity can be increased both as a consequence of decisions about the location, design, and nature of settlement and land use, and as a potential consequence of future climate change. While flooding cannot be wholly prevented, its adverse impacts can be avoided or reduced through good planning and management. It refers that climate change may lead to increased flood risks.
- 9.5 Paragraph 5.7.3 notes that where new energy infrastructure is, exceptionally, necessary in areas at risk of flooding, policy aims to make it safe without increasing flood risk elsewhere and, where possible, by reducing flood risk overall.
- 9.6 The local policies discussed below, in relation to surface water flood risk and drainage, are consistent with that contained in NPS EN-1.

National Planning Policy Framework (NPPF) and National Planning Policy Guidance (NPPG)

- 9.7 Paragraphs 159 – 169 of the NPPF (July 2021) cover planning and flood risk. Paragraph 169 sets out the expectations for how sustainable drainage systems should be incorporated into major developments.
- 9.8 Flood risk and coastal change is covered within several sections of the NPPG. Particular sections of note are; Why are sustainable drainage systems important?, When should a sustainable drainage system be considered?, What sort of sustainable drainage system should be considered? and Where to go for advice on surface water drainage?
- 9.9 The Department for Environment, Food and Rural Affairs (DEFRA), non-statutory technical standards (NSTS) for sustainable drainage systems (March 2015) should be used in conjunction with the NPPF and NPPG.

Local Plan Policies

West Suffolk Local Plan

- 9.10 Policy DM6 (JDMPD): Flooding and Sustainable Drainage, states that proposals for all new development will be required to submit schemes appropriate to the scale of the proposal detailing how on-site drainage will be managed so as not to cause or exacerbate flooding elsewhere. Examples include: rainwater harvesting and greywater recycling, and run-off and water management such as Sustainable Drainage Systems (SuDS) or other natural drainage systems.

East Cambridgeshire Local Plan (2015)

- 9.11 Policy ENV 8: Flood Risk requires all new development to contribute to an overall flood risk reduction. This includes appropriate surface water management techniques, such as SuDS and these must be accommodated within the site.

Other Relevant Local Policy

- 9.12 It should be noted that the Suffolk Flood Risk Management Strategy (SFRMS) and the appendices associated with it are currently undergoing review.

- 9.13 The Suffolk Flood Risk Management Strategy (SFRMS) sets out guiding principles on tackling flooding and integrates the issue of flooding from surface water runoff and from ordinary watercourses. One of the key objectives is to prevent an increase in flooding as a result of new development by ensuring SuDS are properly considered and incorporated into works. The document notes the importance of aligning with the content of River Basin Management Plans to ensure a holistic approach is taken to flood management and water quality.
- 9.14 Appendix A of the SFRMS sets out the local requirements for SuDS design in Suffolk.
- 9.15 SFRMS Objective 3 states that planning decisions should be *“based on up-to-date information about all flood risks”*.
- 9.16 Cambridgeshire Flood and Water SPD (or any subsequent updated version) which is adopted by East Cambridgeshire District Council.
- 9.17 CIRIA SuDS Manual (C753) is considered industry best practice for SuDS.

Flood Risk Assessment

- 9.18 The Applicant has undertaken a Flood Risk Assessment (FRA) for the proposed development in order to address the policy requirements of the Local Plan. However, the Councils understand that further work will be undertaken in some instances to increase confidence in the associated hydraulic models and, where required, to incorporate sustainable drainage systems.
- 9.19 The Councils note the conclusions of the FRA on fluvial flood risk but defer to the Environment Agency as the relevant statutory body for detailed commentary on those matters.

Surface Water Drainage and Flooding

Context – Key Local Issues

Newmarket

- 9.20 In June 2019, SCC published a Surface Water Management Plan (SWMP) Update for Newmarket. This work was completed on behalf of SCC by BMT. This update was required to address limitations and outstanding gaps in the modelling included in the previous report (AECOM) that was produced in 2015. The updated model results include additional data such as a catchment based approach, updated watercourse information and a more complete representation of the sewer network.
- 9.21 This detailed work was undertaken in Newmarket because of an established history of surface water flooding in the town which has impacted residential properties on multiple occasions. The production of the SWMP has enabled SCC as LLFA to obtain a greater understanding of how surface water is managed in Newmarket. It should be noted, that whilst the model is more accurate than standard Environment Agency National Mapping⁸, assumptions were made due to a lack of available information on the existing surface water sewer network in Newmarket.
- 9.22 Much of Newmarket is served by an Anglian Water surface water sewer network. This is a historic system that has been upgraded as the town has expanded. The system is unable to

⁸ Environment Agency National Mapping for Newmarket has been updated to include the outputs of the Newmarket SWMP.

accommodate more severe rainfall events, resulting in overland flows along natural exceedance routes.

9.23 The downstream catchment of the Newmarket Brook (that nearest to the proposed development site) is driven by the two southern flow paths in the upper catchment. Two of the upper catchments convene in the underground network upstream of the Exeter Road outfall. The upper catchments' hydrology are synchronous, producing peak flows in the brook at very similar times. This results in a rapid rise in flood water. Compared to the upper catchment, there is little increase in contributing area along the length of the channel as the lower catchment is bounded by the B1103.

9.24 Soil conditions in Newmarket and surrounding areas are variable and therefore cannot be relied upon to deliver infiltration unless proven through BRE365 compliant infiltration testing.

General Principles

9.25 The Councils expect infiltration testing to be undertaken at all sites to inform the Outline design, required to demonstrate that a surface water drainage strategy, compliant with National and Local Policy, Guidance and Best Practice can be delivered within the Order Limits. The Councils await the results of infiltration testing from all proposed development sites, if there were to be a hearing on this matter then it would be expected that these will be made available by the applicant.

9.26 Where the Applicant is reliant on a method of surface water disposal other than infiltration, they must demonstrate that their Order Limits are of sufficient extent to discharge to this location, and if required, obtain permission from the asset owner.

9.27 The submission must propose potential pollution assessment methodologies to be used, depending on proposed site uses. The submission should not rely on proprietary treatment systems (such as bypass interceptors) as this would not be compliant with NPS EN-1 which states that SuDS should be prioritised.

9.28 SuDS should be designed to achieve the 4 pillars of SuDS; managing water quantity and flood risk alongside water quality, maximising biodiversity and providing amenity benefits wherever possible.

Construction Phase Impacts

Commentary

9.29 General Principles: National and Local Policy, Guidance and Best Practice do not provide different requirements for SuDS during construction, compared to operation. As such, the Councils expect the Applicant to comply with National and Local Policy, Guidance and Best Practice during the construction phase.

9.30 The Councils expect sufficient mitigation to be demonstrated for every site, compliant with National and Local Policy, Guidance and Best Practice which can be delivered within the Order Limits during construction.

9.31 The land required for SuDS during construction, alongside other site requirements should be adequately considered when establishing the applications Order Limits.

- 9.32 Where elements of the development have the potential to increase existing surface water flood risk to residential properties, the Applicant is expected to deliver mitigation that could reduce existing surface water flood risk to residential properties and deliver legacy benefit.
- 9.33 Main Development Site: It is vital that during the construction phase, natural surface water drainage processes are mimicked through the use of SuDS.
- 9.34 Any culverts within the scheme should only be where they are required and of a minimum length to protect the surrounding watercourse networks.

Positive

- 9.35 None identified. At this time there is no demonstration of the potential to deliver legacy benefit, through a reduction of existing surface water flood risk or improvement of water quality. Any potential legacy benefit would require further assessment by multiple specialisms.

Neutral

- 9.36 None identified or anticipated.

Negative

- 9.37 Main Development Site: It has not been fully demonstrated that sufficient mitigation, utilising options thus far identified, can be delivered within the Order Limits.
- 9.38 Due to the high-level nature of the submitted information to date, the Applicant has not demonstrated that any sites can deliver mitigation that is compliant with National and Local Policy, Guidance and Best Practice within the Order Limits.
- 9.39 If infiltration of surface water from the development sites is feasible, then this must be prioritised, as per National and Local Policy, Guidance and Best Practice. Only if infiltration could result in negative impacts to surrounding habitats would a positive discharge to watercourses be considered. The Councils would not view insufficient space to facilitate infiltration features as justification for seeking to utilise alternate methods of surface water discharge.
- 9.40 It is critical that there is sufficient space for SuDS within the development site to remove contaminants from runoff using natural processes, prior to discharge. The use of proprietary treatment measures as a primary method of treatment is not acceptable to the Councils, SuDS must be prioritised.
- 9.41 Due to the potential for suspended sediment in surface water, the Councils do not think it would be appropriate to use wholly below ground SuDS systems, such as crated attenuation tanks.
- 9.42 Further clarification is required on the principles in place for temporary watercourse crossings, to facilitate construction haul roads etc. until such time the permanent culverts are constructed, if such temporary crossings are required.
- 9.43 It must be demonstrated that areas designated for infiltration during operation can be protected during the construction phase to prevent the compaction of natural soils and/or contamination with material that could hinder the future infiltration potential of these soils. This would require sufficient space within the Order Limits to facilitate haul roads etc. If this is not possible, principles for remediation and post construction testing must be identified.

9.44 As highlighted under Key Local Issues, there are existing surface water flooding issues at some limited locations within the Order Limits. During construction, sediment laden surface water runoff has the potential to increase surface water flood risk if it were to enter the existing highway drainage system. It must be demonstrated that sufficient mitigation can be delivered within the Order Limits.

9.45 The local highway authorities will not permit any discharge of construction surface water to the existing highway surface water system.

Operational Phase Impacts

Commentary

9.46 At this time, the Councils have not been approached for discussions regarding operational drainage for any of the proposed development.

9.47 The Councils have not yet received sufficient information pertaining to the proposed detailed surface water drainage strategies for any of the sites that will remain throughout the operational phase.

Positive

9.48 This scheme has the potential to deliver legacy benefit by reducing the existing surface water flood risk within the area. This would require the scheme to retain and discharge surface water generated by the development site through infiltration whilst also intercepting surface water flows and managing these flows (and putting them to beneficial use, for instance firefighting water or irrigation) using the scheme's surface water drainage system. This would require the scheme's surface water drainage system to be designed accordingly.

Neutral

9.49 None identified or anticipated.

Negative

9.50 The reinstatement of areas used during construction, particularly any borrow pits once backfilled, have the potential to increase greenfield runoff rates. No information has been provided to detail how this could be mitigated.

9.51 At this time there is no demonstration of the potential to deliver legacy benefit, through a reduction of existing surface water flood risk or improvement of water quality. Any potential legacy benefit would require further assessment by multiple specialisms.

9.52 Quick Storage Estimates (QSE) have been used for the attenuation volumes across the site. This is acceptable where the upper end values are used for preliminary sizing. The difference for the lower and higher end results from the QSE show how much variance there is. If the upper end values are required for attenuation, this could result in requiring a further 17,831m³ storage across the scheme, which is a large amount to be accommodated at a later stage.

9.53 Another potentially adverse impact could be from early level rilling (i.e., the creation of shallow channels of erosion by water), whilst vegetation takes around the solar panels. High intensity storms in the first few years could damage any planting around the site along the PV row driplines,

and therefore could lead to levels of rilling within the scheme. This can lead to increased flood risk to downstream areas.

- 9.54 The local highway authorities are unlikely to permit any discharge of operational surface water to the existing highway surface water system.

Required Mitigation

- 9.55 The Councils hope to get to a position of agreement with the Applicant on the details of sustainable drainage systems for the key sites. As referred to above, the Councils have not yet seen sufficient evidence that surface water drainage infrastructure can be facilitated within the proposed Order Limits to a satisfactory standard. The County Councils, as LLFAs, require all issues to be resolved, with evidence that a sustainable drainage solution can be delivered for all sites both during construction and operation.
- 9.56 The potential increase in surface water flood risk and pollution associated with construction and operation of the proposed project should be mitigated through the prioritisation and use of SuDS. Surface water drainage strategies and designs must comply with national and local, policy, guidance & best practice. Surface water drainage strategies should maximise the use of above ground storage and treatment through natural processes.
- 9.57 It must be demonstrated that sufficient & suitable mitigation can be accommodated within the Order Limits to mitigate any identified impacts. Providing this can be demonstrated, a requirement of the DCO will ensure further details of these works can be provided post-consent.
- 9.58 With regard to non-potable water supply, the Applicant is asked to consider the provision of reservoirs for non-potable water, the water of which could either be used by the Applicant for construction activities, or through license trading with local farmers substitute/offset farmers' use of groundwater extraction. Such reservoirs could provide legacy benefit.
- 9.59 Regarding the attenuation and use of Quick Storage Estimates, the Applicant should provide enough space to attenuate the 73,700m³ as a minimum across the scheme. This would provide a level of contingency and to ensure that there is sufficient space provided.
- 9.60 To mitigate the risks associated to rilling of planting below the PV rows, maintenance and monitoring for vegetation should be carried out particularly after heavy periods of rainfall, to ensure that there is no damage to the vegetation. Any damage to the planted areas should be repaired/reinstated as soon as possible.

Requirements and Obligations

- 9.61 Requirements will need to give sufficient assurance to the relevant Lead Local Flood Authority that final designs are acceptable.
- 9.62 The County Councils as LLFAs should discharge any requirements which concern surface water drainage. This is to reflect and protect its statutory duties as LLFA, and in recognition of the fact that SCC and CCC County Council hold the technical expertise on this matter. The Councils acknowledge that flood/drainage matters must be considered on an integrated basis with other environmental topics and would fully expect to do so, in consultation with any other relevant discharging authorities for other matters. The proposed wording for a revised requirement will be included within an appendix.

10 Landscape and Visual Amenity

Summary

Landscape and Visual Amenity

- 10.1 The scale, duration and geographical extent of the proposed development are likely to result in widespread and significant adverse landscape impacts, and prolonged and, in some cases, permanent adverse visual impacts. The ES predicts significant effects as a result of the proposals across the DCO site during construction, operation and decommissioning. The Council agrees with this assessment. The ES also highlights significant visual effect from the proposals when viewed from the surrounding countryside. By year 15, it is predicted that the visual effects would persist but would have reduced to the extent that they are not significant. The Councils do not agree that the visual effects of the proposals at year 15 can be dismissed, but that the accumulation of residual effects in combination would be significant.

Design and Mitigation

- 10.2 These are not sufficiently tailored across a variety of landscape character types and are not ambitious enough to sufficiently deal with the degree of harm caused by the project. Notwithstanding the overall concerns about the scale of the development, the Councils expect the Applicant to provide a more thorough presentation of key areas of impact, and to work with the local authorities to reduce these impacts on the most sensitive receptors by redesigning elements of the scheme and propose more ambitious, robust, deliverable and properly secured mitigation proposals.
- 10.3 While there might be very limited choice in the physical appearance of solar panels – as in this case – there is still the need to demonstrate:
- how the design process achieves good aesthetics (as far as possible), including in respect of landscape and visual amenity;
 - how the design choices are sensitive to “place”;
 - how the siting relates to existing landscape characteristics and;
 - that the design and sensitive use of materials of associated development (such as batteries and other buildings) contributes to the area.
- 10.4 It is not sufficient for only the functional parameters (fitness for purpose and sustainability) of the project to have set the parameters of the design (see NPS (EN-01)). Good or High Quality Design begins with the site selection process. ES Chapter 4: Alternatives and Design Evolution does describe the selection criteria for the sites. However, these do not include landscape character and visual amenity.
- 10.5 ES Chapter 4 does not provide sufficient evidence for the site selection made. There is no data provided that would demonstrate why the chosen sites were more suitable than others. No other alternative search areas were identified and compared with the selected sites.
- 10.6 It is also worth noting that of the 7 potential solar development areas (PDAs) identified in stage three of the site selection process, not one is within the DCO limits. No assessment of suitability is provided of the areas that are included within the DCO.

Geographical Scale and Extent of the Project

- 10.7 In landscape terms Sunnica is set apart from other consented solar developments, including other solar NSIPs, by its scale and extent, as it consists of four sites which are connected by four cable corridors (982ha, without cable routes), and the option of a National Grid Substation Extension. These factors lead to significant landscape and visual impacts. Rather than being perceived as a solar development occupying an area of land within a wider landscape, Sunnica is expected to dominate and transform the local landscape, to alter it beyond recognition, and thus to create a new solar farm landscape.
- 10.8 In respect to this the National Design Guide (2021) states in paragraph 59 “Where the scale or density of new development is very different to the existing place, it may be more appropriate to create a new identity rather than to scale up the character of an existing place in its context. New character may also arise from a response to how today’s lifestyles could evolve in the future, or to the proposed method of development and construction.”
- 10.9 The potential for a new visually attractive identity is not only a valid consideration but one that must be considered. However, the current proposals fall short of providing a new landscape with a positive effect on identity and sense of place.

Temporal Scale - Longevity of Impacts

- 10.10 While the adverse visual effects on communities may be justifiable in the short term to address the climate crisis, it is not justifiable to seek a consent that goes beyond the initial lifespan of the PV panels (approx. 25 years) without providing an opportunity to assess the policy merits of the proposal at that time, given the extent of harm and land take when the capacity/load factor of solar at this latitude in the UK is only 10-12% (see table below from Digest of UK Energy Statistics (DUKES) 2022).

Table 5: Excerpt from Digest of UK Energy Statistics (DUKES) 2022: Chapter 6.3 Load factors for renewable electricity generation (from Digest of UK Energy Statistics (DUKES): renewable sources of energy)				
Load factors for renewable electricity generation - based on average of beginning and end of year capacity	2018	2019	2020	2021
Wind	31.5	32.0	35.6	29.3
Onshore	26.7	26.5	28.3	23.2
Offshore	39.9	40.4	45.7	37.4
Marine energy (wave and tidal stream)	5.5	7.5	5.7	2.8
Solar photovoltaics	11.2	10.7	10.9	10.0
Hydro	33.2	36.1	41.5	33.1
Small scale	36.9	39.2	43.1	37.7
Large scale	32.1	35.2	41.1	31.8
Bioenergy (excludes cofiring and non-biodegradable wastes)	58.6	55.4	56.7	56.6
Landfill gas	42.0	39.1	37.7	35.8
Sewage sludge digestion	46.0	48.6	49.3	47.3
Energy from waste [note 3]	35.8	35.4	36.1	36.0

Animal biomass [note 4]	56.0	58.3	57.0	54.3
Anaerobic digestion	61.7	63.0	61.7	64.3
Plant Biomass [note 5]	70.6	64.1	67.1	67.5
All renewable technologies (excluding cofiring and non-biodegradable wastes)	29.8	30.0	32.3	28.5

10.11 The ES considers adverse effects beyond five years of the operational phase to be long-term (APP-037, ES Chapter 5, p.5-6). This temporal threshold did not form part of the assessments in the LVIA. Given the change in weather patterns and the associated difficulties in establishing new planting, it appears prudent to assume that at year 5 the effects would remain comparable to those at year 1, with clusters of moderate adverse effects remaining around Isleham, Worlington, Freckenham and the U6006. Even in year 15 these adverse effects are still perceivable. While they have been assessed as minor at year 15, the Councils consider that these adverse effects are still significant in their accumulation and would be likely to remain so throughout the operational phase.

10.12 Therefore, the Councils consider that the proposed lifespan of the project of 40 years, and the consequent temporal accumulation of adverse effects, is not reasonable and appropriate considering that the need is to deliver Net Zero by 2050 and decarbonise the Grid by 2035.

Scale of Change of Character - The Impacts on Character, Amenity, and Sense of Place

10.13 The fragmented layout of the proposals, located amidst and around several settlements, is likely to have such an impact on local character to such an extent as to affect the sense of place. Firstly, the Councils consider that the construction activities would go beyond usual agricultural activity in all areas of the DCO, rather than just in some areas that are in close proximity to those activities, as acknowledged by the applicant's Environmental Statement [for example Appendix 10G, LLCA 13, LLCA 26; Appendix 10H, VP5]. Secondly, the Councils consider that once operational, the expansive solar arrays, BESS, substation, weather stations, fencing, access points and access roads and other associated infrastructure would transform the existing agricultural and rural landscape into an essentially industrial landscape.

10.14 The adverse inter-cumulative, and sequential effects, on landscape character and visual amenity of recreational and other users of highways, Public Rights of Way, promoted and cycle routes will be significant.

10.15 The extent duration and nature of these effects can reasonably expect to affect the place attachment of the residents of the affected villages and communities as many residents would experience the adverse visual and perceptual effects of various elements of the solar farm as part of their daily routines (for further information see the paper *What shapes community acceptance of large-scale solar farms?* attached as Appendix 25). This is reflected in the visual assessment tables in Appendix 10H. [APP-107]. The initial and residual visual effects cluster around the settlements of Worlington, Freckenham, Isleham and Snailwell

10.16 Therefore, the scheme is likely to adversely affect the residents' quality of life, contrary to the Design Principles of the National Infrastructure Commission (for further information see *Climate People Place Value, Design Principles for National Infrastructure*).

Table 6: Summary of impacts - Landscape and Visual Impact Assessment					
Ref.	Description of Impact	Construction (C)/ Operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy Context
	Impact on/loss of the rural character of the landscape. Introduction of solar panels, BESS and other infrastructure into the countryside affecting the openness and open rural character of the landscape.	C/O	Negative	It is not possible to mitigate this impact as demonstrated in the ES. Mitigation planting to screen the development can in some areas of open landscape have its own adverse impact. Other strategies such as incorporating setbacks, buffers and vistas may be more effective in retaining the openness of the landscape.	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM13 requires, inter alia, that commensurate provision must be made for landscape mitigation and compensation measures, so that harm to the locally distinctive character is minimised and there is no net loss of characteristic features. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved.
	Impact on landscape features and their legibility 1. Pine lines 2. Lee Brook 3. The Avenue	C/O	Negative	Viewpoints where it is assessed that the existing features within the landscape would remain visible above the panels – such as pine lines- are dependent on the set back of the	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section

	4. U6006			panels and appropriate mitigation – adequate setbacks to be determined. In relation to the Lee Brook appropriate planting alongside a river restoration scheme should be implemented.	10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM2 requires, inter alia, that proposals for all development should recognise and address the key features, characteristics, landscape character, local distinctiveness and special qualities of the area. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved.
	Impacts on the historic landscape and the setting of Chippenham Registered Park and Garden. Due to the landform of the wider study area, this area is also highly visible from The Limekilns, an area not only for horse riding, but also recreational walking. The ES recognises that the adverse visual effects would not reduce by year 15.	C/O	Negative	Solar panels should be removed from Sunnica West A. Although it would be difficult to successfully screen the whole area, so that the development would become invisible from The Limekilns, views onto the development could be partially screened or filtered by strengthening existing hedgerows and additional planting, which would reduce the effects over time. This can however not be reconciled with the historic landscape and setting of Chippenham Park. The landscape is historically open with	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. The proposals, as presented, are also in conflict with the East Cambridgeshire Local Plan Vision, its Objectives 4 and 5, and Policy ENV 1 and ENV 2 and ECDC Policies ENV 12, ENV 13, ENV 15 and NPPF Section 16.

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				few hedgerows and small woodland plantations. Landscape mitigation in the form of woodland planting should be strengthened around the proposed BESS to better integrate this into the existing woodland and the landscape.	
	Landscape and Visual Impact on U6006 (E12), green corridor of amenity value	C/O	Negative	No works should take place within this corridor. The exception should be one crossing at a suitable point for the cable route only. All access routes must be accommodated elsewhere or field side of the U road leaving an adequate buffer. Solar panels should be removed from parcel E12 to provide visual relief from the solar arrays on the eastern side of the U road.	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy CS2 seeks, inter alia to ensure that areas of landscape, and biodiversity interest and local distinctiveness will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved.

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	Landscape Impact on Chippenham Fen	C	Negative	The construction activities would have an adverse effect on the tranquillity of Chippenham Fen.	ECDC Policy ENV1 with regards to tranquillity
	Impacts on views across the landscape and to features: Open views would be truncated, Views to existing Landmarks would be lost 5. VP2C and others 6. View from PROW at Snailwell	O	Negative	The solar arrays and mitigation need to be designed so that setbacks and vistas are maintained or created to retain views of features and aspects of the existing openness of the landscape.	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM2 requires, inter alia, that proposals for all development should recognise and address the key features, characteristics, landscape character, local distinctiveness and special qualities of the area.
	Impacts of BESS buildings and infrastructure on landscape character and visibility from viewpoints such as West Row, Elms Road, Ferry Road, the River Lark, Sunnica West A Lime Kilns)	C/O	Negative	The BESS and other built structures should be designed to resemble agricultural buildings as far as possible, with carefully chosen massing, materials and finishes. Mitigative planting would need to be robust to achieve screening or filtering of views. Tonal rendering of shades – cited in the ES as embedded design mitigation	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM13 requires, inter alia, that all development proposals should demonstrate that their location, scale, design and

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				for the Bess - should be based on Environmental Colour Assessment.	materials will protect, and where possible enhance the character of the landscape, including the setting of settlements, the significance of gaps between them and the nocturnal character of the landscape. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved.
	Impact on landscape character west of Lee Brook and Visual Impact on the Ark (E05)	C/O	Negative	Remove solar panels from E05 to make the Lee Brook the natural boundary to the solar farm or reduce the extent of the panels to an existing/historic field boundary (for example beginning at the agricultural building along Beck Road and leading north-east to Lee Brook) to limit effects on open character of the landscape. Panels to also be setback from the Lee Brook. Woodland is not appropriate in this open landscape; suggest scattered trees in front of hedgerow (refer to App 10E, p.13, 'empty' perception to the character) (see VP5)	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved.

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	Visual Impact along Golf Links Road	C/O	Negative	The large field sizes around Golf Links Road result in a vast extent of solar arrays, which do not integrate into the landscape. In this area there is potential to provide robust mitigation, including internal hedgerows/woodland strips as is seen around adjacent fields.	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM13 requires, inter alia, that commensurate provision must be made for landscape mitigation and compensation measures, so that harm to the locally distinctive character is minimised.
	Visual and Landscape Impact along Elms Road	C/O	Negative	Proposed roadworks may affect the roadside vegetation, which is essential for the mitigation of the effects of the development proposals in this area but is on its own not robust enough to sufficiently screen the BESS in E18. The current mitigation proposals are insufficient and need to be improved.	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM13 requires, inter alia, that commensurate provision must be made for landscape mitigation and compensation measures, so that harm to the locally distinctive character is minimised and

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					there is no net loss of characteristic features.
	Visual and Landscape Impact along Ferry Lane and the River Lark	C/O	Negative	Additional mitigation and design modifications are required in relation to E33, E01, E04 and E08. The Councils consider that the proposed construction activities within parcels E01, E04, E33 (BESS), and E08 would be highly noticeable from Ferry Lane. The BESS would remain visible long-term during the operational phase. The Councils consider that the visual assessments for VP1, VP2a, VP2b and VP2c are not correct and that more than just the upper parts would be visible.	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. Policy DM13 requires, inter alia, that all development proposals should demonstrate that their location, scale, design and materials will protect, and where possible enhance the character of the landscape, including the setting of settlements, the significance of gaps between them and the nocturnal character of the landscape, and that commensurate provision must be made for landscape mitigation and compensation measures, so that harm to the locally distinctive character is minimised.

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	Accumulation of adverse effects and intra- and inter- cumulative effects	C/O	Negative	Even for year 15, clusters of minor impacts remain (especially around the settlements), which in their accumulation the Councils consider to be significant.	See Natural England's written representation on Navitus Bay Offshore Wind Park Application, 2014, paragraph 6.4.3 and paragraph 6.4.34. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved.
	Effect on placemaking The scale of the proposals in geographic extent, duration and magnitude of change results in the creation of new landscape.	C/O	Negative	The applicant has failed to recognise and embrace the fact that these proposals go much beyond any other solar plant within the UK and create their own landscape. As this development is likely to become a national and possibly international showcase, it is paramount that this new landscape is designed to an exemplary standard. The Councils consider that this could be achieved through high quality design and robust mitigation that is demonstrably deliverable. However, the scheme as it has been presented, has failed to achieve this, as the impacts and effects for parts of it are unacceptable, the design lacks vision and ambition and the mitigation is based on insufficient	Requirements for high quality design in NPS EN-1, and good design in the Planning Act 2008, Section 10 (3b) and in NPS EN-3 and draft NPS EN-3. The proposals, as presented, are also in conflict with the East Cambridgeshire Local Plan Vision, its Policy ENV 1 and ENV 2. Policy CS3 seeks, inter alia, to protect and enhance the quality, character, diversity and local distinctiveness of the District's landscape.

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				baseline information (tree and hedgerow surveys), and is not sufficiently robust, secure or proven to be deliverable.	
	Impact on landscape character within Freckenham from changes to the highway Potential for other landscape effects associated with highway works not considered in the landscape and visual assessments	C/O		Provide an assessment of the landscape and visual effects of the proposals as a result of highway works within the Freckenham village and at other locations that have the potential to affect the rural character of the roads and roadside vegetation.	Draft NPS (EN-3), the current NPS (EN-3) requirement to demonstrate regard to public amenity.
	Insufficient detailed information in relation to the mitigation proposals to be confident that the mitigation would be robust, deliverable and effective.	C/O		Provide a landscape strategy for the proposals including a more detailed landscape masterplan at an appropriate scale showing how landscape, recreation, ecological and archaeological mitigation and SUDs would be delivered. Update the LEMP to include all aspect of the mitigation, including management proposals, in sufficient detail.	Requirements for high quality design in NPS-EN1, in particular paragraphs 5.9.8 and 5.10.10. Policy DM13 requires, inter alia, that commensurate provision must be made for landscape mitigation and compensation measures. East Cambridgeshire Local Plan Policies ENV1 and ENV6 seek to ensure the landscape and character of the area is preserved. Policy ENV7 and 8 relate to biodiversity mitigation and ensuring appropriate sustainable drainage.

Policy Context

National Policy Statements

Overarching National Policy Statement for Energy (EN-1)

- 10.17 EN-1 clearly expresses that the design of infrastructure, including renewable infrastructure, should be sensitive to “place” and have “an appearance that demonstrates good aesthetic as far as possible” (para. 4.5.1). EN-1 places significant emphasis on the design process exploring what is possible to achieve for good aesthetic appearance. Is it not sufficient for only the functional parameters (fitness for purpose and sustainability) of the project to have set the parameters of the design.
- 10.18 Landscape and visual impacts in relation to energy infrastructure developments are addressed in Section 5.9 of NPS EN-1. It identifies that landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape.
- 10.19 Projects must 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 (paragraph 5.9.8).
- 10.20 Applicants should further consider how landscapes can be enhanced through landscape management plans (paragraph 5.10.10).

National Policy Statement for Renewable Energy Infrastructure (EN-3)

- 10.21 EN3 provides criteria for “good design” for energy infrastructure, highlighting that Section 10(3)(b) of the 2008 Act requires the Secretary of State to have regard to the “desirability of good design”.
- 10.22 Paragraph 2.4.2 states: “Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology.”

Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)

- 10.23 The Draft NPS (EN-3) is part of the Government's wider Energy NPS review process. Given the possibility that draft EN-3 may be designated before either the conclusion of the examination, or the grant of consent, the Councils consider that it is important that the applicant demonstrates compliance. While not yet in force, NPS (EN-3) is expected to be relevant to the Secretary of State's decision. This is acknowledged by the Applicant in para. 2.1.4 of EN10106, Volume 6 6.2 Appendix 10A [APP-100].
- 10.24 According to paragraph 2.4.2 of both the Draft NPS (EN-3) and the current NPS (EN-3) proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity.
- 10.25 Specific to the consideration of solar photovoltaic generation, landscape, visual and residential amenity is dealt with in section 2.51 of Draft NPS (EN-3):

- 10.26 Paragraph 2.51.2 states that ‘whilst it may be the case that the development covers a significant surface area, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero’.
- 10.27 Paragraph 2.51.3 states that the applicant should carry out a landscape and visual assessment and report it in the ES. Visualisations may be required to demonstrate the effects of a proposed solar farm on the setting of heritage assets and any nearby residential areas or viewpoints.
- 10.28 Paragraph 2.51.4 states that applicants ‘will be expected to direct considerable effort towards minimising the landscape/visual impact of solar PV arrays’.
- 10.29 Paragraph 2.51.5 covers existing trees and hedges requiring that ‘The applicant should have regard in both the design layout of the solar farm, and future maintenance plans, to the retention of growth of vegetation on boundaries, including the opportunity for individual trees within the boundaries to grow on to maturity’. It goes on to state ‘Existing hedges and established vegetation, including mature trees, should be retained wherever possible. Trees and hedges should be protected during construction. The impact of the proposed development on established trees and hedges should be informed by a tree survey or a hedge assessment as appropriate.’
- 10.30 At paragraph 2.49.5 Draft NPS (EN-3) acknowledges that given the likely extent of solar sites it is possible developments may affect the provision of local footpath networks and public rights of way. Applicants are encouraged to minimise as much as possible the visual outlook from existing footpaths.

National Planning Policy Framework

- 10.31 Paragraph 174 states that planning policies and decisions should contribute to and enhance the natural and local environment including by protecting and enhancing valued landscapes and recognising the intrinsic character and beauty of the countryside, and the wider benefits of natural capital and ecosystem services – including the economic and other benefits of trees and woodlands. It is well-established that a landscape does not have to be a ‘valued landscape’ to be afforded protection from inappropriate development.
- 10.32 Paragraph 200 states “Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional”. Paragraphs 201 and 202 detail how harm and public benefits should be weighed in decision making.

Local Plan Policies

West Suffolk

- 10.33 Within West Suffolk local landscape policies are included in the Core Strategy (CS) for the former Forest Heath Council area of West Suffolk and the Joint Development Management Policies Document (JDMPD).

Forest Heath Core Strategy

- 10.34 Policy CS2 Natural Environment states that areas of landscape, biodiversity and geodiversity interest and local distinctiveness within the district will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures. Links between such areas will also be sought. Measures listed include the promotion of Green Infrastructure enhancement and/or provision on all new developments and the promotion of green corridor enhancement, such as improvement projects along the River Lark and Icknield Way.
- 10.35 Policy CS3 Landscape character and the historic environment of the CS requires that development proposals consider the local distinctiveness and sensitivity of landscape character types to change. The policy requires that assessment of development proposals is informed by local Landscape Character Assessment. The policy is clear that all schemes should protect and seek to enhance overall landscape character, taking account of the key characteristics and distinctiveness of the landscape and the landscape setting of settlements.
- 10.36 The policy refers to the Forest Heath Landscape Character Assessment, which replicates the Suffolk Landscape Character Assessment.

West Suffolk Joint Development Management Policies Document

- 10.37 Policy DM13 of the JDMPD also requires that proposals for development should be informed by, and be sympathetic to, the character of the landscape. The policy is clear that Landscape Character Types are identified in the Suffolk Landscape Character Assessment but goes on to state that the 'Type' boundaries are only indicative, being mapped for the whole county at a scale of 1:50,000. Therefore, the character of the site and setting of a proposal should be individually assessed.
- 10.38 The policy requires that all development proposals should demonstrate that their location, scale, design and materials will protect, and where possible enhance the character of the landscape, including the setting of settlements, the significance of gaps between them and the nocturnal character of the landscape.
- 10.39 The policy then goes on require commensurate provision for landscape mitigation and compensation measures, so that any harm to the locally distinctive character is minimised and there is no net loss of characteristic features.

East Cambridgeshire District Council Local Plan, 2015

- 10.40 East Cambridgeshire's Local Plan sets out the vision for the district until 2031. Part of this vision is that the 'overall diversity and quality of East Cambridgeshire's countryside and natural environment will have improved, and the historic environment conserved and enhanced' (p.16).
- 10.41 This includes better access to the countryside and green spaces and for a better quality of life. It is the aim that challenges resulting from climate change will have been embraced and expected that renewable energy production will have increased.
- 10.42 The Local Plan sets out 10 strategic objectives to help deliver the plan's vision. Considered relevant for this proposal in landscape terms are Objectives 4 and 5 which aim to ensure that

- new development is of high quality and sustainable design; that it protects and enhances the quality, local distinctiveness and diversity of the natural, historic and built environment.
- 10.43 Objective 7 aims to reduce the environmental impact of development and vulnerability to the impacts of climate change by (among other measures) promoting the use of renewable energy sources and sustainable construction methods.
- 10.44 Policy ENV 1 refers to Landscape and Settlement Character and requires that development should be informed by and respect the distinctive character area within East Cambridgeshire as defined in the Cambridgeshire Landscape Guidelines, 1991, which still form the baseline evaluation of landscape.
- 10.45 Development proposals should demonstrate how they will create positive and complementary relationships with existing development and how they will protect, conserve and where possible enhance the pattern of historic and traditional landscape features (such as watercourses, characteristic vegetation, individual and woodland trees, field patterns, hedgerows and walls, and their function as ecological corridors for wildlife dispersal), the edges of settlements, visually sensitive natural and man-made features and skylines, key views, unspoilt nature and tranquility of the area, public amenity and access and the nocturnal character of rural areas. Suitable compensation must be provided, if significant harm is unavoidable.
- 10.46 ENV 2 emphasises the requirement for high quality design, which enhances and complements local distinctiveness and local amenity. Design needs to have regard to local context and take advantage of opportunities to preserve, enhance or enrich the character, appearance and quality of an area. All development is required to make efficient use of land, retain existing important landscape, natural and historic features, and include landscape enhancement measures. Development must protect important views into and out of settlements and key views of landmark buildings and provide structure and legibility. Public Rights of Way must be protected.
- 10.47 There must be no significant detrimental effect on residential amenity in the area.
- 10.48 Finally, regard should be had to the East Cambridgeshire Design Guide Supplementary Planning Document, which provides detailed guidance on how design should complement landscape, setting, local architectural traditions, and how sustainable construction techniques can be incorporated.
- 10.49 In principle, the Local plan supports proposals for renewable energy and the wider benefits will be given significant weight. However, consideration will also be given to potential impacts on the local environment and amenity and how significant adverse effects will be avoided. The Council has an expectation that developments for energy generation will remediate potential adverse impacts, especially in relation to visual impact, through careful location, design and landscaping following the design principles set out in the Local Plan.
- 10.50 ENV 6 sets out the criteria against which renewable energy proposal will be assessed. It supports proposals for renewable energy and associated infrastructure, unless the wider benefits would be outweighed by significant adverse effects on the local environment and

landscape, key views, protected species, residential amenity, airfields and heritage assets. Renewable energy proposals will be determined against relevant sections of Policy ENV7 Biodiversity and Geology. ENV6 further stipulates that provision should be made for the removal of facilities and reinstatement of the site, should they cease to operate.

10.51 Light and noise pollution can have a significantly damaging impact on the countryside, on people's living environments and on wildlife. ENV9 states that all applications for development where pollution is suspected must contain sufficient information to enable the Council to fully assess the potential hazards and impacts.

10.52 Proposals will be refused (except in exceptional circumstances, which are detailed), if there are (individually or cumulatively) unacceptable impacts on the natural environment, general amenity and the tranquility of the wider rural area, including noise and light pollution; on health and safety of the public; on air quality; on surface and groundwater quality; on land quality and condition; or on compliance with statutory environmental quality standards.

10.53 The plan refers to National Policy and states that 'all development should aim to conserve heritage assets in a manner appropriate to their significance and provide a positive response to the historic character and local distinctiveness of the district.'. It proceeds to explain that the 'significance of heritage assets lies in how they are valued in terms of their special historic, archaeological, architectural or artistic qualities'; and that 'the contribution of the setting of heritage assets to the appreciation of these qualities will be carefully considered, alongside other more direct impacts of development proposals'. (p83)

10.54 ENV11 details requirements for development proposals within or affecting a Conservation Area, such as a particularly high standard of design. Developers will have to show how the relevant Conservation Area Appraisal SPD (if available), has informed the proposals.

10.55 ENV12 states that proposals will not be permitted, if they would have a detrimental impact on the visual, architectural or historic significance of a Listed Building.

10.56 ENV15 refers to historic parks and gardens. It states that proposals, which affect the significance of a Historic Park or Garden will not be permitted, if they would have a detrimental impact on its character, amenity or setting. Management plans may be required for the long-term preservation of the asset, the promotion of good land management and best use of resources.

10.57 COM 5 focuses on strategic networks of biodiversity and green infrastructure and on sites of a strategic nature, and states that proposals that would cause loss of or harm to the existing green infrastructure would not be permitted unless the harm is outweighed by the wider benefits of the proposals. It also sets out the conditions under which proposals for new and improved strategic green infrastructure would be supported by the Council. These include the increased public access for quiet recreation and increased provision for biodiversity. The proposals would also need to be consistent with the Cambridgeshire Green Infrastructure Strategy (2011), which provides a framework for considering strategic green infrastructure in East Cambridgeshire, and aim to achieve Natural England's Accessible

Natural Greenspace Standards (ANGSt). They should not have adverse effects on the locality, existing buildings, designated sites, residential amenity or generate significant amounts of additional traffic. New development will be expected to contribute towards the establishment, enhancement and ongoing management of strategic green infrastructure in accordance with Policy GROWTH 3 Infrastructure requirements.

Other Relevant Local Policy

- 10.58 Cambridgeshire Landscape Guidelines, A Manual for Management and Change in the Rural Landscape, Granta editions 1991. This document describes a series of ways in which new, richer and more diverse landscapes can be developed. The aim of the document was to reverse the decline of landscapes in Cambridgeshire through small creative actions which would act cumulatively. This document remains relevant today and is referred to in the relevant East Cambridgeshire local plan policy above. It also has relevance in West Suffolk, where landscapes such as the fens and chalklands straddle the boundary between the counties.
- 10.59 The East Cambridgeshire Design Guide Supplementary Planning Document (Adopted 2012) refers to the Cambridgeshire Landscape Guidelines and sets out criteria against which development proposals will be assessed.
- 10.60 The East Cambridgeshire District Council Renewable Energy (Commercial Scale) SPD (Adopted 2014) provides guidance on the District Council's approach to larger 'standalone' renewable energy schemes which are of a commercial scale.
- 10.61 The Cambridgeshire Green Infrastructure Strategy (2011) is designed to assist with the delivery of Green Infrastructure in the county, to provide social, environmental and economic benefits now and in the future and has the objectives to reverse the decline in biodiversity; mitigate and adapt to climate change; promote sustainable growth and economic development; and to support healthy living and well-being.
- 10.62 Forest Heath District Council: Accessible Natural Greenspace Study January (2017), which aims to provide evidence on appropriate accessible open space and to support the planned growth in the district.
- 10.63 Neighbourhood Plans and preliminary studies, which could be relevant:
- 10.64 Fordham Neighbourhood Plan 2016 – 2036, Adopted 2018
- 10.65 Newmarket Neighbourhood Plan 2018-2031, Adopted 2020
- 10.66 Isleham Neighbourhood Plan 2021 - 2041, Adopted 2022 (see Locally Important View IV11 from Beck Road to the Ark)
- 10.67 Freckenham Neighbourhood Plan Parish Landscape Study: Character and Sensitivity Appraisal, 2020
- 10.68 Conservation Area Appraisal SPDs and Maps
- 10.69 Burwell High Town Conservation Area Appraisal SPD (2010)
- 10.70 Burwell North Street Conservation Area Appraisal SPD (2010)
- 10.71 Barton Mills Conservation Area Appraisal (2008)
- 10.72 Chippenham Conservation Area Map

10.73 Freckenham Conservation Area Appraisal (2010)

10.74 Newmarket Conservation Area Appraisal, Consultation Draft (2009)

Assessment and Presentation of Adverse Effects

10.75 The Councils are concerned that, due to the way evidence is presented the ES assessment tends to under-estimate impacts.

10.76 Concerns remain with regards to the visualisation of the visual effects of the scheme, and some judgements made as part of the landscape and visual assessment process. Elements of the scheme, such as proposed road improvements, within settlements and in the countryside, have not been included in the Landscape and Visual Impact Assessment (LVIA) [APP-042], despite their potential to have adverse effects (such as urbanisation, loss of vegetation and visual amenity) in the rural landscape.

10.77 Cumulative effects with other schemes (see section 10.11 of [APP-042]) do not appear to be fully integrated within the assessments of landscape and visual effects.

Methodology

10.78 The Landscape and Visual Appraisal is based on the Guidelines for Landscape and Visual Impact Assessment (GLVIA), 3rd Edition, 2013. However, the Councils disagree with the method adopted by the applicant to interpret the Guidelines and the resulting methodology.

10.79 The classification scales within the assessment tables on pages 5-9 of the methodology (APP-102) are biased towards low (containing very low, but not very high) with the potential result that assessed effects of the scheme are reduced.

10.80 The Councils consider that Susceptibility does not depend on the criteria listed, but on how well the landscape can absorb the proposal without undue harm (see Guidelines, p.88f). In order to establish the susceptibility of a specific area or a specific landscape to change caused by a specific development the criteria need to be landscape based and should include aspects like landform, location (valley – valley side – plateau), characteristic vegetation, local landscape character, tranquility and other perceptual qualities. For example: a flat, well wooded landscape with few or no PROWs would be better able to absorb pockets of solar farms than an undulating, open agricultural landscape with far reaching views with a network of PROWs.

10.81 The method of determining sensitivity does not adequately allow for the combination of value and susceptibility in both landscape character and visual aspects.

10.82 As stated for the PEIR, the information included in the visual baseline appendix goes beyond baseline description to include assessment, blurring the boundaries between baseline studies and assessment. Whilst it might be convenient to group this information together with the baseline description, the status of this information should be made clear through appropriate labelling.

Baseline Information

10.83 The Councils disagree that sufficient information on the landscape has been collected and sufficiently conveyed. For example, information on existing main vegetation patterns is

hidden in the Figure 10-3 Designations (APP- 193), the tree constraints mapping is incomplete (page 10 is repeated on sheets 10-19) and does not provide sufficient accurate information on trees. A survey to the standard in BS5837:2012 Trees in relation to design, demolition and construction, as requested at the PEIR has not been provided and the hedgerow survey in Appendix 8 C (APP-079) appears to be incomplete.

- 10.84 It should be noted that on the 21 September 2022 East Cambridgeshire District Council added a Tree Preservation Order (TPO reference: E/08/22) to the tree avenue along Chippenham Road between Snailwell and Chippenham.

Landscape Character Assessment

- 10.85 The Councils welcome that the applicant has reviewed the published landscape character assessments which describe the landscape at the various scales. However, the Councils disagree with the method adopted by the applicant to assess the scheme against these published areas rather than interpret the information and use it to inform the description of the landscape affected by the proposals. The assessment of landscape character is mechanical in its approach and is overly complicated as a result.
- 10.86 GLVIA 3 (section 5.14) recommends that existing landscape assessments at the different scales can be used to form the basis for LVIA; those at National or Regional scales provide context and indicate the key characteristics that may be apparent in the study area, while local authority assessments provide more detail on the types of landscape in the study area. It suggests that the descriptions and definitions of key characteristics can be used to inform the description of the landscape that may be affected by the proposals.
- 10.87 GLVIA goes on to explain that existing assessments may need to be reviewed and interpreted to adapt them for use in LVIA 'for example by drawing out more clearly the key characteristics that are most relevant to the proposal' (GLVIA section 5.15)
- 10.88 Appendix 10D sets out extracts from the published assessments and related studies however it does not draw out the key characteristics of the National Character Areas (NCA's) nor those in the Regional, and County typologies and the Freckenham Parish Character Areas that are actually present in the study area and which are therefore likely to be affected by the scheme.
- 10.89 The Councils welcome the local landscape character assessment undertaken by the applicant (Appendix 10 E). However, the Councils are concerned that the areas identified do not accurately pick up the subtle changes in landscape character which occur in the study area and it is not clear how the lines of the Local landscape Character Areas (LLCA) have been drawn to reflect the published landscape areas and typologies. The LLCA descriptions, whilst listing key characteristics, do not describe how the LLCA align with the broader scale areas and typologies or the Freckenham Parish character areas. Whilst the LLCA makes an attempt in the sections titled 'other factors of landscape value' to describe the degree to which each LLCA is representative of the published landscape assessments, it is not clear which area or typology, nor is it clear which key characteristic features are represented.

10.90 The assessment of effects at the various different landscape scales leaves a confusing picture about the impacts of the scheme. At the National and Regional scales, the assessment puts too much emphasis and weight on the localised scale of the changes in relation to the size of the individual landscape character areas and on the retention of features in the landscape without reference to the legibility of those features. The assessment does not adequately address the overall magnitude of change that would occur to the landscape overall across all the character areas/types.

Visual Assessments

10.91 As stated in the representations responding to the PEIR, the descriptions of the existing views skip to the detail of the views without properly setting the scene; for example, neglecting to note if it is a *rural view of open countryside*. The descriptions only extend as far as they can be related to the proposals, often from the first sentence. They do not explain, which qualities of the landscape, if any, contribute to the view. The GLVIA suggests that the nature, composition and characteristics of the existing view are described and goes on to give examples of visual characteristics as the nature and extent of the skyline, aspects of visual scale and proportion, especially with respect to any particular horizontal or vertical emphasis, and any key foci.

10.92 The Councils welcome the considerable number of viewpoints that have been assessed within the ES which in general is adequate for the large scale of the proposed development. However, the assessment is not consistent throughout the LVIA viewpoints. Some viewpoints are difficult to locate as they are not on the viewpoint maps (Viewpoints 2C, 4A, 8A, 9A, 11B, 13A, 17A, 34A, 37B, 39B, 39C, 42A, 59). Some viewpoints are oriented in such a way that they do not convey the full extent of the effects from that location (Viewpoints 13, 13A, 33, 33A, 45, 46, 51). Some viewpoints look the wrong way (Viewpoints 33, 55).

10.93 Despite the large number of assessed viewpoints, there are views which have been omitted. Examples in East Cambridgeshire would be the view from Fordham Road north of Snailwell looking north at a field entrance towards Sunnica West B; similarly, from Dane Hill Road (B1085) looking south/south-east from residential receptors and road onto parcel W15 of Sunnica West A; further afield, views from the edges of Ely and from Ely Cathedral. In West Suffolk views from north of Elms Road in Red Lodge have not been considered although properties in this location are clearly visible from the DCO site.

10.94 Visual receptors do not reflect previous requests by SCC to demonstrate the impact for other users of the Public Right of Way U6006. Visual impact height remains at 1.6 metres and additional heights, such as for equestrian use, are not included as previously requested. This does not give a true impact for all users. (APP-216, viewpoints 15 to 16).

10.95 Clarification is required in relation to the height of the security fence around the site. The ES, chapter 10 (APP-042) section 10.3.9f, is clear that the security fence would be a 2m high 'deer style' fence, and this appears to be an assumption in the landscape and visual assessment. During the site visit (ASI1, 29.10.22) in relation to parcel W15, the applicants representative stated that the fence would be a 3.5m high deer fence. The councils consider

that the effects of a 3.5m high fence could be significantly different from those of a 2m high security fence.

Tree Constraints

- 10.96 The tree constraints report appendix 10B is incomplete as map 10 only has some of its information visible the rest of the page being blank, maps 11 to 19 are identical and are a blank page with only the red line boundary plotted therefore this cannot be assessed. As these maps are the main ones that cover the ECDC area it is not possible to make any assessment of the local impact at this time.
- 10.97 There is no proposed site plan with the tree locations plotted to show the relationship between the development and the retained trees (Root Protection Areas (RPA) and their proximity to the areas of construction) which should be included in a British Standard BS5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS5837) report. The report is based on estimates of tree diameters based on approximate tree height and crown spread information taken from Ordnance Survey base mapping, the National Tree Map created from aerial photography this has also been used to decide on the quality of the trees in conjunction with walk-over assessment of publicly accessible areas this appears to be a lot of guess work that cannot be confirmed sufficiently as most of the areas requiring assessment are not publicly accessible. There is no information indicating which trees or how many will be impacted/removed through this development so no assessment of the development impact on the existing vegetation can be assessed or if any high value tree might require additional long term protection/consideration via Tree Preservation Orders. A BS5837:2012 based Arboricultural Impact Assessment (AIA) would be the best solution to provide the relevant tree information to allow assessment of the proposed scheme.
- 10.98 There appear to be trees omitted from the landscape master plans relating to sites EC01 W01 and W03 and hedging omitted from EC01, EC02, E05, W01, W02, W06, W08, W10, W11 and W12. The landscape master plans have omitted to show some significant tree areas and hedges that would border the sites and could be impacted by the development and new planting such as those adjacent W03, W08, W15, EC04 and EC05. There is no annotation for existing hedging that will be retained without the need for new planting, the only hedge based annotation covers existing and new hedges with no differentiation between the two.
- 10.99 The Weirs Drove substation option 2 states that only parts of groups G9 and G10 will need to be removed yet the supplied plan indicates that all of group G10 which is recorded as category B will be removed. It is not clear which is correct: the text in the report or the plan.
- 10.100 The new cable route in relation to the proposals for connecting to the national electricity transmission system appears likely to impact upon existing trees and hedgerows but there is no information relating to the extent of the impact whether it will equate to the removal of the existing features and wildlife habitat or not. Without some information on this it is not possible to assess these changes therefore the only option is to object to this due to lack of sufficient/any information.

10.101 Due to the lack of detail/specifics, missing information and errors as indicated above it is currently not possible to assess the local impact of this proposal on trees.

Construction Phase Impacts

Overall Impact

10.102 Even taking into account the embedded mitigation measures within the design, the Applicant's Environmental Statement considers that construction works are likely to result in significant adverse residual effects on the local landscape character and on visual receptors within and adjacent to the site. This is due to changes in the surface landform, landcover, presence of machinery and the associated activity. The scale of change, the physical extent and the duration of the construction activities would also each have a significant impact on the character of place during this period. The Councils agree that this would be the case.

Positive

10.103 No positive impacts on landscape or visual receptors during construction have been predicted in the ES, and would not be expected, as construction works are generally disruptive in nature. The construction works may provide the basis for future benefits through the conversion of arable to grassland but can only do so if the restoration objectives are clearly understood, and methods of achieving them are properly embedded into the construction programme, rather than being an adjunct to it, or an afterthought.

Neutral

10.104 When considering the project as a whole and based on the assessments in Appendix 10G, neutral effects on landscape character across the study area have been predicted, however in the main this is where no development is proposed. Distance and intervening vegetation are in some cases also considerations for these findings.

10.105 The Councils agree that the construction effects would be neutral on the following assessed landscape character types and areas, because of their distance to the scheme and intervening structures and vegetation.

10.106 Landscape Types 'Settled Chalklands' and 'Valley Meadows and Fens' (east of the village of West Row) (Suffolk County Landscape Character Assessment)

10.107 Landscape Character Type 'River Valley' (east of West Row) (Norfolk and Suffolk Brecks Landscape Character Assessment)

10.108 The Councils do not agree that two of Freckenham's Village Character Areas are not impacted by the scheme and assessed as neutral. There are changes to highways suggested to the junction in the heart of Freckenham village and on Mildenhall Road, which would have impacts by themselves. They further indicate that construction traffic is envisaged to be routed through Freckenham, which would impact on the tranquility of the village and therefore have perceptual effects on all village character areas. In combination these effects should be considered significant adverse.

10.109 The Councils further consider that construction phase effects on Local Landscape Character Areas (as defined by the applicant) cannot be considered neutral, where

construction traffic occurs and is likely to adversely impact on tranquility. This is expected to be the case in LLCAs 23a 'Chippenham' and 19a 'Fordham Estate Sandlands'.

10.110 In LLCAs 17 'Fordham Chalklands' and 34 'Soham' cable routes would be constructed, which could increase the adverse effects for these LLCAs.

10.111 It must further be considered that the adverse effects on Chippenham Fen during the construction period would not be neutral, as the works at Sunnica West B could affect the sense of tranquility experienced at Chippenham Fen.

Negative

10.112 Significant adverse effects on landscape receptors and character during construction are recognised in the ES to occur on a number of landscape character types, which are listed in Table 18-1 Summary of significant residual effects during the construction phase of the Scheme (ES Chapter 18: Summary of Significant Environmental Effects).

Major Adverse Landscape Effects

10.113 Major adverse Landscape effects are expected in all Order Limits Areas as defined by the Applicant, with the exception of Burwell National Grid Substation Extension. Option 2, which would be located on a greenfield site close to residential areas is considered to result in Moderate Adverse effects, as vegetation loss would be limited. This fails to consider that the landtake for Option 2 is on greenfield land. Option 3 would be located within the BESS areas of Sunnica West A, Sunnica East A and Sunnica East B, where the construction phase effects are already considered to be Major Adverse.

10.114 Aligning with the assessment for all Order Limits Areas is the assessment for Major Adverse Landscape Effects on Local Landscape Character Areas (LLCAs) 13 'Elms Sandlands Mosaic/Estate Sandlands Mosaic/Elms Farmland' and 24 'Lowland Estate Chalkland'. LLCA 13 contains Sunnica East B, LLCA 24 hosts Sunnica West A and B, as well as connection cable routes.

10.115 LLCA 11 'East Fen Chalklands' would host Sunnica East A and a small section of cable route. It is not clear, why the effects on this area are considered Moderate Adverse rather than Major Adverse, despite the development taking up approximately one third of the LLCA. The existing characteristics of Lee Farm are, despite its structures and water reservoirs, part of the fabric of the agricultural landscape, which would be fundamentally altered by the development. The Councils consider that the effects on LLCA 11 should be considered Major Adverse, especially when compared to effects expected for LLCA 21 'Snailwell' and LLCA 36 'Burwell Fen', where intra-project effects are assessed as Moderate Adverse.

10.116 The Councils share the view with the Applicant that within the DCO limits the impacts on the landscape would be in the highest category.

10.117 The predicted major adverse landscape and visual effects resulting from the construction of the proposed development are unacceptable in several areas:

Sunnica West A

- 10.118 The historic landscape around the Chippenham Registered Park and Garden and the historic Avenue leading to the park provides the setting to these historic features and is also of historic significance in its own right.
- 10.119 Owing to the gently undulating landform this landscape is also highly visible from The Limekilns (see VP38) and LLCA 26 'The Limekilns and Gallops'. This is an important site for the Newmarket Horse Racing Industry, and is also used for recreation by local residents in the afternoons when access is permitted.
- 10.120 The Councils do not agree that the effects on the LLCA 26 'The Limekilns and Gallops' resulting from the proposals would be minor. The Councils consider that the geographical extent of the works at Sunnica West A combined with the strong visual connections to the Limekilns would result in significant adverse effects on the landscape character of LLCA 26. The Councils do not agree with the statement that no significant harm occurs, because no physical activity would take place within the LLCA. The open countryside views towards the north are an integral part of the character of LLCA 26. The existing railway line and road corridor are located in the valley floor and well-integrated by existing vegetation. They do not detract from the overall character of the LLCA.
- 10.121 The proposals for Sunnica West A, as they stand, would have multiple significant adverse effects, namely on the Setting of Chippenham Park, the legibility of The Avenue and other historic features (woodland plantations) within the landscape as well as the legibility of the historic landscape itself, significant adverse visual effects on receptors at The Limekilns and PROW (bridleway) 204/5, major adverse effects (during construction) on views from La Hogue Road both looking south from the edge of Chippenham Park and when exiting La Hogue Farm (which has a farm shop and café and is considered a leisure destination).

Sunnica East B, Within and Alongside the U6006

- 10.122 The U6006 is an important landscape, recreation, and ecological feature and potentially also historically significant (Icknield Way); while classified a road, the U6006 or Badlingham Lane, between Elms Road and Newmarket Road, does not present as a road, but as a well-used footpath, with diverse habitats and, particularly in the southern stretch, mature trees and shrubs on either side, forming a substantial tree belt. Further north, the character is more open, with views into the rural landscape on either side, before it becomes more confined again approaching the residential properties at the edge of Worlington. As a whole, this U road provides a pleasant and varied walking experience, which is one of the best within the locality. The current proposals are not entirely clear but it appears that they include the use of this road as an access to some of the solar plant parcels and as such would have a devastating effect on the character of the route, its amenity value, and its value as a well-connected wildlife corridor.
- 10.123 Elms Road is a small, secondary road, with long sections where vegetation is present on either side. Proposed roadworks would be likely to affect the roadside vegetation, and potentially the width and kerb line of the road changing its rural character. The existing

vegetation is essential for the mitigation of the effects of the development proposals in this area but is on its own not robust enough to sufficiently screen the BESS in E18. The Councils disagree with the statement made in the assessment of visual effects for the construction phase (APP-106, Appendix 10H, VP19), that the construction vehicles would reflect views of vehicles using the road at present and consider that the impact and resulting landscape and visual effects would be greater than assessed.

Sunnica East A

- 10.124E05, located within the open landscape west of Lee Brook towards Isleham: Once Beck Road crosses over Lee Brook and turns north-west towards Isleham, the landscape character begins to transition. While still within the chalklands, vegetation cover is much reduced and the views are far reaching, leading into the Fens, which lie beyond Isleham. From a landscape scale design point of view, Lee Brook forms a natural border by which the development should be confined. The view of construction activity across E05 would represent a significant change.
- 10.125The area north of Freckenham, identified as 'Rural 2: North' in the Freckenham Neighbourhood Plan Parish Landscape Study: Character and Sensitivity Appraisal, 2020, is also predicted to experience Major Adverse Effects during Construction. The reason for this is that the construction activity would be located across most of this area, and substantially change its character.
- 10.126Taking intra project effects into account, major adverse Visual Effects during the construction period are predicted within the ES from viewpoints on the River Lark (VP1), around Isleham (VP5), Beck Road (VP11and 11A), Lee Farm (VP12), along the U6006 (VP15A, VP15B, VP16) along Elms Road (VP18), View from PROW W257/003/0 (VP20), from residential properties along Badlingham Road (VP21A), from the view south on La Hogue Road, south of Chippenham Park (VP 32), from La Hogue Road at junction with La Hogue Farm (VP33), and from PROW 204/1 north of Snailwell (VP45).
- 10.127The Councils further consider that the following viewpoints should be judged as experiencing major adverse visual effects (rather than moderate adverse as stated in the ES):
- 10.128View west from Ferry Lane (VP 2C): It would appear that no hedges have been identified/mapped in this part of the site but are being relied on to soften views during construction and year 1. The Tree Constraints Plan shows intermittent trees along Ferry Lane. The proposals for additional tree planting along Ferry Lane could potentially obstruct the long-distance views to the Ark and St Andrew's Church in Isleham.
- 10.129View south-east from The Ark (VP4): The setting of the Ark within the wide, open landscape south of Isleham, should be expected to form an integral part of the worship experience for the visual receptors. Therefore, the overall sensitivity for this viewpoint should be considered HIGH instead of MEDIUM. In addition, views to the Ark are significant as noted in some of the assessment commentary – this (along with Isleham Church) forms a landmark from the surrounding landscape.

- 10.130 View north-west from Ferry Lane (VP12A): The baseline assessment appears to be inconsistent with that for VP5. The function of the two roads for motorists is essentially the same. The visual baseline should treat both roads in the same way. The overall assessment for the sensitivity from this viewpoint should be HIGH, rather than MEDIUM (as per ES), as it is from an elevated position, affording long distance, substantially rural views and features, including the Ark mentioned, combined with slower travel (junction); the construction works including towards the BESS would dominate the view. A HIGH sensitivity would result in the assessment of the visual effects as Major Adverse.
- 10.131 View north from B1102 (VP13): Although the analysis is acceptable, it would have been useful to have a view towards north-east or east towards Sunnica East B from this VP. The assessment for this viewpoint does not take account of views to the east, north-east and towards ECO3 and E12. Had this been assessed the visual effects may have been greater.
- 10.132 View south from B1102 (VP14): The Sensitivity is assessed as MEDIUM in the ES, based on high value and medium susceptibility. However, this is inconsistent with the assessment of viewpoint 17A. If the sensitivity was assessed as high this would potentially increase the construction and year 1 significance from Moderate Adverse to Major Adverse. (Refer to photomontage 14)
- 10.133 View north-east from U6006 (VP16): Views towards the construction of the BESS and substations in E18 are not assessed. It is considered that these elements would most probably be visible behind the line of pines, and that this would increase the significance of the effects to Major Adverse.
- 10.134 View north from PROW W257/003/0 (VP20): The cumulative effects resulting from the construction of solar arrays at E20-E22 and disruption to the footpath during construction of the cable route, lead to major adverse visual effects.
- 10.135 View north-west from Worlington Road (VP22): The close-range construction of the solar arrays in E24 and E25 would result in significant adverse visual effects when travelling towards Worlington.
- 10.136 View north-west from La Hogue Road at junction with La Hogue Farm (VP33): The construction activity within W10 and W12 in combination with the construction of Cable Routes A and B also potentially visible at the same time would lead to major adverse visual effects.
- 10.137 View north-west from PROW (footpath) 204/1, north of Snailwell (VP45): During the constructions phase the combination of construction activities for Sunnica West Site B and Cable Route B would result in major adverse effects on the views from this footpath.
- 10.138 View from the Limekilns (VP38): The extent of Sunnica West A becomes particularly noticeable from the elevated Lime Kilns, leading to significant adverse effects, not just during construction, but during all phases of the project. Successful visual screening is not only hard to achieve, because of the undulating landform, but the substantial additional planting required to achieve sufficient screening would be in conflict with the open character of the historic landscape around Chippenham Park and the defined Avenue that forms a

fundamental part of the Historic Park and Garden. It should also be considered that VP38 is not an isolated viewpoint, but representative for a wide area within Limekilns, resulting in sequential effects.

- 10.139 View south-east from PROW (bridleway) 204/5 (VP41), south-east of Snailwell: During construction machinery moving across W03, and between W03 and Chippenham Road would be visible, resulting in significant adverse visual effects.
- 10.140 View south from Fordham House (VP48): During construction there would be close-range views of excavation and implementation of Cable Route B which would result in significant adverse visual effects

Moderate Adverse Landscape Effects

- 10.141 Moderate Adverse Landscape effects are predicted on Freckenham NP's area 'Rural 3: East' in the Freckenham Neighbourhood Plan Parish Landscape Study: Character and Sensitivity Appraisal, 2020.
- 10.142 Moderate Adverse Intra Project Effects are assessed in the ES for the County Landscape Character Type 'Rolling Estate Chalklands' (Suffolk County Council Landscape Character Assessment), which spans the majority of Sunnica East A, the north-eastern part of Sunnica East B, all of Sunnica West A and B and considerable stretches of connecting cable routes.
- 10.143 The ES further acknowledges Moderate Adverse effects for the East of England Framework 'Lowland Village Chalklands'.
- 10.144 There are widespread Moderate Adverse visual effects, which include views from the villages of Worlington, West Row, Isleham, Snailwell, Burwell and other locations such as the Limekilns (VP38). The Councils consider that the accumulation of Minor and Moderate Adverse Effects around Worlington (LLCA 8), between Freckenham (LLCA 12) and Isleham (LLCA 10) and around Snailwell (LLCA 21), result overall in Major Adverse Effects, which require changes in the proposals and more robust mitigation measures.

Minor Adverse and Negligible Effects

- 10.145 The Councils do not agree with the assessment of effects of the scheme on the National Character Areas (NCA), which are assessed as Negligible Adverse throughout all areas, except for 'NCA 87: East Anglian Chalk' and 'NCA 85: The Brecks', for which intra-project effects are assessed as Minor Adverse. The Councils consider that the ES has largely based its assessment on the land take of the scheme in relation to the size of the NCA, rather than establishing how representative the affected areas are for each NCA and what significance should be awarded to the loss of landscape features and change in landscape character, taking into account their rarity within the NCA.
- 10.146 The same applies to the Landscape Areas of the East of England Framework, the landscape types of the Suffolk Landscape Character Assessment and the Landscape Character Types of the Norfolk and Suffolk Brecks Landscape Character Assessment. The latter would have to accommodate all of Sunnica East B, within areas that are representative of the LCT 'Brecks Arable Heathland Mosaic'.

10.147 Given the disruption to tranquility that would be expected within the villages during the construction period, and the duration and geographical extent of this disruption, the Councils consider that these impacts, which individually might be considered to be Minor Adverse, would become more significant in their accumulation and their impact on local tranquility.

10.148 Because of the visual connectivity with the DCO area the landscape character of LLCA 26, 'Limekilns and the Gallops', is considered by the Councils to be significantly affected by the proposals. The sense of place would change from an equine landscape at the edge of a rural landscape to an equine landscape on the edge of an industrial construction site (The ES considers the effects on LLCA 26 as Minor Adverse).

Impacts on Trees and Hedgerows

10.149 With a project of this scale in a landscape with a considerable amount of vegetation in some areas, some tree and hedgerow losses must be expected, especially during the construction phase, although it is noted in the LEMP (APP-108) section 1.6.14 that retention of existing trees is listed as an impact avoidance approach. The extent of impacts on trees and hedges is unclear, and there is currently no tree survey as would normally be expected to inform a project such as this to demonstrate the effects of the proposals on trees. The surveys of hedges are incomplete and therefore unreliable. There is no estimate of the number of trees that are likely to be affected by the proposals. The draft DCO requirements would not sufficiently protect trees but allow for uncontrolled tree and hedge removal and tree works to be undertaken including on protected trees.

Operational Phase Impacts

Positive

10.150 No positive effects on landscape character across the study have been predicted, and the proposals are not predicted to result in any positive effects on the visual environment.

Neutral

10.151 When considering the project as a whole and based on the assessments in Appendix 10G [APP-106], neutral effects on landscape character across the study area have been predicted, however in the main this is where no development is proposed.

10.152 Within the extents of the DCO site, long term neutral effects are predicted in some locations where the cable route would pass through. In these locations, by year 15 any mitigating vegetation would have matured.

10.153 Neutral effects are predicted in LLCA 17 Fordham Chalklands. This is based on the presumption that there would be no development within this LLCA. However, this is not the case as a short section of cable route traverses the LLCA at its southern end.

10.154 Neutral effects have also been predicted within the village of Freckenham, although the assessments do not appear to have taken into account the proposed highway works at the junction of The Street and Mildenhall Road which potentially could have a residual effect into the long term if unsympathetic highway works are undertaken.

*Negative**Significant Adverse Effects*

- 10.155 The assessment of operational effects at year one shows there to be significant adverse effects on landscape character across the full 981 plus hectare extent of the DCO site. This is assessed as Major Adverse for the majority of the site, notable exceptions being Sunnica West site B and Burwell option 2 where the significance is assessed to be Moderate Adverse. The Councils consider that the changes to both these areas result in Major Adverse Effects that persist into the operational phase as the changes experienced would be long-term or permanent.
- 10.156 The assessment indicates there would be significant adverse effects across the wider landscape in particular relating to the County level 'Rolling Estate Chalklands' landscape character type, but also relating to both the 'LLCA13 Elms Sandland Mosaic' and 'LLCA24 Rolling Estate chalklands' as well as much of the northern (Rural 2) and eastern (Rural 3) side of the Parish of Freckenham. In addition the Councils consider that the accumulation of Minor Adverse Effects around Worlington (LLCA 8), between Freckenham (LLCA 12) and Isleham (LLCA 10) and around Snailwell (LLCA 21), result overall in significant Adverse Effects, which require changes in the proposal and more robust mitigation measures.
- 10.157 The scheme would be widely visible from the surrounding countryside with adverse effects to the visual environment of local residents, footpath/recreational users, motorists and visitors as demonstrated in Appendix 10H [APP-107] Visual Effects. The assessment suggests that the visual effects would be significant in year 1 of operation from a large number of viewpoints as listed in the Summary of Significant Environmental Effects (APP-050). These particularly relate to the proposals at Sunnica East A and Sunnica East B. The Councils also consider that effects from viewpoints VP2A, VP2B, VP14, VP14A, VP21, VP24, VP25, VP37, VP40 would also likely be significant.
- 10.158 The assessment of landscape and visual effects takes into account the change in land use across the DCO site from farmland to solar infrastructure and other factors such as the changes in massing, uniformity and colour tonal changes associated with this. The assessments place significant weight in that key feature in the landscape, in particular existing hedges and trees, would have been retained. Nevertheless, residual significant effects would persist into the long-term.
- 10.159 At year 15, the assessment of operational effects shows there to be significant adverse effects on landscape character across the extent of the DCO site with the exception of Sunnica West site B. The significance of the effects is predicted to be Moderate Adverse.
- 10.160 At year 15, it is predicted that the visual effects would persist but would have reduced to the extent that they are not significant. The premise for the reduction in significance is in the main based on the establishment of the mitigatory planting proposed such that the hedgerows and trees would be taller than in year 1 and provide screening to the solar panels. The Councils do not agree that the landscape visual effects of the proposals at year 15 can be dismissed as insignificant. It is the Councils' view that there is not sufficient detailed

information in relation to the mitigation proposals to be confident that the mitigation would be robust enough, deliverable and effective. The landscape mitigatory planting is described in the LEMP (APP-108). Sections 1.7.33-41 deal with hedgerow and tree planting. The species diversity is very restricted in relation to both hedgerows and tree/woodland planting and does not take into account the changing landscape character across the DCO site. The landscape masterplans are drawn at a scale that does not adequately demonstrate the type of planting or the width of tree belts/woodland, and the proposals for establishment and future management are both sketchy and contradictory such that they cannot be relied upon. For example, section 1.7.35 suggests that hedges would be allowed to grow tall and wide however, this is contradicted in section 1.8.10 which suggests that hedgerows would be maintained at between 2-3m.

- 10.161 The ES draws on a number of published landscape character assessments to describe the DCO site and surrounding landscape. This is a transitional landscape where the Fens meets the broad band of chalk on which the thin sandy deposits of the Brecks lie as illustrated on the National character area plan APP-195 and explained in the West Suffolk Landscape Character Assessment (APPENDIX 35) (page 5). But the landscape, most notably, whether reminiscent of the fens, the chalk or the brecks has a rural character, the main land use being agriculture. The proposals would introduce new solar infrastructure, electricity substations and battery storage which would change the land use and character of the land from rural to industrial. This would have a negative effect on placemaking for many of the users of this part of East Cambridgeshire and West Suffolk. The Councils consider that the proposed development along with the limited mitigation proposals in the LEMP would lead to the widescale transformation of this rural landscape to a new solar landscape with a very different and potentially degraded landscape character of major adverse significance.
- 10.162 This significant change to the rural landscape is illustrated from The Ark, on the edge of Isleham (VP 4). ‘The horizontal massing of the solar panel frames and the upper parts of the solar stations across E05 would be visible at close range, along with the perimeter fencing’. The description in the ES goes on to describe the massing and change of land use to be ‘an extensive change to the view’.
- 10.163 The assessment predicts that from the Ark at year 1, visitors and church users would experience a Moderate Adverse visual effect. The Councils consider that the setting of the Ark with its extensive open views of the countryside is an integral part of the experience of attending worship. As such the susceptibility of the receptor is considered to be at least medium (APP-105 p6). Even with medium sensitivity, a high magnitude of impact, as predicted (APP-107 p3), would result in Major Adverse effects.
- 10.164 At year 15, the assessment suggests that ‘the proposed planting along the edges of E05 would have established and be in leaf. This would screen the solar panel frames, solar stations and perimeter fencing, as well as truncating longer views across the landscape’. The predicted magnitude of change is medium, tempered by the vegetation that would, according to the assessment ‘improve the scenic quality of the view’. The Councils consider

that the planting in this location would truncate the existing view changing the setting of the Ark and the experience of the users. The significance of the effect would be higher than predicted. An alternative approach would be to reduce the extent of the panels (potentially to an appropriate historical field boundary) providing a more substantial set back so that a more creative and appropriate landscape buffer can be provided.

- 10.165 The truncation of open views is a theme throughout the year 15 visual assessments. This is generally an open landscape; the openness is a key feature to varying degrees within the Fens, the Brecks (excepting the forest) and the more rolling chalk landscapes. There are many rural views across the landscape from higher points or where the land rises slightly. Tree and hedgerow planting is used to provide visual screening to the proposed solar infrastructure, and away from roads, and footpaths this is an effective tool, particularly where planting can be related to the existing landscape pattern and the new planting makes a contribution to the texture of the landscape. However, where screen planting is used along roads, footpaths and in locations with long views to mask solar infrastructure the open character of the landscape as experienced by the user would be impacted. For example, the view over the brow of the hill from PROW204/5 (VP41) to the next ridge would be increasingly truncated as the proposed mitigation woodland to the north-west of parcel W03 gradually matures. The same woodland would also potentially (depending on the height it achieves) block the existing views from The Limekilns to Ely Cathedral, conflicting with ECDC Local Plan Policy ENV1.
- 10.166 Truncation of views at Sunnica East A and B would also result in loss of views to local landmarks. For example, to Isleham Church and the Ark from VP2C, of Freckenham Church from VP3, and of the Ark from Beck Road (not a VP in the ES, but identified as an important view in the Isleham Neighbourhood Plan).
- 10.167 A significant change would also be experienced from Golf Links Road (VP 24, 25 and photomontage 25). When travelling southeast, although oblique, the view would be of an extensive expanse of solar panels predicted to be moderate adverse significance in year 1. The mitigation proposed is designed to screen views from Golf Links Road and views from the north (VP 26). However any glimpsed views through gateways, entrances and during the winter, would continue to give views across this vast area into year 15 and beyond which would continue to harm the perception of the landscape in this area. In this area it should be possible to better integrate the proposals into the landscape, as adjacent areas are already more contained, and landscape restoration along existing field boundaries would be an obvious strategy.
- 10.168 Along with the solar panels and solar stations, large substations and battery station infrastructure would be introduced into the countryside which would remain visible. The visibility of the BESS adjacent to Elms Road at E18 has not been fully considered when viewed from the U6006 unclassified road, as illustrated by VP16. The Councils disagree that the level of planting proposed adjacent to Elms Road, approximately 10m (APP-108 Annex B Fig 12) would be sufficient to provide good screening including in the winter. However, the Councils consider that with additional and substantial woodland screening, including to the west of

E18, it should be possible to effectively screen the proposed BESS and substation development.

- 10.169 The visibility of the BESS at Lee Farm E33 has not been fully considered from the viewpoints on the edge of Isleham (VP3). Other viewpoints, for example those on the River Lark (VP 01, 2A and 2B), from Ferry Lane (VP2C) and from VP12A are highly reliant on the mitigatory planting around the BESS. However, the BESS here is located in an open landscape with limited existing vegetation to help integrate the proposals into the landscape. The mitigatory planting appears to be particularly weak and limited, which is partly a result of archaeological constraints to the east. It might be necessary to adjust the position of the infrastructure here to allow sufficient space for effective mitigation.
- 10.170 The visibility of the BESS at Lee Farm E33 has not been fully considered from the viewpoints on the edge of Isleham (VP3). Other viewpoints, for example those on the River Lark (VP 01, 2A and 2B), from Ferry Lane (VP2C) and from VP12A are highly reliant on the mitigatory planting around the BESS. However, the BESS here is located in an open landscape with limited existing vegetation to help integrate the proposals into the landscape. The mitigatory planting appears to be particularly weak and limited, which is partly a result of archaeological constraints to the east. It might be necessary to adjust the position of the infrastructure here to allow sufficient space for effective mitigation.
- 10.171 The ES (section 10.7.4 b APP-042) suggests that the tonal rendering of shades which are suitable to integrate within the landscape will help reduce the perceived overall mass of these structures, secured via the OEMP. This mitigation is suggested in relation to the BESS at E18, and E33 (10.7.4a). However, this requirement is not included in the OEMP and this is possibly not the most obvious place to secure this. To ensure that the tonal rendering of the structures is appropriate an Environmental Colour Assessment should be undertaken prior to or as part of the detailed design and presented with the details of construction materials to show how the colour of the structures has been selected to integrate with the landscape.
- 10.172 Other features within the landscape will also be impacted, for example pine lines.
- 10.173 The pine line shown in plate 10-1 (APP-042) is not typical of the Brecks pine lines which are better represented by the pine line illustrated in viewpoints 15 and 16 (APP-215). The embedded mitigation includes for the structures to be offset from pine lines (APP-042 section 10.7.3) vegetation patterns and the highway network. However, it is not clear what distance the offset would be and therefore whether it would be sufficient to ensure that landscape features remain present and legible in the landscape. It is likely that the pine line in the foreground of viewpoint 15 would be retained and remain legible albeit with the solar panels of E12 beyond it. The pine line in viewpoint 16 may remain visible at year 1 above the panels in E15 and set against the BESS in E18. However at year 15 the view would be truncated by the proposed mitigatory planting and the view to the pine line within the landscape would be lost.
- 10.174 Offsetting is also discussed in relation to the Lee Brook adjacent to parcel E01 with an 8m offset proposed (APP-042 10.7.5a). However, no offset is proposed for parcels E03 and E05

both of which also abut Lee Brook. In addition, there is inconsistency in the proposals as the LEMP (APP-108) states that no works would be undertaken within 10m of watercourses. The work plans show Work No 6A along the bank of all sections of the Lee Brook; however, the landscape masterplan does not indicate that there would be any planting on the western side of parcels E01 and E03. The Councils consider that the proposals should be offset from the Lee Brook and landscape planting should be undertaken to ensure that the Lee Brook remains legible in the landscape through the DCO site, and the solar panels and solar stations are screened from the west including from the River Lark footpath. Planting along the Lee Brook should be designed to enhance the river habitat as part of a river restoration scheme. Viewpoint 1 does not take into account that the woodland planting on the northern extent of E05 would not screen the views of E01 and E03 and it is not clear how views of these parcels would be softened. The effect at year 15, based on the current proposals would be more significant than predicted.

- 10.175 During operation of the solar farm the U6006 road would remain accessible for recreational use. It is not clear how the appearance of the route would have changed as a result of the proposed construction; the works plans show that Works No 1Biii, 4, 6B, 9 and 10 may have been implemented along the various sections, all of which have the capacity to change the character of the green route. At year 1, solar panels would be visible along a significant length of the route, and the open views across the countryside would be lost. By year 15, the view of the panels would be masked in some sections, but not all, however views would be further restricted and truncated by the mitigatory planting changing the character of the recreational route further.
- 10.176 Sunnica West A, once operational, would continue to have multiple significant adverse effects, namely on the setting of Chippenham Park, the legibility of The Avenue and other historic features (woodland plantations) within the landscape as well as the legibility of the historic landscape itself, significant adverse visual effects on receptors at The Limekilns (VP38) and PROW (bridleway) 204/5, adverse effects on views from La Hogue Road both looking south from the edge of Chippenham Park and when exiting La Hogue Farm (including the farm shop and café). As extensive mitigatory screen planting is inappropriate within this open landscape of historic importance, the adverse visual effects would remain significant, even in year 15.
- 10.177 The Councils agree with the assessment that during operation the effects on LLCA 22 'Chippenham Fen' can be expected to be neutral. Adverse visual effects on PROW (footpath) 204/1, leading from the north of Snailwell towards Chippenham (VP45) are assessed as reduced from major adverse during construction to minor adverse at the beginning of the operational phase. This is expected to reduce further to neutral effects by year 15 of the operational phase.

The Accumulation of Adverse Effects and Intra- and Inter- Cumulative Effects

- 10.178 The Draft NPS EN-3 suggests that solar schemes could have no or negligible residual visual effects after 15 years. Paragraph 2.51.2 states that '*whilst it may be the case that the*

development covers a significant surface area, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero’.

- 10.179 Notwithstanding the Councils view that the adverse impacts at year 15 are likely to be significantly greater than predicted for the reasons discussed above, under the proposed scheme and allowing for embedded mitigation, the ES predicts that a significant number of minor visual effects remain in year 15. These visual effects, as predicted, concentrate around Sunnica East A (VP1, VP3, VP4, VP5, VP6, VP10, VP11, VP12, VP12A), because of the very open character of the landscape and far-reaching views, and Sunnica East B, in particular along the U6006, because of the close proximity to the solar arrays, and around the Golf Links Road area (VP15, VP15A, VP15B, VP16, VP18, VP22, VP 24, VP25, VP26A). Other Minor Adverse effects would persist across the Sunnica West A (VP32, VP33, VP41). The Councils also consider that the significance of effects at the following viewpoints, predicted to be negligible, would likely be greater than predicted; VP2A, VP2B, VP2C, 12B, VP22, VP23, VP 37, VP40. The impacts include the truncation of rural views, including to landscape features such as church towers and pine lines, residual views of the solar panels, solar stations, BESS, substations, and other ancillary infrastructure, including changes to rural roads to accommodate construction traffic.
- 10.180 The Councils consider that in their accumulation and longevity these effects are significant (also see Natural England’s written representation on Navitus Bay Offshore Wind Park Application, 2014, paragraph 6.4.3 and paragraph 6.4.34).

Associated Development Impacts – highway schemes

- 10.181 To enable the construction of a proposed development of this scale, it must be expected that in some locations changes to the existing highway would become necessary. However, the Councils consider that the landscape and visual impacts and effects of these highway schemes should be appropriately assessed within the ES.
- 10.182 The Councils are concerned with regards to several highway schemes associated with the proposed development, which have not been assessed in landscape and visual terms, and about the impacts and effects of these schemes on existing landscape features, in particular trees and hedges.
- 10.183 There are 21 Highway schemes outside the DCO area that have potential landscape and visual effects, which were not assessed as part of the ES.
- 10.184 Of these, the most concerning are:
- 10.185** Junctions of B1102 Mildenhall Road and The Street, Freckenham. Semi-mature trees within the double junction, to the east (TPO/1972/182) and south (also TPO’d) contribute to visual amenity of the double junction and elevate the character of what would otherwise be a rather functional part of the village. Losing either of these trees would be detrimental for the very individual village character of this double-junction.
- 10.186** Newmarket Road (works plans, sheet 16). Mature tree belt/woodland along eastern edge of Newmarket Road which forms an important visual screen. The applicant has failed to

adequately explain why it is necessary to include such a long stretch of tree belt, north of the cable route, in the DCO and earmarked for temporary road works.

- 10.187 Fordham Road, north of Snailwell. The mature vegetation on either side of the road contributes to its secluded character. The vegetation to the north is also important for the screening of Sunnica West B.
- 10.188 Chippenham Road (works plans, sheet 14). This is a straight road, lined with an avenue of protected (TPO) trees. The proposed road works are in addition to works for the cable route corridor which intersects the road further north-east. It is unclear, why these road works and this access are required. The Councils consider that construction and operational traffic should use the entrance at the cable route corridor to minimise tree loss along Chippenham Road, which would have a detrimental impact on the young and developing avenue of trees and a long-term detrimental effect on this landscape.

Required Mitigation

- 10.189 The aim for the mitigation should be to retain the legibility and character of the landscape and, ideally, to reduce the visual effects to zero, where possible, as suggested at paragraph 2.51.2 of the draft National Policy Statement for Renewable Energy Infrastructure (EN3), especially for visual receptors, at the edges of settlements, and along routes connecting settlements. However, the mitigation must be appropriate to the local landscape character and given the open character of the landscape it may not be possible to screen the solar panels from all visual receptors without the mitigation in itself being unacceptable, raising the question of the suitability of some parts of the sites for this type of development.
- 10.190 The Councils consider that the applicant has not reached an appropriate balance in terms of good design and positive place making where the panel arrays may be visible in some locations but would sit well within the landscape and would not be dominant or too prominent. The mitigation as proposed is not sensitive enough to the existing landscape character and not sufficiently tailored to the location and conditions, noting that these change across the DCO site. Putting aside the grassland proposals, the current proposal for planting is limited to hedgerows or woodland according to the landscape masterplan, with landscape offsets demonstrated only along the Beck Road and to the south of Worlington.
- 10.191 The embedded landscape mitigation and the tree and hedgerow planting within the LEMP lack the required detail to give confidence that the proposals are deliverable. There is very limited information about the width of tree belts/woodland or the width of offsets, and the scale of the landscape masterplan (APP-209, APP-210, APP-211, APP-212, APP-213, APP-214) does not provide sufficient detail to fully understand and assess the provision of landscape and ecological enhancement measures nor does it convey the full intention of the proposals. The species diversity is very restricted in relation to both hedgerows and tree/woodland planting and does not take into account the changing landscape character across the DCO site. The 'Cambridge Landscape Guidelines' provide guidance on species appropriate for different landscape character types.

- 10.192 The embedded mitigation in section 10.7.5 indicates the types of grassland to be sown. However, this does not appear to be based on soil type or fertility (no information is presented) and is contradicted by information in the LEMP (APP- 108) Annex C. For example, E12 is to be seeded with native chalk grassland according to the ES but in the LEMP it would be grassland for sandy or acid soils and managed for Stone Curlew. The landscape setback south of Worlington which would be seeded with chalk grassland includes Worlington Heath County Wildlife Site designated because of its acid grassland.
- 10.193 The LEMP does not provide sufficient detail with regards to additional mitigation measures, such as special construction methods and measures, to address residual impacts, which cannot be avoided by the embedded design.
- 10.194 The Councils are not confident that the LEMP would be effective in delivering and securing well designed green infrastructure, which, along with the existing landscape features, would provide a framework in which the development would sit. The required mitigation to make the proposals acceptable in landscape terms will need to be integrated and compatible with the aims of mitigation for ecology, cultural heritage, and well-designed public access. To this aim the applicant should be required to provide a more detailed landscape strategy that includes a coherent plan of the scheme proposals that takes into account the requirements for ecology, landscape, recreation and archaeology.
- 10.195 The councils would also require a strategy for the mitigation of trees and shrubs that are removed in association with highway improvements, creation of access points and provision of the cable route, currently not included on the landscape masterplan. In such cases trees and hedges should be re-instated or replaced as close as possible to where they are removed, at a ratio that would preferably allow for Biodiversity Net Gain.
- 10.196 The effectiveness of the mitigation across the DCO site is entirely dependent on management which must be undertaken for the lifetime of the project. Management including of grasslands is covered in section 1.8 of the LEMP. There is no commitment in the text on management of the solar farm by grazing nor is there a method statement for this type of management beyond the table of 'management after establishment' and a short note on conservation grazing (APP-108, LEMP Annex C). This is contradicted in the LEMP text (section 1.8.1) which states that 'the management regime for species rich grassland within the solar farm is not yet defined'. There is also a lack of provision of infrastructure that would allow sheep grazing of the various parcels, and although the need for grazing troughs is mentioned, these are not committed to. No other additional infrastructure is considered. Management by sheep grazing within the solar farm is likely to require additional internal fencing, to create compartments for the livestock. Consideration will be needed as to how the presence of sheep and other livestock could affect infrastructure such as cabling and the panels themselves. This would require consideration as part of the scheme design as there may be requirements relating to panel heights, casing for cables and additional fencing. There is also potential for conflict with motion-sensitive security cameras and lighting.

Clarification on the future management of the grassland within the DCO extents is required and a commitment to this should be demonstrated.

- 10.197 The management prescriptions for existing and proposed woodlands, tree lines and hedgerows are either absent from the LEMP document or not sufficiently specific to ensure that they will be tailored to achieving the required landscape and biodiversity functions. Details are required.

Improved Mitigation Required

Parcel E05

- 10.198 West of Lee Brook, the landscape character is beginning to transition from the Chalklands to the Fenlands, which lie beyond Isleham. The Councils therefore consider that, in landscape terms, Lee Brook would be a more appropriate boundary for this development proposal and that E05 should be removed or significantly reduced in size. In any case, Lee Brook should be retained as a legible feature in the landscape, and a landscape and river restoration scheme should be developed and implemented.

Parcel E33

- 10.199 The landscape at E33 is very open as there is very little, if any, tree cover within Sunnica East A excepting some boundary planting. As a result, there would be views of the BESS at Lee Farm from the River Lark (VP1) to the north-west and also from West Row (VP2A, B and C). The visibility has not been fully considered from the viewpoints on the edge of Isleham (VP3). In its current location, mitigation of the BESS and substation (at E33) is constrained by archaeology. Consideration should be given to the adjustment of the location of the BESS so that it can be better mitigated by appropriate woodland planting.

Parcels E30, E31, E32/ Golf Links Road

- 10.200 The landscape east of Worlington is slightly more contained and wooded than other areas within the DCO. The Councils consider that, with appropriate woodland and tree belt planting, it should be possible to integrate solar arrays successfully into the landscape with minimal residual effects on the local landscape character and visual receptors. Effective mitigation is required for Parcels E30 and E31, such as strengthening or creating hedgerows within the parcels, and to provide effective mitigation at access points both at Golf Links Road and Newmarket Road. Parts of E32 should be set aside for woodland planting, including within the corner of Newmarket Road and Golf Links Road. The 'home-straight' to Worlington needs to be overall enhanced.

Elms Road

- 10.201 Elms Road is a small secondary road, which will experience a significant amount of change with parts of the proposed development on either side, including a BESS site to the north. More detailed information is required with regards to proposed alterations to Elms Road itself and the effects these will have on the character of the road and on visual receptors. The Council consider that the ES is overly optimistic with regard to the ability of the existing

roadside vegetation to deliver mitigative screening. The proposals for mitigation will need to be more robust to be effective.

Requirements and Obligations

Areas of the project that are not capable of effective mitigation or amelioration

Sunnica West A

10.202 The site that has been chosen for Sunnica West A is unsuitable for the development of the proposed solar panels from a landscape and visual impact perspective. Not only is the area visually sensitive; this is a historic landscape and the setting of historic assets (Chippenham Registered Park and Garden, The Avenue), which puts constraints on otherwise possible mitigative planting [see further detail where impacts are considered by phase]. However, subject to exemplary design and mitigation strategy, the area is likely to be able to accommodate the BESS. The removal of solar panels and associated infrastructure from the Sunnica West A would significantly reduce the extent of harm.

U6006

10.203 The U6006 is an important landscape, recreation, and ecological feature and considered locally to be historically significant (possibly associated with the route of the Icknield Way); the current proposals to use this road as an access to some of the solar plant parcels, would have a devastating effect on the character of the route, its amenity value, and its value as a well-connected wildlife corridor. Impacts on the U6006 should be limited to a single crossing point for the cable route only. There should be no operational access across this landscape feature.

Parcel E12

10.204 Even assuming that the U6006 corridor is retained in its existing amenity and ecological functionality, the perceptive qualities would be significantly altered as a result of the proposals. The Councils consider the visual effects on the U6006 as detrimental, if Parcel E12 was to be implemented as it is currently proposed.

10.205 In order to be made acceptable in landscape terms, E12 would need to be set back a considerable distance from the U road, so as still to afford open views to the west, in an area, where the views to the east would be lost or significantly compromised. The parcel would also require mitigative screen planting. This can however not be reconciled with the requirements in ecology terms, as this area is an important area for nesting Stone Curlew pairs, which must be kept as open as possible. Therefore, the Councils consider that the solar panels and associated infrastructure should be removed from E12.

DCO and Work Plans

10.206 The work schedules are too broad and non-specific and would allow actions that would be harmful to existing trees, woodland, hedges and existing habitats. Works have been grouped together that vary greatly and should ideally be in different groups: Engineering works are included even in areas that are meant to be set aside for Green Infrastructure, landscape and biodiversity enhancement measures, and the protection of habitats.

Important Hedgerows

- 10.207 It should be anchored in the definitions of the DCO that “hedgerow” and “important hedgerow” have the meaning given in the Hedgerow Regulations 1997. Any important hedgerows that are to be removed should be listed in a Schedule (Removal of Important Hedgerows) and identified on an appropriate plan. The ES identifies only one such hedgerow, H15, in Sunnica West A. While this may be the only important within the DCO, there may be others that have not yet been identified, as the hedgerow surveys are incomplete.
- 10.208 No work should be allowed to commence until full and complete hedgerow surveys have been carried out. This is necessary to inform the baseline against which Biodiversity Net Gain and the success of the LEMP would be assessed and to agree replacements as part of the landscaping scheme.
- 10.209 The Councils consider that important hedgerows for the purposes of Sunnica should include;
- 10.210 Those meeting the Hedgerow Regulations, including the criteria for Archaeology, History, Wildlife and Landscape as listed in Schedule 1 of the Regulations. If bat surveys identify 20 or more passes by bats the hedgerow should be considered important as a bat corridor.
- 10.211 All the hedgerows where one or more passes of a barbastelle have been recorded - due to the rarity of the species and margin for error in recording. The Regulations do not appear to set out a basis for a threshold of 5 passes.
- 10.212 Those that perform an important visual function.
- 10.213 To enable full understanding and assessment of locations of important hedges, and areas, where either Horizontal Directional Drilling (HDD) needs to be undertaken, or offsetting of residual impacts needs to be agreed the Councils would ask the applicant to:
- 10.214 Append a column which identifies, by reference to the hedgerow regulations, why hedgerows are considered important.
- 10.215 Display the above hedges on a colour – coded map of an appropriate scale, distinguishing between the different criteria and include the additional hedgerows covered by points 2 (bat passes) and 3 (visual importance) above.
- 10.216 Confirm that the hedgerows in the cable corridor have been assessed against all the criteria in the hedgerow regulations, regarding, for example the presence of other protected species (Part II 6 (3)) and proximity to rights of way (Part II 8).
- 10.217 Provide photos of each of the hedgerows which fall within the definition of 1, 2 and 3 above as and in accordance with point C. This will provide a reference for the baseline.
- 10.218 Confirm which hedgerows the applicant is proposing to HDD.
- 10.219 Confirm how adverse impacts on hedgerows are minimised, for example by defining a minimum width for the cable corridor, when crossing hedges. This should be individual for each hedgerow (as circumstances may differ).

Trees

- 10.220 In the absence of tree surveys being available to inform the examination, prior to the detailed design stage full Tree Surveys in accordance with BS 5837:2012 Trees in relation to

design, demolition and construction should be submitted to and agreed in writing by the relevant LPA. These Tree Surveys should then be used to inform the detailed design stage and micro-siting of all works.

- 10.221 No works should be allowed to commence until a full Arboricultural Impact Assessment (including Tree Survey and Tree Protection Plan) and an Arboricultural Method Statement, (including location specific special construction method statements, where works are to be carried out within rootzones of trees that are to be retained) in accordance with BS 5837:2012 are submitted to and agreed with the relevant LPAs in writing.
- 10.222 No article in the DCO should authorise any works to any tree subject to a tree preservation order. Such works, if demonstrated to be unavoidable, should be agreed with the relevant LPA on a case-to-case basis so that appropriate compensation can be agreed and secured.
- 10.223 Section 36 paragraph 4 states 'The undertaker may, for the purposes of the authorised development and subject to paragraph (2), remove any hedgerows within the Order limits that may be required for the purposes of constructing the authorised development.' Has no mention with compliance with the Wildlife and Countryside Act 1981 which would restrict the timings of this in relation to nesting birds. Also, as hedges are an invaluable habitat resource the removal of hedges must have a degree of control, suitable assessment and adequate mitigation if required for removal. Such as only being able to remove hedging as set out in any approved plans.
- 10.224 Section 37 paragraph 1 states 'The undertaker may fell or lop any tree within or overhanging land within the Order limits subject to a tree preservation order or cut back its roots, if it reasonably believes it to be necessary to do so in order to prevent the tree from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development.' Given the lack of tree information provided, the Councils would require the DCO to not remove legislation in Part VIII of the Town and Country Planning Act 1990 as amended and in the Town and Country Planning (Tree Preservation) (England) Regulations 2012 which applies in relation to trees covered by a TPO on/adjacent a development site. In addition, due to the lack of clear tree information it is not possible to assess if the retained trees have been suitably considered in relation the future maintenance of and operation of the sites. The sites should be designed in relation to the existing trees on site making suitable allowances for the future growth potential and associated impact of the retained trees.
- 10.225 Paragraph 2 (b) states 'the duty contained in section 206(1) (replacement of trees) of the 1990 Act does not apply.' It is unacceptable that replacement trees are not planted when TPO trees are removed after completion of the development as this will ensure the continuity of the landscape. Trees removed to facilitate the development should be directly mitigated for as part of the soft landscaping scheme.
- 10.226 Paragraph 3 states 'The authority given by paragraph (1) constitutes a deemed consent under the relevant tree preservation order.' Deemed consent should only be appropriate for

the construction of the development in line with approved plans indicating required tree removals.

- 10.227 Schedule 2 Detailed design approval 6: This contains no mention relating to providing information relating to what trees are removed or impacted by the proposals. This should form part of the layout and scale details as the presence of trees must receive suitable consideration when at the design stage, as this is the point when this can be altered to allow the retention of any quality trees and plan their replacement if removals are required.
- 10.228 Fencing and other means of enclosure 11: tree protection measures will need to be agreed as part of this section as the installation of fence posts can cause significant root loss if inconsiderately located. Also, the means of installing fence posts can cause issues to trees as Concrete (mortar, cement, slurry) washout wastewater is caustic and considered to be corrosive with a pH over 12, essentially the same as Liquid Drano®, ammonia or other household cleaning detergents. The primary ingredient in ready mixed concrete is Portland cement, which consists of Portland cement clinker, calcium sulphate, calcium and magnesium oxide, heavy metals and potassium and sodium sulphate compounds, chromium compounds and nickel compounds. In cases where tree roots have been exposed to the high pH of cement products, the effects may include inhibited growth and dieback of portions of the crown due to cellular damage from the uptake of toxic compounds, and substantial alteration of the soil and plant chemical composition even after the source of pollution is gone.
- 10.229 Surface and foul water drainage 12: will also need to consider trees so as to avoid significant alterations to soil moisture levels that may harm existing and planned trees also the installation of drainage pipes can adversely effect established trees via root severance. Any temporary drainage measures required during construction must take into account the existing trees in the vicinity.

Associated Developments: Landscape Planting

- 10.230 Landscape retention plans should be at a suitable scale, clear and complete and included under approved documents.
- 10.231 If any tree or shrub is removed, dies or becomes seriously damaged or diseased during the operational phase of the scheme or during the aftercare period, it must be replaced with suitable replacement plants or trees to the specification agreed in writing with the relevant LPA during the next available planting season (the following November/December).

Post Construction Monitoring

- 10.232 The proposals should allow for the costs of annual inspections by and reports to the LPAs for the life span of the project or at least for the first 15 years, and longer if mitigation goals are not being achieved (dynamic aftercare). The Councils do not agree with the proposal in the LEMP, paragraph 1.8.30 to carry out walkover surveys only in years 1,3,5 and 10 and focusing only on grassland and hedgerows. Tree and woodland planting will equally need to be monitored on an annual basis as the acceptability of the proposals as a whole depends on the effectiveness of all elements of the landscaping scheme.

10.233 The baseline to monitor against is the pre-construction baseline data (see LEMP, paragraphs 1.8.29 – 34), which thus far is incomplete, as there are no arboricultural impact assessments and only incomplete hedgerow surveys.

Roles and Responsibilities

10.234 The Councils consider that there should be involvement of all three disciplines (ecologist, landscape architect and arboriculturist) in the LEMP arrangements, as they are not interchangeable (see LEMP paragraph 1.9.1 c. and d. and heading to and paragraph 1.9.3).

10.235 No arboricultural works are mentioned in chapter 9 of the LEMP. The Councils consider that the monitoring of tree health and safety and associated necessary tree works should be included in a management plan that covers such a large geographical area and long timeframe, that tree works must be anticipated; the health of the existing and proposed trees is a fundamental part of the effectiveness of the landscape mitigation.

10.236 The Councils consider that it must be part of the Applicant's responsibilities to report back to the relevant LPAs and agree any necessary changes in management to reach the objectives of the LEMP. The cost for meetings, correspondence and officer time should be factored into the proposals.

10.237 The Councils consider that measures must be put in place (including financial contingencies), for the case that the objectives of the LEMP are not met and for additional remedial works, including planting, to be undertaken at year 15, or at such a stage where it becomes evident that the objectives of the LEMP will not be met.

10.238 The Councils consider that measures must be put in place (including financial contingencies), for the decommissioning phase.

11 Noise, Vibration, Dust, Light/Glare

Summary

- 11.1 The nature, size and duration of the construction phase of this development is likely to cause adverse effect on nearby sensitive receptors.
- 11.2 If the development is consented, it must be ensured that impacts have not been underestimated, that there are robust procedures to monitor those impacts and that where there are impacts, the mitigation reduces as much as reasonably practicable the impact on those affected.
- 11.3 The chapter deals first with noise and vibration, and then dust and light impacts.

Table 7: Summary of impacts – Noise and Vibration				
Description of impact	Construction (C) / Operational (O)/ Decommissioning (D)	Negative/ Neutral/ Positive effects	Required mitigation	Policy context
Adverse noise and vibration impact of construction activity (including transport) on noise sensitive receptors persisting length of construction/ decommissioning period.	C/D	Negative	Full and continuing assessment of impacts and appropriate mitigation of noise levels through attenuation/ adjustments to working practices/community engagement. Construction hours to be limited to between 0800 and 1800 Mon-Fri, 0800 and 1300 Sat and at no time on Sundays, Public Holidays or Bank Holidays. Piling operational hours to be limited to between 0900 and 1700 Mon-Fri and at no time on Saturdays, Sundays, Public Holidays or Bank Holidays.	West Suffolk DM14 Proposals for all new developments should minimise all emissions and other forms of pollution (including light and noise pollution). East Cambridgeshire Local Plan Policy ENV9 seeks to minimise and reduce all forms of pollution (including light and noise pollution), as well as seeking to generally protect the health and safety of the public. Policy 1 seeks to ensure the rural area is kept tranquil and free from light pollution. Policy ENV2 seeks to protect residential amenity.

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Change to the existing rural noise climate	C/O	Negative	Full and continuing assessment of impacts and appropriate mitigation of noise levels through attenuation/ adjustments to working practices/community engagement	As above
Potential for adverse impact to sensitive receptors from additional noise and vibration during operation, including tonal characteristics	O	Negative	Full and continuing assessment of impacts and appropriate mitigation of noise levels through attenuation/ community engagement	As above
Potential adverse impacts from dust	C/D	Negative	Full and continuing assessment of impacts and appropriate mitigation of dust through appropriate control measures	As above
Potential adverse impacts from light	C/O/D	Negative	Full and continuing assessment of impacts and appropriate mitigation of light spill and glare through appropriate control measures	As above

Policy Context

Local Plan Policy

- 11.4 West Suffolk Joint Development Management Policies Document (Appendix 2) contains Policy DM14 Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards.
- 11.5 East Cambridgeshire District Council has the following relevant policies in its adopted Local Plan 2015 (Appendix 6).
- 11.6 Policy ENV1 seeks to protect the tranquillity of the area as well as ensuring rural areas are kept free from light pollution. Policy ENV2 seeks to ensure that there is no significantly detrimental harm to residents from new developments.
- 11.7 Policy ENV9 seeks to ensure all developments minimise and reduce all forms of pollution including but not limited to light and noise pollution.

Noise and Vibration

Construction Phase Impacts (Noise and Vibration)

Commentary

- 11.8 The nature, size and duration of the construction phase of this development is likely to cause complaints to be received, from nearby sensitive receptors, of adverse effects.
- 11.9 If the development is consented, it must be ensured that impacts have not been underestimated, that there are robust procedures to monitor those impacts and that where there are impacts, the mitigation reduces as much as reasonably practicable the impact on those affected.
- 11.10 The submission documents highlight that any baseline monitoring of existing noise levels will be subject to a degree of uncertainty. While the assessment of impact has been based on sound modelling, data from field assessment of background noise and theoretical data of noise sources, there will need to be a requirement for ongoing revisiting of assessments to take account of uncertainty and new information, and future monitoring to ensure the reliability of the current predictions and to ensure adequate protection can be provided.
- 11.11 There is also uncertainty in the detail of the baseline noise assessments and the Councils are not satisfied that the appropriate receptors have been identified due to the position of some rural and isolated properties which may experience lower background and ambient noise levels than those identified by the long-term monitoring results, particularly where the monitoring sites were adjacent to the local road network and suggesting ambient noise levels in the region of 60-70 LAeq16hr. Long Term monitoring position 6 on the roadside, at the entrance to the village of Isleham (LT6) where the speed limit drops from 60mph to 30mph may not be representative of the sound levels experienced to the rear of residential properties along Houghtons Lane and East Fen Road Isleham which are situated on no through roads. These properties are considered rural and isolated but potentially in line of sight of construction work areas due to the open flat landscape. Long Term monitoring

position 7 on the roadside entrance to Freckenham village (LT7) was used to establish the average ambient levels at Badlingham Road Chippenham, again a no through road with properties in an isolated position, although during certain wind conditions such properties will experience road traffic sounds from the A11. Short term monitoring of 3 hours was carried out in the middle of the day at Badlingham and this showed lower LAeq ambient levels than at LT7, which was then chosen as the representative background and ambient monitoring location. Properties in Badlingham are situated 250m west of East Site B. It will be important to fully consider the adequate protection of external amenity areas of such properties during construction phases. Additional considerations of impact must be given weight at approval stages of any final CEMP.

11.12 Noise and vibration impacts are considered according to No Observed Effect Level (NOEL) the Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL).

11.13 The NOEL is the level below which no effect can be detected. The noise can be heard but does not cause any change in behaviour, attitude, or other physiological response. It can slightly affect the character of the area but not such that there is a change in the quality of life. No specific mitigation measures would be expected to address noise.

11.14 The LOAEL is the level above which adverse effects on health and quality of life can be detected. Noise can be heard and causes small changes in behaviour or other physiological response. There is a potential for sleep disturbance at these levels. This level of noise affects the acoustic character of the area such that there is a small actual or perceived change in quality of life. There is an expectation that the noise will be mitigated and reduced to a minimum.

11.15 The SOAEL is the level above which significant adverse effects on health and quality of life occur. The noise causes a material change in behaviour, attitude or other physiological response. These responses may include avoiding certain activities during periods of intrusion or having to keep windows closed most of the time because of noise. There is greater potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty getting back to sleep. Quality of life is diminished due to change in acoustic character of the area. At this level there is an expectation of avoidance.

11.16 Prior to agreement of the CEMP further discussion as to the suitability of the LOAEL and SOAEL levels for construction noise thresholds will be required. Although the ABC method in BS5228 (indicating the threshold decibel values in Categories A, B and C) is an acceptable means by which to set construction noise limits BS5228 also identifies that construction projects involving large scale and long-term earth moving activities rather than conventional construction sites, and which will continue for more than 6 months, should consider the alternative guidance on setting of noise limits. Acceptable limits during construction will need to be explored further at the final CEMP stage, with levels being agreed by the LA, considering the type of activity, period of the operation and potential impacts on rural noise sensitive receptors.

11.17 BS5228 also references local attitudes to the site operator and the situation whereby the acceptability of the project itself can also be a factor in determining community reaction. Perception of negative impact can be reduced where it is evident that all possible steps are taken to reduce noise and there is good community liaison, information and efficient response to queries/complaints.

Positive

11.18 It is not anticipated there will be any positive impacts from construction noise and vibration.

Neutral

11.19 Impacts from noise from construction related activities are considered to be negative to varying degrees, however where the appropriate and adequate and fully implemented noise mitigation measures it may be possible to consider some, but not all, of these impacts as impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the LA to consider.

Negative

11.20 Adverse effects have been predicted entailing negative impacts. It is important that there are comprehensive procedures to monitor those impacts and that where there are impacts above the relevant significance criteria that the mitigation is such that they are reduced as much as reasonably practicable. For example, decisions are still to be made on plant and equipment to be used, i.e. the type of piling, the extent of piling, the type and final position of the operational plant on the different sites, the mitigation measures that will be required and the program of works.

11.21 Hours of work are a key control in terms of construction impacts affecting noise sensitive receptors including local residents. The applicant states that construction is proposed to take place Monday to Saturday 0700-1900. Usually, construction hours on development sites are restricted to between 0800 and 1800 Mon-Fri, 0800 and 1300 Sat and at no time on Sundays or Bank Holidays. Due to the construction site locations, area, size and the duration of the project and the inevitable noise disturbance caused by construction operations and traffic movements, we would not support any proposal to conduct construction works or deliveries outside the hours of 0800 and 1800 Monday-Fridays and 0800 and 1300 Saturday and at no time on Sundays, Public Holidays or Bank Holidays on any part of the application site.

11.22 The Framework CEMP advises a noise construction mitigation and monitoring scheme to be developed and agreed prior to commencement of works, as part of the s.61 consent application process under the Control of Pollution Act 1974 (COPA). LA's have 28 days in which to consider a s.61 application. For a site of this size and extent this is not considered an appropriate timescale for full consideration to be given to enable agreement as to limitations, working methods, conditions etc. Any s.61 application should only be submitted following extensive pre-application discussions and agreements being in place. It may be that separate work areas are required to operate under separate consents and the 28 day consultation period is considered acceptable if this was to be the case. However, it is the

preferred option of the LA to consider construction noise impacts and mitigation as part of a dynamic construction noise management plan which has been agreed through the planning process rather than submissions under the COPA. Any form of agreement must also include details of noise monitoring (the position of any monitors, the servicing and calibration of the equipment, duration of the monitoring etc), proposals for reporting results to the LA and actions to be taken should any breaches occur as a result of an unforeseen or underestimated adverse noise impact. That work can positively influence future work methods and controls moving forward into later stages of the construction.

- 11.23 Concerns are often raised about breaches of acceptable vibration standards and damage to property, so it is recommended that as part of the noise monitoring procedures to be adopted within the detailed CEMPs and any s.61 applications, vibration monitors are also installed at key sites during relevant periods of piling and drilling to enable reassurance to residents and the LA that guideline limits are being met. We are aware of complaints of excess noise from piling activities on a construction site for ground mounted solar PV's, some distance away from sensitive receptors. It can be the type of noise and the repetitive nature, rather than the level that causes complaint. The submission at this stage does not contain details that provide suitable reassurance that the activity of extensive and widespread piling will not cause a degree of adverse impact. The CEMP should also contain a Piling Method Statement to be agreed with the LA before any such work takes place. This shall include a requirement in line with controls currently placed on piling operations within the LA area, for such work to be undertaken between 0900 – 1700 hours Mon-Fri with no piling outside of these hours or at weekends, Public Holidays or Bank Holidays.

Operational Phase Impacts (Noise and Vibration)

Commentary

- 11.24 The assessments of impacts have been based on noise modelling, baseline assessments of existing sounds and theoretical data of noise sources using the weighted equivalent continuous sound level (LAeq) indices. There will be a requirement, either due to levels of uncertainty in the baseline background data or due to the issue of lower frequency noise impacts not being characterised within an LAeq measurement under BS4142, for continual review of assessments and predictions, and assurances provided that the final design and position of plant and equipment will have no adverse impact.
- 11.25 Plant types and specifications, and precise locations have not yet been confirmed. In addition, the applicant should be providing confident data that the significance of operational noise impacts are accurately modelled and are sufficiently low that they will remain negligible under all weather conditions (for example temperature inversions, positive downwind scenarios etc.) and throughout the life of the project, and will not impact those properties which might experience lower background noise levels at night than those reported in the Baseline Noise Survey.
- 11.26 Low frequency hum from the proposed fixed plant is an issue requiring consideration, and technical evidence provided in any final report if predictions show negligible adverse impact.

As plant types and specifications have not yet been confirmed it will be key going forward that it can be demonstrated that estimates of impacts have not been underestimated.

Positive

11.27 It is not anticipated there will be any positive impacts from operational noise.

Neutral

11.28 Impacts from noise from operational activities are considered to be negative to varying degrees, however where the appropriate and adequate and fully implemented noise mitigation measures it may be possible to consider these impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the Councils to consider.

Negative

11.29 There are potential negative impacts at the operational stage. Low frequency hum from any of the proposed fixed plant is an issue that requires further consideration. and technical evidence provided in any final report if predictions show negligible or minor adverse impact. Plant types and specifications have not yet been confirmed. It will be key going forward that it can be demonstrated that estimates of impacts have not been underestimated.

11.30 The assessments of impacts have so far been based on noise modelling, baseline assessments of existing sounds and theoretical data of noise sources using the LAeq indices. There will be a requirement, either due to levels of uncertainty in the baseline background data, due to the issue of lower frequency noise impacts not being recognised within an LAeq measurement under BS4142, or due to character corrections not being adequately applied under the BS4142 assessment, for continual review of assessments and predictions, and assurances provided that the final design and position of plant and equipment will have no adverse impact.

11.31 The above comments were relevant to all plant throughout all operational sites and, prior to the submission for changes to substation and connection options in June 2022, this was particularly relevant to the extension to the Burwell Sub Station and Receptor 1.

11.32 The original application, with Option 1 for the site of the new transformer, identified that Receptor 1 would experience a medium magnitude of impact under the operational noise assessment, during the night, early morning, and late evening periods. These are considered the most sensitive periods for noise impacts, as persons are more likely to be at home, enjoying their gardens during later summer evenings or resting.

11.33 Under BS 4142 the calculated difference at Receptor 1 was +6 dB with no character correction being applied for acoustic features such as tonality, impulsivity, other character or intermittency. Character corrections could add between 2dB and 21dB to the specific sound level. The report advised that noise emissions from the new transformer plant associated with the Option 1 extension **may** have tonal characteristics, but concluded that due to the existing presence of transformer plant noise and road traffic, it was not expected any tonal features would be significant at receptors in Burwell. The rationale provided was that there is an existing audible impact at night time from substation operations on residential properties,

and therefore it is unlikely that adding to this would be incongruous with the soundscape and therefore not unreasonable or above a medium adverse impact level.

- 11.34 The LA did not consider that the data was sufficient at the time, to provide confidence that an expansion to the transformers onto land via Option 1, would not have a cumulative effect on general and low frequency noise levels at the nearest sensitive receptors. BS 4142 also specifically states that is not appropriate to be used for the assessment of low frequency noise.
- 11.35 For internal low frequency noise complaints, the LA refers to the guidance from the University of Salford on the Procedure for the Assessment of Low Frequency Noise Complaints (Ref NANR45) to understand impact on occupiers at night. No reference was made to this guidance.
- 11.36 If Option 2 is to be adopted then the same comments to those noted above would apply, although it is accepted that increasing distance between a noise source and a sensitive receptor would likely afford greater sound mitigation. Sufficient data would be required to provide confidence that expansion to the transformers onto land at Option 2 would not have a cumulative effect on general and low frequency noise levels at the nearest sensitive receptors.
- 11.37 Option 3 is proposing changes to the infrastructure at Sunnica West A, Sunnica East A and Sunnica East B, to include individual transformers on each of these sites. A shunt reactor would also be introduced at Sunnica East Site B. The connection to the Burwell Substation would be via a 400kv underground cable. The consultation documents on these proposed changes provided **no** detail as to the potential environmental noise and/or vibration impacts of the revised arrangements or the new items of equipment on these 3 sites. There will be a requirement to provide modelled updates on construction, operational and decommissioning noise and vibration impacts from the changes being proposed and robust evidence to support any conclusions as to negligible, low or medium adverse impacts for sound levels and frequency profiles at the nearest sensitive receptors.
- 11.38 It was previously reported in the applicant's submissions that noise from the new transformer plant associated with the Burwell Substation extension may have tonal characteristics, but due to the existing presence of transformer plant noise and road traffic it was not anticipated that tonal features would be noticeable at receptors in Burwell. The applicants position on specific noise levels and tonal impacts of transformers at receptors near to the proposed **new** sites, where there are no existing low frequency hums or road traffic sounds at night, will therefore be key. Robust evidence to be provided to support any conclusions reached. Assurances must be provided going forward that impacts have not been underestimated or, if applicable, that mitigation measures can be applied, once final plant types, specifications and positions on each site, relative to sensitive receptors, are confirmed.
- 11.39 It is important to ensure that impacts have not been underestimated, that appropriate criteria have been chosen to characterise those impacts, that there are comprehensive procedures to monitor those impacts and that where there are impacts above the relevant

significance criteria that the mitigation is such that they are reduced as much as reasonably practicable.

Decommissioning Phase Impacts (Noise and Vibration)

Positive

- 11.40 It is not anticipated there will be any positive impacts from decommissioning noise and vibration.

Neutral

- 11.41 Impacts from noise from decommissioning activities are considered to be negative to varying degrees, however where there are appropriate and adequate and fully implemented noise mitigation measures it may be possible to consider some, but not all, of these impacts as impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the LA to consider.

Negative

- 11.42 Details in the application rely on the decommissioning of the project entailing similar or reduced levels of disturbance than the construction phase. At the end of the life of the development a revised CEMP should be agreed taking in to account any relevant changed circumstances with regard to the development, local environment and regulations and guidance applicable at that date. Deconstruction tools, extraction of piles, equipment moving machinery, landscaping etc at decommissioning may all produce noise impacts. Guidance on the reasonably practicable means required to ensure protection from detrimental effects may have changed/moved on. Additional sensitive developments built closer to the sites during the operational period may be in place.

Light and Dust

Construction, Operational and Decommissioning Phase Impacts (Light and Dust)

Commentary

- 11.43 Community engagement will be key in the successful management of concerns around dust and air quality emissions during construction and decommissioning phases. The contact details of the person or persons on site accountable for air quality and dust emissions and whom the public can direct specific concerns, should be readily available and advertised, not just displayed at the entrance to the site.
- 11.44 The details contained within the Framework CEMP are acceptable with respect to the options for dust monitoring and these should be moved forward to the final CEMP, following discussion and agreement with the LA. Agreements will be sought on the most appropriate measures considering sensitive human receptors and considering the location and construction activities taking place at specific times; the requirement being to consider dust mitigation controls and/or monitoring requirements as a dynamic process that will be under regular review throughout the construction period. The CEMP should be reviewed and amended as necessary prior to the decommissioning phase.

- 11.45 There are no concerns regarding artificial lighting proposals during construction and operational phases of the development providing there is compliance in full with the detail contained in the framework CEMP.

Positive

- 11.46 It is not anticipated there will be any positive impacts relating to light and dust at any phase of the development.

Neutral

- 11.47 There is potential for impacts from light and dust to be neutral where mitigation measures are fully implemented.

Negative

- 11.48 There are potential negative impacts from dust at the construction and decommissioning stages and from light at the construction, operational and decommissioning stages. The potential dust emission magnitudes during earthworks, construction and the HDV track out of materials is large due to the size of the site. The sensitivity of the area to dust soiling during all phases is high due to the proximity of sensitive receptors. Impacts could range from increased dust deposits on external structures to impacts on amenity use of gardens/homes. Intrusion from artificial lights used to satisfy health and safety requirements during construction work must be properly considered, with measures in place to address specific concerns raised by sensitive receptors. The details contained within the Framework CEMP are acceptable with respect to the options for air quality assessments and dust monitoring and this will be used moving forward to the final CEMP, following discussion and agreement with the LA.
- 11.49 The Dust Management Plan talks about highly recommended and desirable measures. Agreements will be sought on the most appropriate measures considering sensitive human receptors and considering the location and construction activities taking place at specific times; the requirement being to consider dust mitigation controls and/or monitoring requirements as a dynamic process that will be under regular review throughout the construction period.
- 11.50 It is important to ensure that impacts have been accurately assessed and that there are comprehensive procedures to monitor those impacts and that the mitigation is such that the impact is reduced as much as reasonably practicable.

12 Socio-Economics and Land Use

Summary

- 12.1 The Councils consider that the applicant's socio-economic assessment is inadequate, given substantial concerns about its methodology, the use of unrealistic assumptions and invalid conclusions. As such, the assessment does not allow the Councils to make informed conclusions.
- 12.2 Notwithstanding the inadequacy of the assessment, the Councils have significant concerns about the impact of the proposals on the local economy and employment market.
- 12.3 While the Councils accept that there may be minor positive impacts, for example from local employment, local investment and spend from the non-home based workforce, they consider that the overall impact will be negative. This includes:
- Potential negative impacts on the important local horse racing industry, as a result of environmental disturbances of racing horses, detrimental effects on the landscape and general attractiveness of the area, and as a result a potential negative perception of the area which may reduce investment in the equine industry.
 - Negative impact on construction workforce availability to local and regional businesses due to workforce displacement and churn
 - Negative impact from increased congestion and journey time delays
 - Negative impacts on the tourism industry.
- 12.4 The Councils identify a number of proposed mitigation measures to somewhat reduce these impacts, including a skills intervention package, a mitigation package and funding to be developed in conjunction with the horse racing industry, and employment and local economic strategies.
- 12.5 The Councils also identify negative impacts on agricultural land use and businesses, as a result of agricultural land being used for the development.

The impact on local communities, as a result of the scale and nature of the development, is also highlighted.

Table 8: Summary of impacts – Socio-Economics and Land Use					
Ref No.	Description of Impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
Supply Chain and economic development					
1	Investments in local economy as part of the construction programme, and associated local/regional supply chain opportunities	C	Positive	Positive – but is dependent on agreeing suitable strategies with local partners. Applicant should form suitable governance involving councils to maximise opportunities	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land. Suffolk County Council's Energy Infrastructure Policy: The Council expect to have comprehensive and effective engagement with developers and their supply chain partners to maximise the local business opportunity, skills inspiration, and employment benefits. Wherever appropriate, the Council and developers should promote synergies between projects that enhance these benefits, deliver growth, and attract inward investment.
1a	Potential loss in local economy due to change in investor perception of area as a destination for horseracing business, during operational life of project	O/C	Negative	Applicant should work with the industry to understand the industry's concern and discuss possible mitigation measures that would focus on maintaining the perception of the local area for its continued suitability for the	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.

				horseracing investment and business growth	West Suffolk Policy DM48 – Any development within or around Newmarket which would threaten the long term viability of the horse racing industry as a whole will not be permitted unless the benefits would significantly outweigh the harm to the horse racing industry. NPS EN-1 5.12 Socio-economic: 5.12.5 Socio-economic impacts may be linked to other impacts, for example the visual impact of a development is considered in Section 5.9 but may also have an impact on tourism and local businesses. NPS EN-1 5.10 Land use including open space, green infrastructure & Green Belt: 5.10.24 Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might

					be attached to any grant of development consent. Suffolk County Council's Energy Infrastructure Policy: Priority Setting - Suffolk County Council has declared a Climate Emergency and is therefore predisposed to supporting projects that are necessary to deliver Net-Zero Carbon for the UK. However, projects will not be supported unless the harms of the project alone, as well as cumulatively and in combination with other projects, are adequately recognised, assessed, appropriately mitigated, and, if necessary, compensated for. East Cambridgeshire District Council has also declared a Climate Emergency. However, like Suffolk County Council applications still need to be judged on their merits with appropriate weighting.
1b	Potential of minor positive impacts as a result of additional spend from a non-homebased workforce	C	Positive	Notwithstanding the Councils' consideration that the applicant's assessment is inaccurate, the scheme could provide some benefit in terms of additional spend of non-home-based workers, if the applicant correctly	

				assesses baseline conditions of home-based workers and non-home-based worker. With a realistic number of non-home-based workers ascertained, the applicant should work with the Councils on schemes/strategies encouraging non-home-based workers to spend locally	
1c	Impact on businesses and supply chain to other construction projects in the local area and region due to workforce displacement and churn	C	Negative	The applicant has applied the HCA Additionality Guide standard of 25% displacement factor to its gross construction employment number since the applicant claim that there is no special local information of the study area and the region around to give it a more accurate factor. However, given that there are a significant number of similar projects in planning, just under the NSIP threshold, in addition to other nationally significant energy projects in planning in the region, it is unlikely that the 25% displacement used for this project is an accurate reflection of the area. Therefore, the applicant has an obligation to mitigate the negative impact of displacement	NPS EN-EN1 identifies large-scale development projects are likely to have socio-economic impacts at local levels, e.g., on small businesses.

				The applicant will need to work with the Councils to produce plans and strategies to help control the rate of workforce displacement	
Local Economic Impact					
1d	Adverse impact on businesses as a result of workforce displacement and churn, and disruption/displacement in local wider supply chain	C	Negative	Fund to support local workforce development and improve local skills gap.	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
1e	Economic cost of congestion and journey time delays to local businesses, as a result of increase in construction traffic and highway works	C	Negative	Engagement with all affected firms to identify and remedy potentially damaging impacts.	East Cambridgeshire District Council Policy COM7 of the adopted Local Plan 2015 seek to ensure developments are capable of accommodating the level/type of traffic generated without detriment to the local highway network and the amenity, character or appearance of the locality
1f	Adverse impact on horse racing industry as a result of visual impact and disturbance and perception issues, including: - attraction of local landscape for horse racing industry investments - disturbance of horses from noise and glare - impacts on the wider economy	C/O/D	Negative	Mitigation measures that would focus on maintaining the perception of the local area for its continued suitability for the horseracing investment and business growth, ensuring that the local economy does not lose out on this historic industry.	East Cambridgeshire District Council Policies EMP6, ENV1 and ENV15 of the adopted Local Plan 2015 seek to prevent detrimental harm on the horse racing industry and prevent harmful levels of noise pollution, while ensuring appropriate protection to the historic landscape.

					West Suffolk Policy DM48 – Any development within or around Newmarket which would threaten the long term viability of the horse racing industry as a whole will not be permitted unless the benefits would significantly outweigh the harm to the horse racing industry.
Agricultural Land Use					
	Loss of best and most versatile land	C/O/D	Negative	The Councils are concerned that the report in Sunnica's Appendix 12B: Soils and Agriculture Baseline Report produced by Baird is not consistent with local knowledge or evidence from neighbouring farms. A review of Baird's report, commissioned by the Action Group, has highlighted a number of apparent issues with the surveys and conclusions. The Councils are not in a position to resolve these issues but wish to draw this to the ExA's attention and suggest it may be of value to discuss the adequacy of the data on best and most versatile land at an issue specific hearing.	
	Loss of agriculture production	C/O/D	Negative	Evidence of the yield from this area is needed to inform the assessment of the scheme's impact on agricultural production in the area.	West Suffolk Policy DM8 Low and Zero Carbon Energy Generation requires development proposals to demonstrate that soil quality will not be adversely affected by

					construction, operation or decommissioning.
	Cable route – disturbance of the topsoil and subsoil can have a lasting impact on the quality of the soil	C/D	Negative	Soil surveys should be extended to the underground cabling and access routes	Draft National Policy Statement for Renewable Energy Infrastructure (EN-3). West Suffolk Policy DM8 Low and Zero Carbon Energy Generation requires development proposals to demonstrate that soil quality will not be adversely affected by construction, operation or decommissioning.
Employment, Skills and Education					
2a	Local employment opportunities from the construction; opportunity for local employment creation	C	Opportunity to be positive	The applicant has not developed the opportunity to realise the benefits of the scheme due to their inaccurate and void assessment of impact. The scheme could be beneficial, to be so, the applicant is expected to (as part of their obligations): Set clear, ambitious and SMART employment targets – secured through an obligation Provide an employment outreach fund – secured through an obligation, to support increased activity Support activity to increase the size and diversity of the labour	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training Suffolk County Council's Energy Infrastructure Policy: To seek to maximise the benefits of economic growth, skills, and STEM (Science Technology Engineering and Maths) educational inspiration, from energy generation and connection projects, are fully realised for the communities of Suffolk, to support the post Covid-19 economic recovery and

				market pool – secured through an obligation Deliver a suitable governance model, involving the Councils, to maximise opportunities throughout the entire construction programme – secured through an obligation Monitor employment outcomes and impact – secured through an obligation	long-term economic growth of the area. Energy Sector Recovery and Resilience Plan: Local partners have a clear shared vision to drive low carbon, inclusive economic growth and improve employment and education opportunities for Norfolk and Suffolk. The significant low carbon infrastructure projects in the region have a huge potential to create a lasting skills, education and employment legacy. West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
2b	Opportunity to enhance skills and prospects of local workforce, and improvement Suffolk's skills and training offers – also leaving legacy post construction	C / O	Opportunity to be positive	The applicant has not developed the opportunity to realise the benefits of the scheme due to their inaccurate and void assessment of impact. The scheme could be beneficial, to be so, the applicant is expected to (as part of their obligations):	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training Suffolk County Council's Energy Infrastructure Policy:

				Provide funding contribution to the established regional skills coordination function – secured through an obligation Provide capital and revenue funding for local skills infrastructure and adapting local training offers where relevant – secured through an obligation Deliver a suitable governance model, involving the Councils, to maximise opportunities – secured through an obligation Deliver an apprenticeship strategy – secured through an obligation	To seek to maximise the benefits of economic growth, skills, and STEM (Science Technology Engineering and Maths) educational inspiration, from energy generation and connection projects, are fully realised for the communities of Suffolk, to support the post Covid-19 economic recovery and long-term economic growth of the area. Energy Sector Recovery and Resilience Plan: Local partners have a clear shared vision to drive low carbon, inclusive economic growth and improve employment and education opportunities for Norfolk and Suffolk. The significant low carbon infrastructure projects in the region have a huge potential to create a lasting skills, education and employment legacy. West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a

					focus on delivering jobs and employment land.
2c	Opportunities for unemployed and under-employed	C	Opportunity to be positive	The applicant has not developed the opportunity to realise the benefits of the scheme due to their inaccurate and void assessment of impact. The scheme could be beneficial, to be so, the applicant is expected to (as part of their obligations): Deliver activity to increase the size and diversity of the labour market pool – secured through an obligation Provide an employment outreach fund – secured through an obligation Deliver an apprenticeship strategy – secured through an obligation Fund a bursary scheme to remove barriers to training and employment – secured through an obligation Deliver a suitable governance model involving the Councils to maximise opportunities throughout the entire construction programme – secured through an obligation Monitor employment outcomes and impact – secured through an obligation	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training Suffolk County Council's Energy Infrastructure Policy: To seek to maximise the benefits of economic growth, skills, and STEM (Science Technology Engineering and Maths) educational inspiration, from energy generation and connection projects, are fully realised for the communities of Suffolk, to support the post Covid-19 economic recovery and long-term economic growth of the area. Energy Sector Recovery and Resilience Plan: Local partners have a clear shared vision to drive low carbon, inclusive economic growth and improve employment and education opportunities for Norfolk

					and Suffolk. The significant low carbon infrastructure projects in the region have a huge potential to create a lasting skills, education and employment legacy. West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
2d	Labour market churn issues and impacts on wider business community	C	Negative	Applicant to set clear, ambitious and SMART employment targets – secured through an obligation Applicant to deliver skills interventions as set out above to increase pool of available labour	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training opportunities and potential impact of influx of construction workers on demand for services (potentially including business community). West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
	Indirect and induced employment opportunities	C	Neutral	In contradiction with the applicant's assessment, the Councils anticipate only negligible positive impacts as a result of	

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				indirect and induced employment opportunities.	
2e	Unemployment as construction project demobilises	C	Negative	Applicant to set clear, ambitious and SMART employment targets – secured through an obligation Mechanisms for ensuring that the skills base developed for Sunnica is as transferable as possible to other key sectors in the local economy – secured through an obligation Work with Councils and local partners to be maintained for the post construction period to help alleviate impact – secured through an obligation	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
2f	A small number of operational jobs	O	Positive	Employment, skills and education funding to be of a scale appropriate to ensure employment opportunities are maximised during construction phase	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
Tourism					
3a	Potentially impact on Suffolk as a tourism destination, with the recovery of the tourism sector potentially taking several years following construction	C/O/D	Negative	Funding to support local visitor economy initiatives to mitigate impact	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
3b	Displacement of tourists from accommodation as a result of demand from workforce	C/D	Negative	Applicant to liaise with local tourism organisation and accommodation providers to	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a

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				understand demand and availability	focus on delivering jobs and employment land.
3c	Business benefits of workforce taking up tourism accommodation	C/D	Positive	Applicant to ensure that all local accommodation providers are aware of this potential opportunity, liaise through existing networks	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
3d	Potential “boom and bust” effect on tourism accommodation if becoming reliant on workforce bookings	C/D	Negative	Applicant to support tourism accommodation providers to attract tourists once workforce bookings subside	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land.
3f	The proposal affects several Public Rights of Way which are an important feature of tourism visits	C/O/D	Negative	Applicant to liaise with SCC Right of Way and Discover Suffolk to understand the affects	West Suffolk Policy CS6 seeks to promote sustainable economic and tourism development with a focus on delivering jobs and employment land. West Suffolk Policy DM44 states that development that would adversely affect the character of, or result in the loss of existing or proposed rights of way, will not be permitted unless alternative provision or diversions can be arranged which are at least as attractive, safe and convenient for public use.
Community impacts					
3a	A project of the scale and nature proposed will radically change the sense of place, the place attachment of the residents, and the recreational	C/O	Negative	Community funding to mitigate for residual impacts (this would be separate, and in addition, to any community benefit packages)	

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	amenities of the affected villages and communities, over a long period of time, with residual impacts on the wellbeing of the community and locality.			Mitigation in amenity and recreation	

Policy Context

National Policy Statements

Overarching National Policy Statement for Energy, EN-1:

- 12.6 Generic socio-economic impacts of energy NSIPs are covered in Section 5.12 of Overarching National Policy Statement for Energy (EN-1).
- 12.7 EN-1 sets out that the construction, operation, and decommissioning of energy infrastructure may have socio-economic impacts. It identifies that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels.
- 12.8 Paragraph 5.12.3 notes socio-economic impacts may include the creation of jobs and training opportunities, the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities, and effects on tourism. There may be impacts from a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development.
- 12.9 Paragraph 5.12.3 also covers potential cumulative impacts of development: if development consent were to be granted for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.
- 12.10 Paragraph 5.12.5 states socio-economic impacts may occur in isolation or be linked to other impacts, for example the visual impact of a development is considered in under landscape and visual impact assessment but may also have an impact on tourism and local businesses.
- 12.11 Paragraph 5.12.8 notes decision-makers should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.

Local Plan Policy

- 12.12 West Suffolk Policy CS6 relates to sustainable economic and tourism development. It seeks to deliver jobs and employment land in addition to supporting the development of local economy with particular priority given to key sectors including the equine industry and tourism.
- 12.13 West Suffolk Policy DM44 states that development that would adversely affect the character of, or result in the loss of existing or proposed rights of way, will not be permitted

unless alternative provision or diversions can be arranged which are at least as attractive, safe and convenient for public use.

12.14 West Suffolk Policy DM48 states that any development within or around Newmarket which would threaten the long term viability of the horse racing industry as a whole will not be permitted unless the benefits would significantly outweigh the harm to the horse racing industry.

12.15 East Cambridgeshire has a range of policies that seek to promote GROWTH2 that states where economic growth will be situated, EMP6 that seeks to protect the Horse Racing Industry, COM5 that seeks to ensure a strong green infrastructure including for recreation and site specific policies that promote economic growth (FRD4-8).

Context

12.16 With its, existing, unique mix of onshore and offshore renewables, gas and nuclear generation and emerging opportunities for hydrogen the East of England has become strategically important in the UK's drive to deliver its Net Zero goals. The East of England has a unique blend of infrastructure, expertise, skills and innovation which will now play an important role in delivering the integration needed to meet the UK's transformational ambition to net zero greenhouse gas emissions whilst reducing cost to the consumer. The region also has unique geographical conditions suitable for large scale solar, onshore wind and bioenergy that could also deliver significant contributions as part of the UK's whole energy journey to Net Zero. At the same time, hosting so many renewable projects does present a number of challenges, in terms of impacts on the tourism economy, the horse racing industry, and the labour market.

Inadequacy of socio-economic assessments

12.17 The Councils consider that the socio-economic assessment by the applicant is substantially inadequate and based on incorrect assumptions. Neither is the methodology and assessment of the workforce and its origins presented by the applicant sufficient to make an informed decision. The Councils, throughout the consultation period, have raised concerns about the Applicant's approach of modelling assumptions, the use of ready reckoners, absence of employment modelling and assessment of supplier availability. The Councils have offered to work with the applicant at all points of consultation and no request has been received.

12.18 The Councils are concerned that the Applicant will not achieve the home-based worker predictions as the assessment is wholly inaccurate. The applicant has identified that the project will support, on average, 1,685 total net jobs per annum during the construction period. Of these the applicant assumes that 1,483 jobs (around 90%) per annum will be taken up by residents based within 45 minutes of the project as home-based workers. The applicant has identified that there will be 202 workers from outside of the 45 minute study area and will have based their 'worst case' impact scenario on this number. The Councils consider it highly

unlikely for the study area to be able to supply 90% of the workers needed for construction, i.e., the postulated number of home-based workers.

- 12.19 The applicant has identified, using ONS statistics, that the same 45 minute study area has around 4,900 workers currently employed within the construction sector. This would mean that, according to the applicant's assumption that 1,483 jobs would be taken up by local residents, around a third of the current locally available construction workforce would be available to deliver the Sunnica project. The unlikelihood of these assumptions is further underlined considering that the construction sector in the region currently experiences very high demand for its workforce. because of the high number of similar large solar projects, as well as offshore wind, Sizewell C and other infrastructure projects, that are in planning and are projected to be in construction during the construction of this project. Hence, the Councils consider that the likely scenario instead would be that a considerably higher number of construction workers will be non-home-based. if this occurs, mitigation will not be sufficient.
- 12.20 Similarly, the applicant's assessment of construction employment identifies that the project will create indirect and induced employment opportunities for 962 jobs in total. The applicant has provided no further detail as to the split between indirect and induced in their assessment. An indirect job is created when the applicant, or its associated supply chain, purchases goods or materials from a company and an induced job is created through workers spending their money. Of the 962 total jobs to be created, the assessment indicates that only 115 of these are outside of the 45 minute study area. This leads to the conclusion that the applicant and its associated supply chain will be purchasing the majority of its goods and materials needed within the 45 minute study area. Due to the lack of any assessment by the applicant on the local supply chain and its ability to supply goods or materials to the project, the Councils cannot ascertain the validity of these numbers. The Councils are not aware of companies located within the study area that are part of a solar supply chain and therefore, hence assume that this is another example of wholly inaccurate assessment and that there will not be a positive impact from indirect and induced labour creation from hosting such a project.
- 12.21 Given such issues with methodology, unrealistic assumptions and invalid conclusions, the Councils consider that the socio-economic assessment by the applicant is inadequate. The Councils conclude that the applicant has failed to adequately, and correctly, assess the baseline and likely effects of the project proposal on employment, skills and education, and therefore the conclusions with regards to impacts and effects of the scheme presented to date, not to be valid.
- 12.22 As a result, mitigation based on the 'worst case' impact scenario of numbers of non-home-based workers in this topic area and also for other topic areas, such as, traffic and transport, is incorrect and insufficient.

Construction Phase Impacts

Positive

Supply Chain and Economic Development

12.23 While the overall impact of the proposal on supply chain and economic development is considered by the Councils as negative, the Councils accept that the construction of Sunnica Energy Farm could also have some minor positive impacts on the local supply chain through investment in local businesses to deliver the installation of the project. However, given the relatively short construction period of the project, the benefits on the local supply chain are not expected to have a long-term impact. Nevertheless, there are, in addition to Sunnica, up to 10 large solar farm developments in planning that are expected to be constructed in the coming five years. Therefore, a developed local supply chain with experience in the construction of large-scale solar PV and battery storage installations can expand to take advantage of these projects and be in a position to export their expertise to similar large-scale solar project opportunities nationally. To maximise these opportunities, the Councils expect the Applicant to work with local stakeholders to develop programmes that will support local businesses to grow and offer their services to supply the Applicant's project and other related projects within and outside the region.

Local Economic Impact

12.24 While the overall impact of the proposal on the local economy is expected by the Councils to be negative, there is a potential of some minor positive economic impacts, although the assessment of the applicant suggests otherwise. As discussed above (see Inadequacy of socio-economic assessments), the applicant assumes that 90% of home-based worker being resident within the 45 minutes study area, this would suggest that there would not be any significant change in additional spend in the area by non-home-based workers – hence this would suggest a neutral impact.

12.25 As discussed above, the Councils expect there to be a considerably higher number of construction workers to be non-home-based. This may result in a minor positive impact that could be gained in the local economy in terms of additional spend from a non-home-based workforce. However, the exact value of this additional spend cannot be determined until the applicant has conducted a realistic assessment of number of home-based workers compared to the non-home-based ones. On balance with negative impacts, this positive impact will not outweigh the negative local economic impacts.

Agricultural Land Use

12.26 None identified or anticipated.

Employment, Skills and Education Impacts

12.27 The Councils anticipate, based on the current proposals, negligible positive employment, skills and education impacts. This is in contradiction to the applicant's assessment of 90% of the workforce being home-based, which the Councils do not consider accurate as discussed above (see Inadequacy of socio-economic assessments).

12.28 The applicant has not provided detailed plans and skills strategies towards maximising employment, skills and education impacts from the project. This is a missed opportunity which should be addressed, as this could result in local benefits of a scheme which currently has very little positive impacts.

12.29 While the Councils consider that current proposals would have a negative or perhaps neutral impact on employment, skills and education, there are opportunities for some positive employment, skills and education impacts, in terms of employment levels and reducing inequalities by creating opportunities for those furthest from the workforce and for vulnerable groups. To achieve such positive impacts, the applicant would need to identify the different skills required across their total workforce, and then the propensity and flexibility of the labour market within the 45 minute travel study area to fill these identified roles. In parallel, the applicant would also need to identify local supply chain companies that can become part of the Sunnica supply chain.

12.30 To achieve this positive impact the Applicant needs to work collaboratively with local stakeholders, share detailed skills and job information in advance and provide funding for a number of interventions that will ensure a pipeline of local people can be trained and enter the labour market at the right time with the right skills to take up opportunities that the scheme will provide. The Councils wish to fully maximise the opportunities for a local workforce that have the chance to develop specialisms in solar installation at a time when the Government's British Energy Security Strategy is promoting solar deployment of up to 70GW by 2035.

12.31 The Councils consider that the Applicant needs to work with their associated supply chains, contractors and local partners to recruit and train local people ahead of the construction period which will ensure that they develop their skills and are enabled to move between roles and different types of contracts as we see further solar deployment. The scheme, as part of the wider energy infrastructure construction projects, is an opportunity to generate skills and employment outcomes and subsequently contribute to the achievement of both national and local policy objectives. This includes:

- providing new, additional employment opportunities for all, but especially those who are currently unemployed or underemployed, thereby reducing in-work poverty and inequality which has risen sharply in the region in the last 2 years
- increasing skills attainment levels for school leavers and those in work through using net-zero/clean growth as a catalyst to motivate the workforce to seek, and take advantage of, opportunities for professional development
- build on the regions existing net-zero/clean growth taskforces aligning with the Government's Ten Point Plan for a Green Industrial Revolution and the Green Jobs Taskforce, creating new green jobs and delivering on our net zero ambitions as we meet our climate targets, thus building back better
- Levelling up - by boosting productivity, pay, jobs and living standards by growing the local supply chain in sustainable industries

12.32 In order to achieve these outcomes the Councils expect the applicant to work with local partners to:

- embed social value in their associated supply chain, delivering change for local people around jobs, sustainability, health and well-being, inclusivity and equity
- raise career aspiration through the creation of sustainable and progressive employment opportunities and contribute to a further enhanced integrated careers and advice system which connects and inspires young people into training for the careers available locally utilising local initiatives
- be an advocate for a diverse, dynamic, and inclusive workforce
- wherever possible, align, utilise and actively promote existing and integrated skills resources available in both counties, enhancing and enriching the local offer for all.

12.33 The benefits of apprenticeships for both an employer and apprentice are widely publicised. The Sunnica solar farm scheme will provide many opportunities for local apprenticeship recruitment supporting regional growth sectors of construction and engineering and play an important part in mitigating any negative employment churn impacts in wider regional employment sectors.

Tourism

12.34 While the Councils anticipate overall a negative impact on tourism, there is the potential for businesses to benefit from the workforce taking up tourism accommodation in the region during this phase. There needs to be consideration made around the publicity of this to ensure that any accommodation providers that are available during this time are able to engage and benefit if possible. Whilst this can be seen as a positive benefit for accommodation providers, it could have at the same time detrimental effects on the tourism industry as a whole and in the long term (see negative tourism impacts below).

Community impacts

12.35 None identified or anticipated.

Neutral

Supply Chain and Economic Development

12.36 None identified or anticipated.

Local economic impact

12.37 While the assessment of the applicant in terms of 90% of home-based worker being resident within the 45 minutes study area, suggest that it does not appear that there would be any significant change in additional spend in the area by non-home-based workers (hence neutral in terms of impact), the Councils disagree with this assumption and consider there could be a positive impact. (See Positive Local economic impact section above)

Agricultural Land Use

12.38 None identified or anticipated.

Employment, Skills and Education Impacts

12.39 The Councils anticipate, based on the current proposals, negligible positive impacts as a result of indirect and induced employment opportunities. This is in contradiction to the applicant's assessment of construction employment, which identifies that the project will create indirect and induced employment opportunities for 962 jobs in total. This leads to the conclusion that the applicant and its associated supply chain will be purchasing the majority of its goods and materials needed within the 45 minute study area. As discussed in the Inadequacy of socio-economic assessments section above, based on the information provided by the Applicant, the Councils cannot ascertain the validity of these numbers. The Councils are not aware of companies located within the study area that are part of a solar supply chain and therefore, can only assume that this is an inaccurate assessment and that there will not be a positive impact from indirect and induced labour creation from hosting such a project.

Tourism

12.40 None identified or anticipated.

Community impacts

12.41 None identified or anticipated.

*Negative**Supply Chain and Economic Development*

12.42 Newmarket is considered a premier location for horse breeding and training.

Representatives of the horse racing industry have expressed concerns that their customers and investors may develop a perception of the area being uncondusive for breeding or training horses due to potential environmental disturbances from the project. Potential transport disruption due to construction activities might, in their view, further exacerbate the negative perception of the area and reduce investment in the equine industry. The Councils consider it therefore important that the applicant engages with the local equine industry and demonstrate mitigating measures that would minimise the disruptions that would generate negative perceptions of the area.

12.43 East Cambridgeshire has a significant logistics/supply chain route along the A142 running from Snailwell, through Soham and onwards up to Ely's Lancaster Way Business Enterprise Zone areas. Disruptions to the already busy flow of traffic along the A142, through increased construction traffic, workers travelling from outside the applicants 45 study area and road works such as cable laying will impact negatively on this growing £1bn+ economy.

12.44 The Councils consider there is a likely negative impact on workforce availability to local/regional businesses and supply chain due to workforce displacement and churn. Within the region, there are up to 10 large solar farm projects that are in planning, with five of these proposed to have a 49.90MW. All of these are expected to be in construction around the same period as the applicant's development. Additionally, there are other major energy projects

taking place around the region that would likely require some of the skills and workforce needed for the construction of this project capacity (see also Inadequacy of socio-economic assessments above). In its impact assessment of this project, the applicant has not considered the implications of these other projects and the cumulative impact of the projects on the local and regional workforce availability for businesses in the area.

Local Economic Impact

- 12.45 Construction will have some effect on the general attractiveness and visual appearance of the area, which may have an adverse impact on businesses as they compete for customers and suppliers, as many companies cite the attractiveness of the area as being very important to their customers.
- 12.46 Newmarket is known as “the Home of Horseracing”, is internationally recognised for the industry, and is home to some of the industry’s leading Trainers alongside a significant support industry of studs, farriers, vets etc. As such, potential adverse impacts on the horseracing industry centred in and around Newmarket need to be carefully considered as part of the economic impact assessment and mitigation proposals.
- 12.47 The Councils are aware that a number of concerns have been expressed by the horseracing industry, there are two key areas of concerns raised by the industry for the construction phase:
- Impact upon the extremely highly strung, valuable horses from noise or reflections: - Industry representations indicate that the horses in training are extremely sensitive to external factors such as noise and visual influences. Noise from additional construction traffic may impact horses which are walked through the town from the training yards to the gallops and back daily, and which are extremely sensitive to the noises of traffic – in particular the sound of braking and hydraulic brake systems. There are concerns by the industry that there is an increased risk of horses to bolt or scare as a result of unexpected noise or glare from the solar panels; this would not only be a danger to itself but also to other road users.
 - Dissuasion of investors/racehorse owners as a result of the visual impacts of the industrial appearance of the solar panels: The industry notes that one of the attractions of Newmarket is its surrounding attractive countryside, which is a factor for owners of racehorses when choosing Newmarket for their horses to be trained. The impact on the long distance views on Limekiln Gallops, as one of the key locations used by the industry to attract new horserace owners, is quoted as a particular concern. Additionally, the industry notes that the horses are extremely volatile (noises can frighten them and so can sudden glare from panels), therefore, the industry are keen to avoid the risk of upsetting the horses. The industry is concerned that changes to the landscape, and related perception issues, could affect the desirability of the area for horseracing and the horseracing investor interest in the area, which could then have a domino effect on the local businesses and supply chain which support this industry. The horseracing industry is concerned that this could result in a significant negative impact during operation.

12.48 The Councils consider there is a likely negative impact resulting from congestion and journey time delays to local businesses, as a result of increase in construction traffic and highway works. For example, there may be supply Chain/logistics disruption on the A142 route resulting from grid connection work from Fordham to Burwell substation, as a major road link into East Cambridgeshire. The road connects Northwards into the districts economic zones and southward to the A14 east (ports) and also westwards, at Newmarket, to the south and midlands. Snailwell Industrial area sited on the A142 near Newmarket (Fordham) is home to a strategically important number of businesses. These operations are highly dependent on the A142 as a continuous supply chain route for distribution of goods and services, as well as connection to ports and onwards into other UK areas. This time lost to businesses has a local economic cost resulting from the reduced productivity of local businesses.

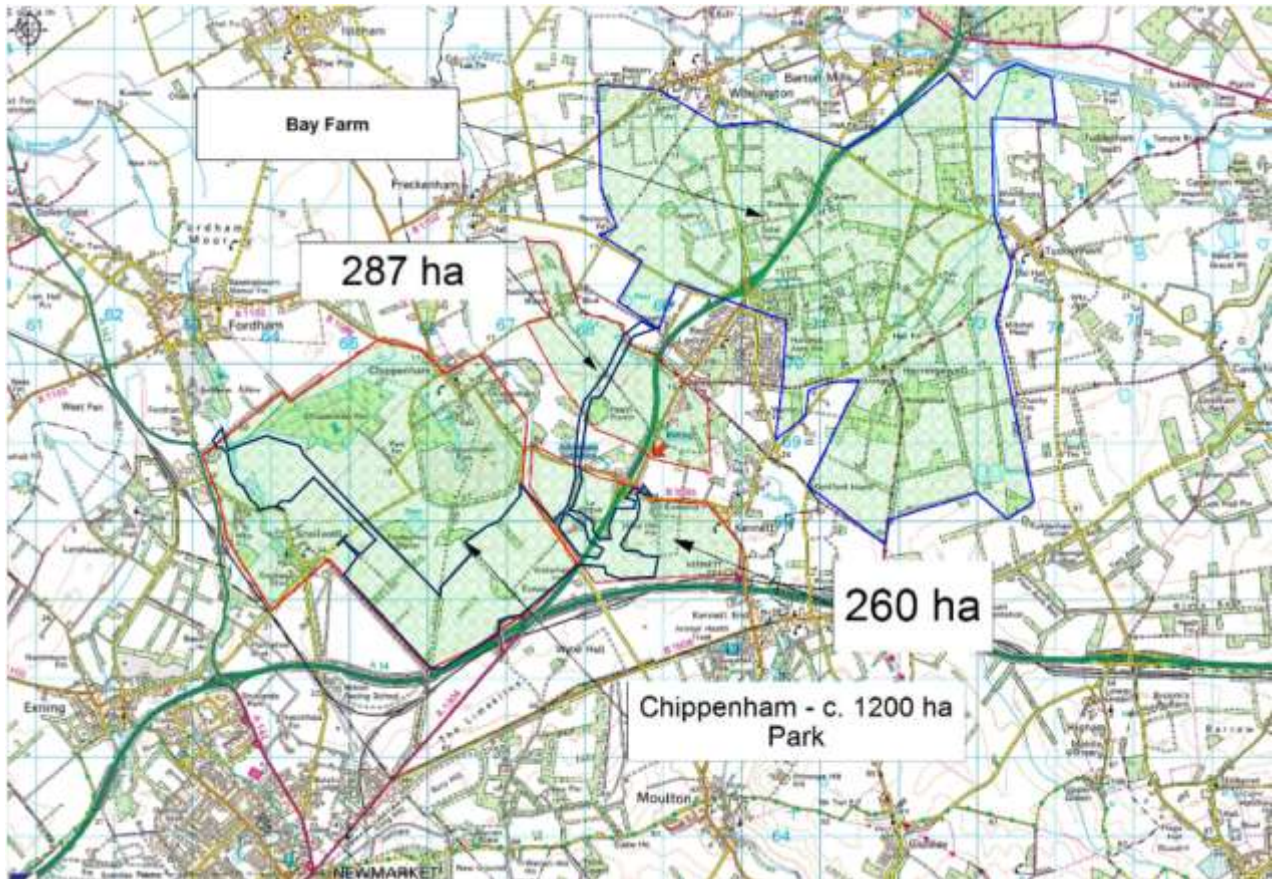
Agricultural Land Use

12.49 The Councils expect a negative impact on agriculture, as a result of loss of food production and loss of employment related to agriculture.

12.50 The Councils note that in Appendix 12B: Soils and Agriculture Baseline Report, soil survey data has been provided by Sunnica. The methodology adopted uses the former Ministry of Agriculture, Fisheries and Food (MAFF) guidelines which have been carried forward by Natural England (which is now the relevant body providing guidance on ALC matters). Concerns surrounding this are highlighted in the paragraph below. The applicant has excluded the assessment of the soils and agricultural land quality of the cable route, and it is clear in the Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) that soil surveys should be extended to the underground cabling and access routes (2.48.14). The Councils consider that further evidence on this should be provided to allow a comprehensive assessment to take place ahead of any decision being made. Whilst the Councils acknowledge the applicant's position that the installation of the cable route will not affect the quality or future use of the agricultural land it travels through, consideration should be given to the methods employed to carry out this element of the development. The disturbance of the topsoil and subsoil can have a lasting impact on the quality of the soil and the retention of water, and this should be taken into account.

12.51 The Councils are concerned that the report in Sunnica's Appendix 12B: Soils and Agriculture Baseline Report produced by Baird does not appear to be consistent with local knowledge or evidence from neighbouring farms. A review of Baird's report, commissioned by the Action Group but not yet published, has highlighted a number of apparent issues, with the surveys and conclusions. It is noted the Action Group employed an agricultural specialist Cambridgeshire County Council uses to assess planning applications where agricultural assessments need to be verified, therefore the Councils consider this credible evidence. Whilst the Councils are not in a position to resolve the issues, they wish to draw the adequacy of the assessment of best and most versatile agricultural land to the ExA's attention and suggest it may be of value to discuss at an issue specific hearing.

- 12.52 Notwithstanding the above, the capability of the soils to produce high yield crops with the support from irrigation seems to be understated. Grade 3 soils in Cambridgeshire can produce a greater range and yield of crops than Grade 3 soils in other areas of the country albeit using irrigation. Evidence of the yield from this area is needed to inform the assessment of the scheme's impact on agricultural production in the area. The assessment needs to reflect this.
- 12.53 The loss of land capable of food production is less well documented by Sunnica and should be assessed.
- 12.54 The Councils raise concerns regarding potential conflict on this proposal and conditions on extant permission DC/15/2109/FUL at Bay Farm in Worlington. Permission DC/15/2109/FUL is for the installation of an Anaerobic Digestion (AD) plant to produce biogas with digesters, silage clamps, lagoons, pipeline to gas grid, landscaping and associated infrastructure. The AD with a gas pipeline and associated infrastructure will generate renewable energy in the form of biogas. A series of conditions were attached to this original permission, there has been a non-material amendment in respect of Condition 4, resulting in the plant being smaller, more compact and with improved layout, thus leading to a decrease in landscape and visual impact. There has also been a variation of condition 3 which states: 'no feedstock shall be used in the development hereby approved other than agricultural crops, together with agricultural and industrial (non-waste) by-products classified by the Environment Agency as suitable for processing within the AD industry for the installation of on-farm anaerobic digestion plant to produce biogas with three digesters, silage clamps, lagoon, pipeline to gas grid, landscaping and associated infrastructure'. Furthermore, as part of the Sunnica proposal it appears some of the supply fields will be eliminated, thus directly impacting Condition 2 due to an overlap between Sunnica and Bay Farm as depicted below. Condition 2 states: The sugar beet and maize feedstock for the AD plant hereby permitted shall only be sourced from the areas showing in the submitted plan. The resulting impact needs to be assessed.



Employment, Skills and Education Impacts

- 12.55 As discussed above (see inadequacies in the socio-economic assessment), the methodology and assessment of the workforce and its origins presented by the applicant is not sufficient to make an informed decision.
- 12.56 The Councils are concerned that the Applicant will not achieve the home-based worker predictions as the assessment is wholly inaccurate. These shortfalls will be met by non-home-based workers, if this occurs, mitigation will not be sufficient.
- 12.57 Labour market churn occurs as workers move between jobs. While the Councils welcome in principle opportunities for individuals to access jobs with better pay and enhanced career paths, in this case the Councils consider labour market churn will have a damaging negative impact on the local economy. Given the relatively short construction period of this proposal combined with the fact there are no long term operational roles, any employment churn, where skilled labour prematurely leaves their current local employment to work on the project, will have a damaging negative impact on the local economy. While Councils do not consider the applicant's assessment realistic that around a third of the available construction workforce within the study area to work on this solar farm project (see Inadequacies in the socio-economic assessment), even with a lower proportion of home-based workforce the Councils expect levels of churn which will have significant negative impact upon the local labour market and economy.

Tourism

- 12.58 The economic impact of tourism in West Suffolk (pre pandemic) was £553m and this is a sector supporting a significant number of jobs and attracting over 11.3million trips a year. Likewise, Newmarket and the surrounding area benefits from tourism to around £58m per year. There is likely to be an adverse effect on the ability to attract visitors to the area.
- 12.59 Newmarket and the surrounding area support around 133,000 bed spaces per year for the circa 1.6million visitors. There is the potential that these visitors could be displaced from the traditional visitor accommodations which is already struggling with capacity and space in addition to being discouraged from visiting the area if no accommodation is available.
- 12.60 Whilst additional accommodation bookings from the workforce may have short term positive impacts on accommodation providers (as set out above), there is a risk that accommodation providers may become accustomed to the workforce bookings and there is a serious risk that post construction these accommodation providers will have lost their regular customer type due to displacement and are no longer viable as a visitor destination accommodation. The visitor economy sector in Newmarket is already in need of more bed spaces during the peak seasons.
- 12.61 East Cambridgeshire has a thriving visitor economy driven by beautiful natural countryside, heritage and tourism directed to important destinations such as Ely and its historic Cathedral quarter and the National Trusts, Wicken Fen. Negative impacts on tourism as a result of detrimental changes to the countryside or a diminishing of visual appeal of surrounding areas needs to be fully considered and mitigation proposals carefully examined.
- 12.62 As discussed in the section on Public Rights of Way (see Section 14), there are negative impacts on the public rights of way network around the proposed development. These rights of way are also used by visitors to the area, hence this may have a detrimental impact on tourism.

Community impacts

- 12.63 A project of the scale and nature proposed will radically change the sense of place, the place attachment of the residents, and the recreational amenities of the affected villages and communities. This impact is exacerbated during the construction phase, due to additional impacts from e.g., public rights of way closures, construction traffic impacts, and environmental health impacts. Technical comments on the specific impacts are covered in other sections of this LIR, however, the in-combination effect of these residual impacts on the local community and its wider wellbeing need to be considered as well. The ES does not recognise this, and the need to mitigate/compensate for these impacts.

Operational Phase Impacts*Positive**Supply Chain and Economic Development*

- 12.64 None identified or anticipated.

Local Economic Impact

- 12.65 None identified or anticipated.

Agricultural Land Use

12.66 None identified or anticipated.

Employment, Skills and Education Impacts

12.67 There may be some minor positive employment impacts, however, due to the inaccurate assessment of operational employment the Councils cannot identify the positive impact during the operational phase of the scheme. The applicant has identified that the scheme will create 17 direct employment opportunities throughout its operational phase. Using its inaccurate methodology to calculate indirect and induced jobs, the assessment has identified these 17 jobs will create a further 17 indirect and induced roles with a total of 27 of these opportunities being within the study area. The Councils maintain that the applicant has failed to adequately, and correctly, assess the likely effects of the project proposal on employment, skills and education, and therefore any and all conclusions with regards to impacts and effects of the scheme presented to date, are null and void.

Tourism

12.68 None identified or anticipated.

Community impacts

12.69 None identified or anticipated.

Neutral

Supply Chain and Economic Development

12.70 No significant positive impact has been identified for this project during its operational stage given the nature of the project. Solar farm projects tend to require minimal regular maintenance which would not require an economically significant number of workers to conduct.

Local Economic Impact

12.71 None identified or anticipated.

Agricultural Land Use

12.72 None identified or anticipated.

Employment, Skills and Education Impacts

12.73 Notwithstanding the limitations of the applicant assessment there will be limited operational jobs and therefore there will be a negligible long term sustainable positive impact on employment.

Tourism

12.74 None identified or anticipated.

Community impacts

12.75 None identified or anticipated.

*Negative**Supply Chain and Economic Development*

- 12.76 The applicant determines that there will be no effect on local amenities and land use in terms of impact on business premises and future development of land. However, in reaching this conclusion, the applicant has not taken into consideration the unique local economy and how this could be negatively impacted by the development during operation.
- 12.77 The local area is unique for its horseracing industry, and this is a crucial part of the local area selling point as a destination that brings in investors and business owners involved in the business of horseracing. The local area hosts several stud farms and horseracing institutions, and in addition to the racing event fixtures which draw in visitors, this industry is worth over £200 million to the local area. Part of what makes this local area unique for this industry is the landscape and terrain. Therefore, investors and business owners are likely to be sensitive about changes to the landscape that could affect the attractiveness of the area for horseracing. Although the project is likely to have screening installed to minimise visual impact, the Councils are aware that concerns have been expressed by representatives of the horse racing industry that there is likely to be a problem of perception. Considering other energy developments being planned within the region, there are concerns by the industry that there could be a cumulative effect on the perception of the area focusing on using its land for renewable energy developments at the expense of the existing horseracing industry. This perception is then seen by the industry as likely to diminish horseracing investor interest in the area, which would then have a domino effect on the local businesses and supply chain which support this industry. Therefore, on this basis, the industry is concerned that there is a potential significant negative impact during operation.

Local Economic Impact

- 12.78 The local area hosts several stud farms and horseracing institutions. During the operational phase there is concern that there will be an impact upon Stud Farms in particular as a result of loss of agricultural land or impact upon stud lands adjoining the application area (see also agricultural land use section below).
- 12.79 In addition, there is likely to be a negative impact upon local economy if the equine cluster is affected. In 2014, the value of the equine sector was estimated as being worth £200million and accounts for 3000 direct FTEs. In addition a significant number of local businesses rely upon the horse racing industry both within Cambridgeshire and Suffolk.

Employment, Skills and Education Impacts

- 12.80 Notwithstanding the Council's concerns about the inaccuracy of the assessments, if the applicant's assessment that 1,483 jobs will be taken up by people within the 45 minute study area the Councils have a significant concern that when the construction period ends and without any long term operational roles available there would be an employment cliff, with many people losing employment at the same time, when construction ends.

Tourism

12.81 Newmarket is a visitor destination that is promoted all year round to visitors interested in horseracing, history, food and much more. If visitor numbers were to reduce as a result of the development, it may take several years and a great deal of promotional work to return the town to its current status as a visitor destination.

Agricultural Land Use

12.82 The Councils expect a negative impact on agriculture, as a result of loss of food production and loss of employment related to agriculture – this impact will be broadly the same as outlined above under construction impacts.

12.83 Soil surveys should be extended to the underground cabling and access routes to allow a comprehensive assessment of the soils to take place ahead of any decision being made.

12.84 Evidence of the yield from this area is needed to inform the assessment of the scheme's impact on agricultural production in the area.

12.85 The Councils wish to draw the adequacy of the assessment of best and most versatile agricultural land to the ExA's attention, and suggest it may be of value to discuss at an issue specific hearing.

Community impacts

12.86 A project of the scale and nature proposed will radically change the sense of place, the place attachment of the residents, and the recreational amenities of the affected villages and communities, over a long period of time. Technical comments on the specific impacts are covered in other sections of this LIR, however, the in-combination effect of these residual impacts on the local community and its wider wellbeing need to be considered as well. The ES does not recognise this, and the need to mitigate/compensate for these impacts. (See also Section 10 Landscape and Visual Amenity).

Required Mitigation

Supply Chain and Economic Development

12.87 While the positive benefit to local supply chains and businesses from this project on its own may be limited and transient, the significant number of large-scale solar projects in planning within the local area and region, opens some opportunity for investing in local supply chain and businesses that can support the development of these projects. Therefore, the Councils expect the applicant to provide a positive strategy, with key targets for financial investment contribution towards the growth of local supply chains and businesses, enabling these businesses to play key roles in supporting other large solar farm developments, regionally and nationally. The applicant would be expected to work with the Councils on the structure on how the financial investment would be used in terms of local business targets and schemes to develop local supply chain. A successful strategy may be able to compensate, to an extent, some of the residual negative impacts on the local economy.

- 12.88 Albeit limited in scale (see also above re concerns of the applicant's assumptions for home-based workers), there is a positive impact to be gained from additional spend from non-home-based workers. This may again somewhat compensate the wider residual impact on the local economy. The Councils expect the applicant to provide proposals to develop schemes to encourage non-home-based workers spend with local retailers. The applicant is encouraged to work with the Councils in developing appropriate schemes for this.
- 12.89 The horseracing industry has raised substantial concerns about potential negative impact on the local horseracing industry during construction, The Councils expect the applicant to put forward mitigation proposals to directly address any negative impacts of the construction works on the horse racing industry, which would need to involve working with local businesses in the horseracing industry. The mitigation proposal should include comprehensive plans on how the environmental and social disturbances to horseracing business and supply chain would be addressed during the construction period. Consideration should also be given whether some impacts on horse racing may be avoided, such as through careful routing of HGV traffic.
- 12.90 The industry equally considers that there is potential for lasting negative impact due to long-term investor perception of the area as not being favourable for the horseracing industry during the operational stage, due to a cumulative effect of the other energy projects in development in the local area and region. Therefore, the Councils consider that the applicant should work with the industry to understand the industry's concern and discuss possible mitigation measures that would focus on maintaining the perception of the local area for its continued suitability for the horseracing investment and business growth, ensuring that the local economy does not lose out on this historic industry. The Councils encourage the applicant to work with the horseracing industry to develop the plans and strategies of helping to maintain the strength of the area as being attractive to the horseracing industry.
- 12.91 As detailed within the Required Mitigation section under Employment, Skills and Education impacts below, the applicant should put forward mitigation measures to address the issues of workforce displacement and churn which is expected to impact local and regional businesses and supply chains something other local economic sectors and developments.

Agricultural Land Use

- 12.92 None identified.

Employment, Skills and Education Impacts

- 12.93 The project will have an impact on local labour markets and workforce availability, further exacerbated by the currently extremely low unemployment rate locally and nationally. Whilst the Councils question the home-based worker numbers that have been presented (see above), it is still expected that a number of workers will prematurely leave their current employment and this level of churn within the workforce will have a major significant negative impact. To mitigate this effect, the applicant is expected, through the project, to

create employment for those currently economically inactive, as well as to train, attract and employ those entering work and those that are under employed and therefore not impacting upon existing employment numbers. The applicant should also support those that are transferring from other sectors for better employment. The applicant is expected to ensure it is an exemplar for inclusion and diversity within its workforce to again ensure it is attracting labour from as many sources as possible beyond the currently employed labour market. The Councils expect the applicant to:

- Deliver and fund, in collaboration with the Councils and local partners, activities that develop both local talent pools and local people so that they are enabled to take up opportunities of recruitment into skilled roles across the project;
- Work collaboratively with the Councils to ensure that where possible skills training, aimed at creating wider and deeper local talent pools from which to draw from, also has a long term demand within the region thus ensuring a greater opportunity for sustainable employment;
- Set an ambition for 5% of the roles required by the project to be filled through 'earn and learn' positions (the majority of which will be apprenticeships but may also include graduates on formalised training schemes and sponsored students as per the definition of the '5% club') including a commitment to a minimum number of apprenticeship opportunities to be provided to local people.
- Create tangible mechanisms for ensuring that the skills base developed for the construction of the Sunnica project is as transferable as possible to other key construction project being delivered regionally
- Deliver activities with the aim to increase the size and diversity of the labour market pool
- Put into place clear plans (e.g., commitments within contracts) to drive the behaviours of their associated supply chain(s) to achieve skills and employment outcomes
- Incorporate social value measures within all activity and use as a tool to quantify the success of any and all interventions and to drive commitment and delivery of the associated supply chain to recruit locally and provide apprenticeship opportunities where feasible.
- Clearly set out via a Skills Plan, incorporating, supply chain skills plans a strategic approach to developing and supporting the Sunnica project's workforce requirements. The strategic approach should take into account each distinct phase of the project, feedback from employment monitoring measures and be reflective of the Councils local economics, in particular local opportunity that meets skills legacy for the region
- Adopt and fund a dynamic approach to monitoring skills, employment and education outcomes and impacts that, through clearly identified governance, processes the use of all available evidence, local expertise and LMI to ensure HB worker targets are being met and programmes are in place to support/ensure local talent pools are available to combat churn effects.

Tourism

12.94 Due to the potential displacement of visitors from the area and the effect on the visitor economy sector and in order to mitigate impacts and maximise opportunities the Councils are seeking to secure the following:

- Funding to support local visitor economy initiatives to mitigate impact.
- Applicant to liaise with local tourism organisations and accommodation providers to understand demand and availability.
- Applicant to ensure that all local accommodation providers are aware of this potential opportunity, liaise through existing networks.
- Applicant to support tourism accommodation providers to attract tourists once workforce bookings subside.
- Fund to support local visitor economy initiatives to mitigate impact.
- Applicant to liaise with SCC Rights of Way and Discover Suffolk to understand the affects.

Community impacts

12.95 Given the scale of this proposal, the Councils expect the applicant to not only mitigate the tangible and more easily defined impacts, but also address intangible but real residual impacts on the community and locality. The Councils expect an appropriate mitigation/compensation package for local communities. This would be in addition to any potential community benefits from the development, including any to be introduced as announced in the Government's British Energy Security Strategy.

Requirements and Obligations

Employment, Education and Skills Impacts

12.96 In order to mitigate impacts and maximise opportunities the Councils are seeking to secure the following through obligations:

- The provision of an employment outreach fund to support the delivery of initiatives in areas of social deprivation and working with those furthest from the labour market and our identified priority groups to bridge the gap to becoming 'work ready' and increase the pool of available local labour
- Provision of a capital and revenue fund ensuring that local skills infrastructure is able to develop and has access to facilities and specialist teaching resources necessary to create a lasting education and skills legacy to service the needs of the build and support local residents beyond the build
- A workforce delivery strategy prepared in collaboration with the main contractors for the project and the Councils and local stakeholders setting out the strategic approach for developing the workforce requirements for the project. Including, but not limited to:
 - Descriptions of the skills, roles, competencies and qualifications needed at each stage of the project
 - The opportunity for skills, training and employment initiatives to contribute to the delivery of the workforce at each stage

- An Apprenticeship strategy integrated with the Applicant's workforce delivery strategy, providing key entry and progression opportunities for all, ensuring all contractors maximise opportunities for local people and providers
- Enrichment and enhancement of Suffolk's current educational inspiration offer and its content, maximising the project's opportunity to increase educational inspiration. Upskilling and equipping inspiration leads throughout education, outreach and the Voluntary, Community and Social Enterprise sector.
- Provision of a bursary scheme aimed at supporting the removal of barriers to training and employment. Ensuring education and skills development is accessible to all.
- Funding for a dynamic approach to monitoring skills, employment and education outcomes and impacts that, through an identified governance structure that involves the Councils in a central, influential position, processes the use of all available evidence, local expertise and labour market information to ensure programmes are in place to support/ensure local talent pools are available to combat negative churn effects
- Funding towards a regional skills coordination function embedded in the system to provide a focal point of coordination and skills planning and legacy - acting as the main link between the project, local providers and broader regional demand for skills.

13 Transport (Highways)

Summary

- 13.1 The Councils have a number of methodological issues with the assessment of transport impacts. The Councils consider that these issues in combination result in the assessment not being able to adequately assess the likelihood or severity of a number of likely impacts. In addition, there is a lack of information, assessment and detailed plans in a number of areas. This includes that information provided by the applicant on site accesses does not clearly show the location and orientation of the accesses, and many lack road safety audits.
- 13.2 The Councils consider that many of these issues could be resolved, by the Applicant establishing the extent of likely impacts, and those being capable of being resolved through suitable mitigation.
- 13.3 The Councils seek further information and commitment with regard to HGV movements and route controls.
- 13.4 The impact of AILs, including on highway structures, has not been fully assessed.
- 13.5 The Councils identify a number of highway safety issues/potential issues at several key junctions, particularly with the A11, which have to be addressed by the Applicant.
- 13.6 The Councils seek a number of changes to management plan, including controls of traffic and HGV movements in the outline Construction Transport Management Plan (OCTMP) and Outline Travel Plan (OTP) to limit the transport impacts to those assessed in the ES and TA.
- 13.7 The Councils are also seeking protective provisions, to discharge their responsibilities to access, inspect and maintain the public highway within the order limits.
- 13.8 Please note that impacts on PROW are discussed in a separate chapter.

Table 9: Summary of impacts – Transport (Highways)					
Ref No.	Description of Impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
1g	Junction layout Applicant does not demonstrate that the junction layout required to provide safe access can be achieved fully within highway or DCO boundary prior to approval may result in the later provision of a safe access being unfeasible. Construction of an inappropriate junction would be significantly detrimental to highway safety.	C & O	Negative	Change: Provide clear details of the DCO boundary and the researched/verified extent of the public highway on an accurate and appropriately scaled plan. Provide details of the proposed junction layout based upon accurate survey information, on an appropriately scaled plan. Provide vehicular swept paths at each designed junction to demonstrate capacity for two-way movement of vehicles likely to be encountered at the junction.	NPPF East Cambs LP Com 7 DMRB GPD WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1h	Visibility Applicant has not demonstrated that visibility appropriate to the speed of the road can be achieved fully within highway or DCO boundary prior to approval may result in the later	C & O		Change: Provide clear details of the DCO boundary and the researched/verified extent of the public highway on an	NPPF LP Com 7 DMRB

	provision of a safe access being unfeasible. Construction of an inappropriate junction would be significantly detrimental to highway safety.			accurate and appropriately scaled plan. Provide appropriate speed data for vehicles approaching the junction from each direction and present the location at which it is taken on plan.	WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1i	Junction capacity Applicant has not demonstrated sufficient capacity within the junction/access roads, as required to ensure safe access to the site may result in construction to the significant detriment to highway safety.	C & O	Negative	Requirement: Provide details of the anticipated use of each access, during both construction and operational phases, including the number and class of vehicle. Provide details of the proposed junction layout based upon accurate survey information, on an appropriately scaled plan. Provide vehicular swept paths at each designed junction to demonstrate capacity for two-way movement of vehicles likely to be encountered at the junction.	NPPF LP Com 7 DMRB GPD WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1j	Inappropriate offside radii	C & O	Negative	Change:	NPPF

	The proposal to provide either small or no radii on the exits from sites is considered inappropriate. While a presumption is made that there will be no flow in that direction, it is unclear whether demand for turning in this direction will exist (possibly associated in onward travel between site), or how such movements would be adequately controlled so to entirely prevent contrary movements. Failure to either prohibit movement or provide appropriate access would be significantly detrimental to highway safety.			Either provide details of how contrary movements would be entirely prohibited during both construction and operational phases or provide appropriate junction radii suitable for the anticipated use.	LP Com 7 GPD WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1k	Junction construction Applicant has not provided sufficient details of the form of construction required to ensure durability of the highway and to prevent migration of materials or standing of surface water in the highway to the significant detriment to highway safety.	C & O	Negative	Change: Provide details of the proposed construction necessary to ensure the structural integrity of the highway and prevent mud/granular material within the site from migrating into the highway, noting that all works within the highway must as a minimum, be in accordance with Cambridgeshire County Councils Housing Estate Road Construction Specification (HERCS).	NPPF LP Com 7 GPD HERCS WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.

				Provide drainage details of the proposed access, including any part of the existing road effected by the proposed works.	
1l	Gates. Absence of information regarding the positioning of gates may result in inappropriate setback being provided. Failure to enable vehicles to clear the highway while gates are being opened may result in vehicles dwelling in the highway to the significant detriment to highway safety.	C & O	Negative	Requirement: Provide details of the vehicles required to access the site. Provide details of the position of gates based upon accurate survey information, on an appropriately scaled plan, noting that gates must swing into the site and operate separately from any parking, loading or storage areas.	NPPF LP Com 7 GPD WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1m	Highway Drainage It is unclear how the additional surface water runoff from impermeable surface will be managed or whether there is sufficient capacity within the existing highway to accommodate this without resulting in water standing in the highway to the significant detriment to highway safety.	C & O	Negative	Requirement: Provide details of the proposed management of surface water runoff from the additional construction in the highway verge, including its relationship to drainage of the existing highway. The applicant should be aware that it is an offence to discharge water from private	NPPF LP Com 7 HERCS WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the

				land onto the highway, and appropriate measures to mitigate this risk must be established.	safety of the highway network.
1n	Internal arrangements Applicant has not provided sufficient details of the internal arrangement of each access sites to determine sufficient capacity to accommodate use and prevent inappropriate manoeuvring or obstruction in the highway with significant detriment to highway safety.	C & O	Negative	Requirement: Provide details of the anticipated use of each access, during both construction and operational phases, including the number and class of vehicle and the number of vehicles required to park on site. Provide details of the internal arrangements showing access routes and areas for staff parking, storage, loading and independent turning within the site sufficient to enable vehicles to both enter and leave the site in forward gear, including plans of vehicular swept paths to support this.	NPPF LP Com 7 WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1o	Hard standing	C & O	Negative	Requirement:	NPPF

	No details of the extent of hardened surface entering each of the sites has been provided and it is not therefore possible to consider whether, irrespective of the use of wheel washing, that this would be sufficient to mitigate the risk of deleterious material being tracked into the highway, to the significant detriment to highway safety.			Provide details of the extent and nature of any hard standings within the site as necessary to mitigate the risk of material migrating into the highway under trafficking.	LP Com 7 HA 1980 WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1p	Ditches It is anticipated that the proposals will generally require widening of existing accesses. Applicant has not provided details of the relationship of any ditches/watercourse with respect to any proposed junction or road widening, and any piping or stopping up required, which may compromise the structural integrity of the highway or the flow of water in the local surface water drainage system resulting in flooding, either of which would be significantly detrimental to highway safety.	C & O	Negative	Requirement: Provide details of any ditch/watercourse that will be affected by any access or road widening, including details of any pipes, retaining features and regraded embankments. This should be included on the junction layout plan to enable the extent of works with respect to DCO/highway boundary to be considered. The applicant should be aware that any such works proposed within adjacent watercourse would require separate Land Drainage Consent (or do they with a DCO) (LLFA approval?)	NPPF LP Com 7 LDA 1991 WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.

1q	Bridges It is unclear whether due consideration has been given to the presence of existing small bridges/culverts along the proposed access routes and whether they have the structural capacity to withstand the loading of the vehicles proposed. Failure to ensure structural capacity may result in damage/collapse, which would be significantly detrimental to highway safety.	C	Negative	Requirement: The applicant should identify all vulnerable structures along the construction routes in consulting with the Highway Authorities Structures team to determine whether any improvement or replacements may be required to facilitate their scheme.	NPPF LP Com 7 DMRB WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1r	Traffic Management There are sites where it appears unlikely that an intrinsically safe design can be achieved without additional mitigation measure being in place while the access is in use. No specific details appear to have been provided in this regard. failure to provide appropriate safe access to the highway would be significantly detrimental to highway safety.	C & O	Negative	Requirement: Provide details of sites where additional measures will be required. Provide details of the additional measures to enable this to be assessed and feasibility/suitability established.	NPPF LP Com 7 RTRA 1984 WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.

1s	Proposed reinstatement of accesses The proposed reinstatement of verges after the construction phase, while retaining access during the operation phase will fail to provide safe access for the intensification of use, which would be significantly detrimental to highway safety.	O	Negative	Change: Retain a suitable and safe access proportionate to the ongoing operational use of the access. Should reinstatement below that required during the construction phase be necessary, provide appropriate details.	NPPF LP Com 7 DMRB GPD HERCS
1t	Approach roads It is unclear whether the width of roads on delivery routes on the approach the main construction site accesses, such as La Hogue Road are sufficient to accommodate the increase flow of HGVs. Increasing the number of large vehicles passing one another on narrow roads will also increase overrun of the road edge resulting in damage to and rutting of the road edge/ verge which can contribute to loss of control accidents, to the significant detriment of highway safety.	C	Negative	Requirement: Provide clear details of the number/frequency of HGVs using individual route. Subject to the outcome of the above, provide survey details of road on approaching the main sites identifying any areas of risk of vehicular overrun. Propose measures to mitigate the risk of damage to the road edge, such as pre-emptive widening or monitoring and reactive maintenance.	NPPF LP Com 7 DMRB WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1u	Grid connection route	C & O	Negative	Requirement:	NPPF

	No details have been provided of the internal routes within the site that may be used during the construction or operational phase, or how turning at associated junctions may affect the required access arrangement. Failure to provide sufficient information will result in inappropriate assessment of the proposals and potential for unsuitable access arrangements to the significant detriment to highway safety.			Provide details of internal routes. Provide details of the type and number of vehicles using each route, including the direction of travel when crossing or entering the public highway.	LP Com 7 DMRB WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.
1v	Damage to Highways Many of the roads approaching individual sites (such as the droves) are of unknown construction and it is unclear whether the structure is sufficient to withstand intensive heavy loading of the works proposed. Failure to have appropriate measures in place to protect or maintain the road surface may result in premature degradation, risking potholing with significant detriment to highway safety.	C	Negative	Requirement: Include an agreed list of vulnerable roads in the Traffic Management Plan, including details of pre/ongoing inspections and agreed maintenance protocol.	NPPF LP Com 7 HA 1980 - S59 extraordinary traffic WSC Policy DM2 requires development proposals to produce designs, in accordance with standards, that maintain or enhance the safety of the highway network.

1w	Road Safety Audit The Road Safety Audit provided in the application does not appear to have been submitted by or to the Local Highway Authority or had its brief or designers' response reviewed by them as the Overseeing Organisation. Its validity is therefore questionable, and it is not clear whether the hazard to highway safety has been adequately resolved.	C & O	Potentially negative	Requirement: Any Road Safety Audits required as part of these proposals must be compliant with DMRB GG119 with brief, audit problem and designer's response approved by the appropriate Overseeing Organisation.	NPPF LP Com 7 DMRB

Policy Context

National Policy Statements

Overarching National Policy Statement (EN-1)

- 13.9 EN-1 states at 5.13.3 that if a project is likely to have significant transport implications, the applicant's ES (see Section 4.2) should include a transport assessment, using the NATA/WebTAG139 methodology stipulated in Department for Transport guidance, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.
- 13.10 While for the Sunnica Energy Farm proposals a Transport Assessment has been provided by the applicant, the Councils consider the level of engagement on appropriate assessment and mitigation has been inadequate. The Councils consider there are issues with the contents and methodology used. This is discussed in detail in ANNEX D.
- 13.11 EN-1 further states in 5.13.4 that where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.
- 13.12 For the Sunnica Energy Farm proposals, the Applicant has included the Travel Plan element within the Framework Construction Management Plan and Travel Plan (FCTMP&TP), not as a separate plan. Due to the rural location of the project, and the limited opportunities for sustainable transport to and from the site, the amalgamation into a single document appears reasonable. However, the Councils consider that more effort can be applied to workers travel behaviour, and greater confidence is required regarding control measures.
- 13.13 EN-1 paragraph 5.13.8 states that where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts.
- 13.14 In 5.13.5, EN-1 states that if additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time.
- 13.15 For the Sunnica Energy Farm proposals, although recognising that the project is located in a rural area with limited sustainable or public transport, the Councils do not consider that the Applicant has considered all practical demand management measures.
- 13.16 Paragraph 5.13.10 of EN-1 states that water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective.
- 13.17 For the Sunnica Energy Farm proposals, the lack of suitable rail facilities limits the use of rail in this area although aggregates can be transported to a small number of railheads locally. It is assumed that the Applicant will be using nearby ports such as Ipswich to

transport large loads as close as possible to the site but this has not been confirmed. This is of particular interest to the Councils as AILs are typically brought to Burwell by road along the A14 corridor and must use local roads to avoid restrictions on the A14. This is not a formal route recommended by the DfT.

13.18 EN-1, at paragraph 5.13.11, states that the IPC may attach requirements to a consent where there is likely to be substantial HGV traffic that:

- control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;
- make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid ‘overspill’ parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and
- ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.

National Planning Policy Framework

13.19 Paragraph 110 (b) and (d) set out that safe and suitable access need to be achieved and that cost-effective mitigation is appropriate for significant impacts on the transport network.

Local Plan Policy

13.20 Policy Com 7 of the East Cambridgeshire District Council Local Plan 2015 (ANNEX I) should be considered with regards to transport impacts, particularly with reference to points a) and f).

13.21 On 1 April 2019 Forest Heath District Council and St Edmundsbury Borough Council were replaced by a single authority, West Suffolk Council. The development plans for the previous local planning authorities were carried forward to the new council by regulation. The development plans remain in place for the new West Suffolk Council (WSC) and, with the exception of the Joint Development Management Policies document (which had been adopted by both councils), set out policies for defined geographical areas within the new authority. It is therefore necessary to consider this application with reference to policies set out in the plans produced by the former Forest Heath District Council. The Forest Heath Core Strategy Development Plan Document 2001-2026 (with housing projected to 2031) was adopted in May 2010 **(APPENDIX 1)**. The relevant Core Strategy Policies relating to transport are quoted here⁹:

“3.11.4 Together with Suffolk County Council, the Council will continue its research to ascertain whether a relief road for Brandon is still required following the A11 improvement and deliverable. It is expected that the dualling of the A11 between

⁹ Paragraph numbers are from the quoted document. In this quote ‘the Council’ refers to the former Forest Heath District Council, and can be read as referring to West Suffolk Council

Thetford and Barton Mills will remove an element of the through traffic from Brandon and consequently reduce congestion in the town centre. The Council together with Suffolk County Council will also research the possibility of a relief road for Mildenhall to ease congestion in the town centre.

3.11.5 The Council will support Suffolk County Council and any other relevant partners in the provision of any 'Local' traffic improvement measures within Brandon, Mildenhall and Newmarket to improve safety, provide additional capacity and enhance the urban street scene. Forest Heath District Council working with Cambridgeshire County Council as neighbouring Highway Authority and other relevant organisations will undertake a further technical study to identify the likely transport implications of development proposed at Newmarket as set out in policy CS1 for the Cambridgeshire area and to identify any mitigation measures that may be required.

Policy CS 12 'Strategic Transport Improvement and Sustainable Transport' The District Council will work with partners including Suffolk County Council, the Highways Agency and developers to secure the necessary transport infrastructure and sustainable transport measures to facilitate the regeneration of the market towns, support the local economy, improve access to services and facilities, particularly in rural areas, and minimise the impact of traffic on the environment. The Local Development Framework will support the delivery of the following strategic transport proposals: Schemes to relieve the adverse impacts of traffic in Brandon, Mildenhall and Newmarket, Dualling of the A11 between Thetford and Barton Mills and improvements to Fiveways roundabout, Improvements to the rail infrastructure within the District, National cycle network (Route 51 through the District), Improvements to the A14/A142 junction at Newmarket, plus other relevant measures recommended by the Newmarket to Felixstowe Corridor Study 2005, Improvements to the rights of way in the District required to achieve the objectives of the Suffolk Rights of Way Improvement Plan including consideration of any cross boundary issues arising."

13.22 Table 4.1 sets out some Core Strategy Infrastructure Delivery Requirements:

Newmarket

13.23 Improvement of A14/A142 junction necessary urgently; Congestion at times in town centre.

Mildenhall

13.24 Traffic issues in town centre. Measures to be developed to manage this. Relief Road may be necessary.

13.25 Cycle routes to west of town.

Red Lodge

13.26 No significant issues for road access.

13.27 Lack of access to eastbound A14 may need to be addressed.

Kentford

- 13.28 Crossroads at centre of village will need improvement to cater for additional traffic. Also new footpath route to station to be provided.

Exning

- 13.29 Traffic congestion at junction of A14/A142, generates need for improvement, to which this development (Hatchfield Farm) should contribute.
- 13.30 The West Suffolk Joint Development Management Policies Document (2015) contains Policy DM2, which., inter alia, required development proposals to produce designs that provide access for all, and that encourage the use of sustainable forms of transport and designs that, in accordance with standards, maintain or enhance the safety of the highway network.
- 13.31 Policy DM45 requires that, for major development and/or where a proposal is likely to have significant transport implications, a Transport Assessment should be submitted that is appropriate to the scale of development and the likely extent of transport implications. In addition, a Travel Plan that identifies the physical and management measures necessary to address the transport implications arising from development should also be required.

Other Relevant Local Policy

Local Transport Plan (LTP) for Suffolk

- 13.32 Suffolk County Council's LTP Part 1 (APPENDIX 13) lists improvements to the A14/A142 Interchange at Newmarket and the A11 Fiveways Junction as key transport issues for the former Forest Heath district area. SCC commits to working with and lobbying National Highways and Central Government to secure such improvements.
- 13.33 The transport strategy for rural areas within Suffolk is based around five themes:
- 13.34 Better accessibility to employment, education and services
- 13.35 Encouraging planning policies to reduce the need to travel
- 13.36 Maintaining the transport network and improving its connectivity, resilience and reliability
- 13.37 Reducing the impact of transport on communities
- 13.38 Support the county council's ambition of improving broadband access throughout Suffolk
- 13.39 The Suffolk LTP sets out that developers are expected to produce robust travel plans to minimise car use with challenging targets for levels of parking and traffic generation and attraction. These plans will be supported by significant contributions to the provision of local facilities for sustainable transport connecting new developments to employment and services. This will include pedestrian and cycle routes, the promotion and enhancement of existing bus services or securing new services, with an aim that each of these new or altered bus services should be commercially viable within five years.
- 13.40 The Suffolk LTP also expects developers to fund traffic management and bus priority schemes, measures to reduce air quality impacts etc. in addition to any work necessary to

mitigate any adverse traffic impacts of their development on the existing highway network. This should include commuted sums for future maintenance.

Local Transport Plan (LTP) Cambridgeshire

13.41 The Strategic objectives for Transport in Cambridgeshire are set out in the CPCA's Local Transport Plan (LTP) 3 (APPENDIX 27).

The Cambridgeshire Health & Well-being Strategy

13.42 The Cambridgeshire Health & Well-being Strategy (APPENDIX 28) sets out a number of priorities to benefit health and wellbeing for residents:

Priority 2 *Support older people to be independent, safe and well*, which encourages older people to stay active

Priority 3 *Encourage healthy lifestyles and behaviours* in all actions and activities while respecting people's personal choices, which promotes physical activity

Priority 4 *Create a safe environment and help build strong communities, wellbeing and mental health*, which recognises the strong link between physical and mental health. Rights of way and access to green space is an important, free source for people.

Priority 5 *Create a sustainable environment in which communities can flourish*, which acknowledges the importance that good transport planning, green spaces and the built environment play a vital role in determining health and wellbeing, together with the benefits that these bring to the local economy.

13.43 Development proposals should also be considered against Cambridgeshire County Council's General Principles for Development (GPD) (APPENDIX 29) and Cambridgeshire County Council's Housing Estate Road Construction Specifications (HERCS) (APPENDIX 30).

Construction Phase Impacts

Positive

13.44 None identified or anticipated.

Neutral

13.45 None identified or anticipated.

Negative

Likely but Unassessed Impacts

13.46 The Councils have a number of methodological issues with the assessment of transport impacts which are set out in more detail in ANNEX D. The Councils consider that these issues in combination result in the assessment not being able to adequately assess the likelihood or severity of a number of likely impacts, such as:

- Reduced capacity at the Red House Lodge Dumbbell roundabouts as a result of large increase in staff vehicle movements, resulting in increased queueing and delay.

- Reduced capacity at the B1506 Bury Road / Herringswell Road priority junction resulting in increased queueing and delay particularly as a result of right turning traffic into Herringswell Road.
- Reduced amenity and increased fear and intimidation on Elms Road, as a result of increased staff movements and increased HGV movements, on NMUs, particularly cyclists. Potentially resulting in reduced walking and cycling with negative implications on health and wellbeing.
- Increased severance and reduced amenity for NMUs on Turnpike Road through Red Lodge. Potentially resulting in reduced access to facilities, reduced walking and cycling with negative implications on health and wellbeing.
- Increased severance and reduced amenity for NMUs on Warren Road through Red Lodge. Potentially resulting in reduced access to facilities, reduced walking and cycling with negative implications on health and wellbeing.
- Increased severance and reduced amenity on B1506 Bury Road and Herringswell Road in Kentford. Potentially resulting in reduced walking and cycling with negative implications on health and wellbeing.
- Reduced capacity at the A14 / A142 (Junction 37) resulting in increased queueing and driver delay and reduced road safety.
- Reduced capacity at the A142 / Landwade Road roundabout junction resulting in increased queueing and driver delay.
- Very limited potential for sustainable transport patterns resulting in increased carbon emissions associated with staff transport.
- Reduced road safety as a result of increased turning movements at the site accesses.

13.47 The Councils consider that:

- 1) the extent of these likely impacts could be established if the Applicant addressed the issues raised in ANNEX D; and
- 2) these impacts are likely to be capable of being resolved through suitable mitigation, the nature of which depends on an accurate assessment.

Traffic Impacts

13.48 As set out at Paragraph 13.6.35 of the Transport and Access section of the ES [APP-045], no assessment has been undertaken of traffic impacts on a Saturday; without such evidence, it may lead to additional impacts not being identified as the construction peak may coincide with the network peak. This is possible particularly given greater leisure use of the highway network (including PROW) by NMUs on weekends and it is assumed that the worker shift pattern on a Saturday would potentially crossover with greater use of the highway network by both vehicles and NMUs.

Heavy Goods Vehicles (HGV) Movements

13.49 The Councils consider that HGV movements and routes should be controlled during the construction period and that those proposed in the submitted Framework Construction Traffic Management Plan & Travel Plan [APP-118] are not robust, contrary to para 5.13.11 of

EN-1. Details of the internal site layout are not included within the application so the Councils cannot confirm that the parking arrangements for HGVs are adequate. Similarly, the FCTMP&TP is not, in the Councils' opinion, satisfactory in terms of avoiding disruption to users of the public highway including public rights of way.

- 13.50 It has proved difficult to extract data from the application to verify whether the anticipated HGV movements accord with the materials required by the project.
- 13.51 Table 2-6 Summary of Equipment and Material Requirements in Outline Skills, Supply Chain and Employment Plan [APP-268] does not quantify the materials required and does not identify items such as aggregate for haul roads and hardstands, concrete or asphalt.
- 13.52 Of particular concern is the lack of information regarding trips as a result of removal of temporary construction works such as accesses, car parks, haul roads, hardstands and laydown area. In other projects there has been a second, albeit generally lower, peak in HGV movements at the end of the construction period.
- 13.53 The applicant has not clearly set out its assumptions made when calculating the construction traffic generated by this project. Hence there is a likelihood that these could exceed those used for the ES and TA and that by doing so impacts on the highway network may occur without suitable controls or mitigation.
- 13.54 It is noted that applicants for other NSIPs, for example Scottish Power Renewables EA1(N) and EA2 have supplied such information.

Abnormal Indivisible Load (AIL) movements

- 13.55 Table 5-1 of the Transport Assessment [APP-117] sets out the forecast AIL movements for the project, which equates to broadly two AILs per month. Although the impacts are normally felt for a few hours, these movements will have a particularly noticeable impact on the local highway network resulting increased journey time and delay.
- 13.56 The Councils maintain their structures on a risk-based approach dependent on the size, structural form and routes carried by assets. With decreasing budgets and progressive deterioration of assets, future restrictions based on Special Order, Special Type General Order and Construction & Use categories are likely to be placed on local highway structures.
- 13.57 In accordance with the asset management principles outlined in SCC's code of practice, Well-Managed Highway Infrastructure, Suffolk County Council undertakes detailed Inspections, Structural Reviews and Assessments on a number of strategically important assets every year. In Cambridgeshire the inspections are every 2 years with monitoring / reviews on a case by case as and when identified. However, pending further investigation into the condition of many of the structures on the, as yet unknown, AIL route from a port to the site may, following further qualitative assessment calculations, result in revised capacity for certain structures. The risk of structures being or becoming weaker applies to both the construction and operational phase of the project.
- 13.58 The Applicant has not demonstrated whether highway structures in the area adjacent to the site (and the wider regional route to suitable ports) can carry appropriate heavy loads. At para 2.1.4 of Appendix P: Proposed Changes to the Application [AS-276] the applicant implies

that discussions with the police and LHA will be conducted at a later stage. Therefore, at this time uncertainty remains whether AILs can access the site.

13.59 There are several small bridges and culverts that are proposed to be crossed by vehicles during the construction works where it is unclear whether the structure has capacity to withstand the loading of vehicles proposed.

13.60 The Councils are concerned that the Applicant has not requested highway boundary details of the relevant junctions so that it can be confirmed that AILs (or other works) do not extend beyond the public highway except where already identified. In many cases, it will be necessary to commission surveys to establish boundaries. The use of Ordnance Survey baseline map data also constitutes a risk particularly where tolerances between loads and structures are small.

Site Accesses

13.61 The Councils' position is that the Applicant must provide sufficient unambiguous information to enable the ExA to judge if the proposals are feasible, safe and deliverable for the purpose of the examination and for the Councils to assess if they are acceptable within the local highway network. The Councils acknowledge that such information should be proportionate but also that the dDCO grants significant powers to the Applicant. Experience with other DCOs and planning applications has shown that not considering this matter in sufficient detail can result in significant problems with delivery.

13.62 The information provided by the Applicant does not clearly show the location and orientation of the accesses. In a number of cases, such as figure 14 and 15 of the FCTMP&TP, the plans are blurred and unreadable. As the plans are unscaled it is not possible to verify the visibility splays shown on the plans. The extent of the access layout, other than outlines shown on the swept path analysis, is not shown. Being based on Ordnance Survey base information rather than an accurate up to date topographic survey, it is not known if the layout of plan features is correct. This is of importance when determining the deliverability of the proposals and their impact, for example quantifying vegetation to be removed or ditches to be piped. No indication has been given to what if any land is proposed to be adopted as highway maintainable at public expense where permanent accesses are being created.

13.63 This has been raised with the Applicant during engagement to date. It is of particular concern to the Councils due to the current lack of provision in the DCO for Local Highway Authority involvement in the technical approval and construction of these works (see *Requirements and Obligations* below). The Councils consider there is a significant risk that if its concerns are not addressed, they may by default inherit poorly designed, inadequately constructed and potentially unsafe accesses which may require improvement at the public expense.

13.64 Except for Access I none of the accesses has been subject to a Stage 1 Road Safety Audit. For highway works, both County Councils as Local Highway Authority require this at the outline planning stage for the majority of applications, hence this should be provided for this development.

- 13.65 The details submitted in the application are not sufficient to satisfactorily assess the design of the accesses.
- 13.66 The site photographs on which many of the comments regarding visibility and vegetation clearance are based appear to have been taken in the winter which is unlikely to reflect the conditions prevalent in summer.
- 13.67 Many of the accesses require movements in a single direction. It is unclear what measures, for example banning turning movements, will be put in place to prevent these.

Highway Safety

[A11/A1101/ A1065 Fiveways Roundabout, Mildenhall](#)

- 13.68 This junction historically had a high number of crashes recorded. As a result, Highways England (now National Highways) undertook a safety improvement scheme that involved partial signalisation of the junction in 2018. Collision data indicates that the frequency of crashes at this location has decreased although the LHA would consider that more time is required before it can be confirmed that the measures have been fully accepted due the reduced traffic during the Covid pandemic.
- 13.69 Larger scale improvements to this junction are included in National Highways Roads Investment Strategy 3 (RIS3) covering improvements to be delivered between 2025 and 2030. Whilst early high-level consultations have started it is not certain that the project will receive funding and progress to construction.

[A11 Red Lodge to Mildenhall \(Fiveways\)](#)

- 13.70 In a separate development to the proposed RIS3 improvements to the Fiveways Roundabout National Highways have proposed closing a number of gaps in the central reserve for safety reasons. These closures may affect the routing of traffic used in the Applicant's Transport Assessment. While recognising the safety benefits in terms of reducing collisions at these gaps, Suffolk County Council has expressed its concerns regarding the impact on local residents and businesses as no mitigation is proposed to reduce the severance impacts that would be increased, and the additional traffic diverted through Mildenhall. Also, the gap closure scheme is not currently addressing the sub optimal slip roads.

[A11 Northbound off-slip / Elms Road Junction](#)

- 13.71 Although the frequency of collisions at this location has not caused SCC to prioritise road safety improvements at the location, SCC does periodically receive complaints about near misses. Typically, these refer to drivers failing to stop at the give way lines. With the proposed construction traffic, the Councils are concerned that the greater volume of traffic will increase the frequency of crashes. Of particular concern is the pm workers peak where the volume of traffic exiting Elms Road towards Red Lodge is likely to delay drivers turning right from the A11 slip off. This may lead to drivers taking greater chances and choosing smaller gaps with an increase likelihood of collisions.

A11 northbound slip on / slip off / Newmarket Road

- 13.72 The Councils are concerned that Access I is unsafe for use as a construction access due to the poor visibility to the south and high traffic speeds on Newmarket Road.

B1102 Freckenham Road / The Street, Worlington

- 13.73 Whilst the frequency of collisions at this junction does not trigger an intervention on safety grounds it is noted that of the four collisions in the area two involved cyclists. The Councils considers that as this road is to be used as an HGV access to Sunnica East A that the details of these incidents are investigated to ensure that there will be no adverse impact on the safety of cyclists.

Highway Improvements

Widening of Elms Road

- 13.74 The Councils consider that the Applicant's proposed widening parts of Elms Road to 5.5m to facilitate HGV movements (FCTMP&TP Annex F1: APP-115) may be insufficient. It is evident from site visits that the road is narrow in places and the verges suffer from significant erosion.
- 13.75 The Councils consider that whilst 5.5m is considered in Manual for Streets to be a suitable width for two large vehicles to pass; however this guidance should be considered with caution: The document is guidance for low speed, predominately urban residential streets rather than unrestricted rural roads such as Elms Road which are used by significant numbers of large agricultural vehicles. A width of 5.5m does not allow for oversailing of large vehicles, in particular where verges are used as sanctuary for pedestrians. The wheel tracks of large heavy vehicles would be on the edge of an unconstrained pavement, one that has not been designed or constructed for heavy use but has evolved over the past centuries. DMRB provides an alternative design mechanism, specifically figure 2.1.1N1g of CD 127 [DMRB CD 127](#) requiring a carriageway width of 7.3m. Having said that, the Councils recognise that this document is intended for the strategic road network.
- 13.76 The closest equivalent in the recent SCC design street guide for residential roads would be a primary street, a street considered as a main access road carrying buses and HGVs. The minimum recommended width would be 6.5m in this case.
- 13.77 The details provided in Annex C are not to scale nor based on an accurate topographic plan. Therefore, the Councils cannot confirm if the proposals are feasible, even if they were accepted as a solution. It is presumed, but not stated, that these works would remain after the construction phase rather than create additional impacts for removal.
- 13.78 Cambridgeshire County Council share the same concerns as they relate to La Hogue Road used to access Sunnica West Site A, with reference to the equivalent local policy.
- 13.79 In the Councils opinion the proposed use on a 5.5m wide road would lead to rapid deterioration of the carriageway in addition to the additional hazards for road users. However, the authorities are conscious that the solution should not create significantly greater adverse impacts through road construction than it resolves. This matter is still under discussion with the Applicant. In addition, the Councils will require the Applicant to engage with a suitable process for approving and inspecting the works.

Other Locations

13.80 The order limits include small areas of the public highway at:

- B1102 The Street / B1102 Mildenhall Junction, Freckenham
- B1102 Mildenhall Road / C603 Freckenham Road, Freckenham
- A11 northbound slip off to U6003 Elms Road

13.81 Brief mention is made in the application regarding vegetation clearance, but the Councils are concerned that the applicant has not fully considered what work is necessary at these locations and could use its powers in the DCO to undertake works within the public highway without appropriate consent, and if necessary local consultation.

13.82 Many of the junctions have small radii or splays that are likely to be unsuitable for all class of motor vehicle to manage safely, especially when entering from a national speed limit road. It is recommended that the absolute minimum radii on any of these junctions should be 6m, subject to provision of evidence to establish that this is not necessary.

Strategic Road Network (SRN) and Regional Network

13.83 Although the SRN is the responsibility of National Highways, the nature of the network and its performance has consequential impact on the local highways maintained by the County Councils.

13.84 The design of the A14/A11 junction (Junction 38) does not provide access from the westbound A14 to the northbound A11 nor in the reverse direction from the southbound A11 to the eastbound A14. Any drivers wishing to follow such a route would need to U-turn at junction 37 A14/A142 at Newmarket or travel cross country through Kentford / Kennet, Tuddenham or use the A1101 between Bury St Edmunds and Ixworth. The cross-country routes pass through scattered communities and are generally unsuitable for significant volumes of additional traffic or large vehicles.

13.85 Junction 37 between the A14/A142 at Newmarket is a grade separated junction with priority junctions where the slip roads join the A142. The safety records of the junctions with the slip road have been a cause of concern for the Councils. These safety concerns together with the impacts of additional traffic at this junction were considered during the recent planning application for the Hatchfield Farm development (which was called in by the Secretary of State for Communities and Local Government). Mitigation in the form of partial signalisation of junction was included as a planning condition. Details can be found on West Suffolk Council's online record of the planning application under the reference number DC/13/0408/OUT.

Damage Through Exceptional Use

13.86 Based on the Applicant's data, it is estimated that an additional 31,500 HGV¹⁰ deliveries >7.5 tonnes (@63,000 individual trips) will be associated with this project. This will have a

¹⁰ Calculated from Plate 1 in the Transport Assessment ([APP-117](#)).

detrimental impact on the local roads which have evolved rather than being designed for such traffic.

13.87 The majority of the local roads have evolved over time rather than being constructed to a formal design. They are typically of thin construction with limited load carrying capacity. The narrow widths and unrestrained edges result in deterioration of the carriageway edges and erosion of the verge.

13.88 Condition surveys will be undertaken by the contractor both prior to the commencement of construction and subsequently at a point close to the completion of construction to identify existing highway defects and any changes following completion of the proposed project. The methodology and scope of surveys will be agreed between the contractor and the LHAs prior to commencement of construction.

13.89 Any damage (the scope of which will be agreed with LHA and the contractor) to the highway caused by construction traffic must be repaired by the contractor or financial reparation made to LHA to cover the cost of remedial work.

Operational Phase Impacts

Positive

13.90 None identified or anticipated.

Neutral

13.91 None identified or anticipated.

Negative

Traffic Impacts

13.92 The Applicant sets out that the operational phase has been scoped out of assessment at Paragraph 13.8.254 of the Transport and Access section of the ES [APP-045].[APP-045]. The Applicant should confirm that there is no likelihood of significant maintenance, such as wholesale replacement of solar panels or batteries, during this phase. Article 2(1) of the Draft DCO [APP-019][APP-019] allows for partial replacement subject to the limitation in Article 5(3) on maintenance works which have a new or different environmental effects to those assessed. The Councils will be seeking clarification and confirmation as to what is intended given that baseline conditions for environment can alter significantly over a 40-year operational period.

Site Accesses

13.93 The environmental impacts of the accesses particularly in terms of vegetation clearance and drainage have not been fully assessed.

13.94 The Councils' main concern is the potential for operational traffic movements to result from replacement of PV cells, batteries or other infrastructure during the life span of the project, for which there has been no assessment. This is both in terms of the number of movements that result, for example replacement of large numbers of PV cells, or access or the larger loads or cranes requiring to travel to or from the substation or battery storage sites.

- 13.95 The Councils understand from experience that the expected lifetime of PV cells before they need to be replaced due to decreasing efficiency is around 25 years, which aligns with the expected lifespan of a solar farm in draft EN-3. As the proposal is to be operational for a 40-year period, the Councils consider it reasonable to expect that some large-scale replacement of PV cells will be necessary during the operational phase.
- 13.96 The area between the C610 Newmarket Road, Golf Links Road and the A11 is served by three accesses:
- 13.97 Access I: Temporary secondary access during construction phase only
- 13.98 Access J: Secondary access during the operational phase
- 13.99 Access H: Temporary secondary access during construction and decommissioning (not for HGV)
- 13.100 Golf Links Road is recognised by the Applicant as being unsuitable for HGV access and the other two accesses are to be removed during the operational phase. The Applicant is asked to clarify how HGVs required for access or maintenance are to access this part of the site.
- 13.101 A number of the plans submitted as part of the application are inconsistent and occasionally inaccurate. The plans are not sufficient to show that the proposals are deliverable or acceptable to the Councils. A review of site accesses based on currently available information is provided at **ANNEX H**. Of particular concern is the deliverability of the proposed visibility splays. It is noted that junction layouts are described as indicative junction works areas (see for example Little Fen Drove – sites D and E on the cable access route). It is not considered appropriate for detailed highway design of junctions to be left to the CTMP.
- 13.102 It has not been possible to consider whether appropriate junction radii and access width is suitable for the individual roads described. Details of the junction works that are proposed are often incomplete, omitting some junction Radii and/or access widths, all of which is included on plans that have neither scale nor orientation that would allow further analysis.
- 13.103 The accesses may not be designed and constructed to appropriate standards, and so create a safety risk to road users and a maintenance burden on the LHA. The quality of the swept path plans is generally poor. It is unclear whether these movements are demonstrated on an accurately surveyed base plan, or Ordnance Survey extract where the information provided risks inaccuracies, especially in more rural areas. Furthermore, there is no indication of vehicle speeds on the track movement.
- 13.104 The proposed access arrangements are generally based upon the swept path analysis of a 16.5m articulated lorry, but the proposed layout is shown on a separate plan from the swept path making it difficult to consider in context and determine whether the proposed radii are appropriate.
- 13.105 The access widths are based upon a single vehicle movement, such that a vehicle waiting to leave the site would fully obstruct the access. This would result in vehicle dwelling in the highway risking collision with other road users. In the absence of appropriate traffic data for all sites, it is not possible to fully consider this risk. It should however be reasonable to

anticipated that two-way movement for appropriately sized vehicles is likely to be necessary at many sites and must therefore be accommodated to ensure safe use of the highway.

- 13.106 Plans for the proposed accesses generally provide a large radius on one side of the junction to accommodate the turn of HGV. It is not however clear whether there will be a need or desire to make alternative manoeuvres, in situations such as onward travel for delivery of materials to other sites. While the CTMP may look to manage unauthorised movements, it is unclear whether this will be sufficient robust to eliminate the likelihood of HGVs turning out across the tighter radius, risking unsafe manoeuvring within the public highway.
- 13.107 Access I is of great concern with respect to the limited visibility to the south.
- 13.108 There is a significant number of sites where the visibility splays shown, appear to extend over land outside of the Applicant's control. In the absence of clear plans showing the extents of the public highway and detail of the DCO extent the Councils are not assured that it is feasible to provide appropriate visibility splays prior to determination of this application. This may result in elements being undeliverable as part of any CTMP. In turn, failure to provide appropriate visibility at junctions risks contributing to turning-out and side-impact collisions, late braking and shunt type collisions or inappropriate overtaking and head on collisions. The Applicant is requested to provide plans that detail the verified extent of the public highway and the DCO boundary at an appropriate scale, along with the proposed visibility splay to enable this to be considered.
- 13.109 In several locations, it is also apparent that significant lengths of established hedgerow will need to be removed to achieve the visibility splay show, some of which appear to be in land outside of the DCO boundary. This may therefore be beyond the scope of this DCO and in any event should be considered from an ecological perspective.
- 13.110 While hard surfacing /standing is proposed in accesses, there is no clear definition of the form this will take, nor its extent into the site beyond the highway boundary. In the absence of appropriate information, it is not therefore possible to determine whether the proposal conforms with appropriate standards for construction within the public highway or that it will be sufficient to mitigate the risk of deleterious material being tracked into the highway from the site. The Applicant should be aware that any works within the highway in Cambridgeshire must be constructed in accordance with the County Councils Highway Estate Roads Construction Specification (HERCS) with private surfaces within proximity to the carriageway edge constructed in a bound rather than granular material.
- 13.111 No details of road levels or drainage of hardened surfaces have been provided. In rural areas, drainage of the highway is generally over edge to adjacent ditches or reliant upon permeability of verges; it is unclear whether the additional flow from impermeable surface can be accommodated or that it may otherwise contribute to water standing in the highway to the detriment of highway safety. The applicant should be aware that it is an offence to discharge water from private land onto the highway, and appropriate measures to mitigate this risk must be established.

- 13.1124.2.5 of Appendix 13B indicates that accesses are to be reinstated to their former pre-construction condition after the construction phase, but that the applicant wishes to retain rights to utilise the access during the operational phase. Use of an access that is not constructed to an appropriate standard would be detrimental to highway safety and would not be acceptable. If the access is to continue to be used, an appropriate form of access layout and construction must remain during the period of its use.
- 13.113 It appears likely that appropriate visibility at junctions may not be achieved at some locations and that there may be some reliance on traffic management such as traffic signals and signing to afford safe access. While this may be adequately managed during the construction phase under a suitable traffic management plan when the access is regularly trafficked, there is a risk that shortcuts will be taken when access is required on an ad hoc basis during the operational phase, especially if the requirements of providing Traffic Management are considered disproportionate to the work to be undertaken. Use of such accesses during the operational phase may result in inappropriate use of unsuitable accesses to the detriment of highway safety.

Required Mitigation

- 13.114 As set out above, the Councils seek for the applicant to provide additional detail and plans as a pre-requisite to determine impact and required mitigation, as well as commitments to undertake mitigation.

Further Information on Site Accesses

- 13.115 Plans showing the layout of the site and cable route access, to scale, with orientation and location are necessary to undertake a check that the designs are feasible and comply with relevant design standards.
- 13.116 Highway boundary and topographic surveys are necessary to ensure that the proposals are deliverable.

Highway Safety

- 13.117 Robust data collection and a reporting mechanism within the FCTMP&TP to record collisions and near misses associated with construction traffic or on construction routes to identify any developing road safety issues.
- 13.118 Commitment from the Applicant to undertake improvements to road safety if these are identified during the above monitoring during the construction phase.

Changes to Management Plans

- 13.119 Controls of traffic movements have not been included in the outline Construction Transport Management Plan (OCTMP) and Outline Travel Plan (OTP) to limit the transport impacts to those assessed in the ES and TA; however, as part of SoCG discussions the Applicant has indicated that they will enshrine relevant controls and monitoring within the OCTMP and OTP. The specific details of these controls need to be agreed.
- 13.120 Management plans secured by the DCO currently lack sufficient commitments to ensure that:

- the development impacts do not occur in the peak hours;
- the number of HGV movements do not exceed those assessed;
- the number of workforce movements do not exceed those assessed;
- car share assumptions are achieved;
- monitoring, reporting and enforcement is effective; or that
- the workforce travel patterns are sustainable

13.121 An updated FCTMP&TP should be submitted to reflect the necessity of monitoring, reporting and enforcement to ensure compliance with the assessment. All embedded mitigations should be clearly and unequivocally set out in the FCTMP&TP and that document secured as a certified document and the routing of HGVs should be restricted to those routes shown in Fig 18 to 23 of the FCTMP&TP.

13.122 To ensure that the final TP can be effectively enforced, it is important to define what will constitute a breach. The following actions are considered to constitute a breach of the TP, whereby corrective measures would be required:

- Construction workers overspill parking on the public highway;
- Exceedance of assessed daily employee vehicle numbers;
- Construction employee traffic operating within the development area outside of agreed hours or shift patterns; and
- Construction traffic being driven inappropriately, e.g. speeding.

13.123 The Councils consider that monitoring and reporting outputs need to be more robust to ensure compliance with the impacts assessed and therefore no material difference – between the project as implemented and as consented – to occur. These should include the following:

- Progress of the project against specific gateways;
- Freight movement to/from the site;
- Details of non-compliance with routing or speed limits;
- Near misses or safety related incidents;
- Freight compliance with appropriate exhaust emissions (Euro VI);
- Transport of ALLs to/from the site;
- LGV movements to/from the site;

13.124 Staff movement to/from the site, including modal split to ensure compliance with car share targets and compliance with shift patterns; and

13.125 Information on complaints received on transport related issues including parking.

13.126 The monthly monitoring report should be submitted to the Local Highway Authorities and a contribution for time and costs associated with reviewing and monitoring by the Local Highway Authorities should be paid.

13.127 Within the FCTMP&TP the following actions are considered to constitute a breach of the CTMP, whereby corrective measures would be required:

13.128 Exceedance of assessed daily HGV numbers:

- Construction HGV traffic operating outside of agreed hours;
- Construction HGVs not adhering to the agreed routes; or
- Construction HGV traffic being driven inappropriately, e.g. speeding

13.129 If the breach is found to be material, a three-stage process is proposed by the Applicants, that includes reviewing the data, liaison with the Highway Authority, potential identification of additional mitigation measures, potential removal of the individual committing the breach.

Requirements and Obligations

13.130 Please note that comments on management plans secured through the DCO are covered in the mitigation section above.

Controls on HGV Movements

13.131 The Councils require provisions to ensure that the relevant thresholds are not exceeded to ensure that the impacts considered in the ES are accurate and the embedded mitigation remains appropriate. These thresholds should be for:

- Maximum HGV movements per day
- Maximum HGV movements per hour between 0700 and 0900 and 1600 to 1800
- Haulage fleet to be 100% compliant with emissions requirements (Euro VI)

13.132 The Councils consider that maximum daily and maximum peak HGV movements are best secured by being directly embedded within the DCO, preferably by requirement stipulating the daily maximum number of movements (and average movements across the life of the project). The Applicant has committed to including controls in their FCTMP&TP and discussions are ongoing.

13.133 Tables 10 below sets out, as a starting point for discussion, what these maximum daily trips in the construction phase should look like. A similar exercise for the operational phase will need to be undertaken.

Table 10: Maximum daily trips (Construction Phase)				
Location	<i>From</i>	<i>To</i>	<i>Daily max HGV deliveries</i>	<i>Daily max HGV movements (single trip)</i>

<i>Beck Road</i>	<i>Isleham Road / Beck Road / Fackenheim Road junction</i>	<i>Access F</i>	<i>14</i>	<i>28</i>
<i>Freckenham Road</i>	<i>Isleham Road / Beck Road / Fackenheim Road junction</i>	<i>Access E</i>	<i>17</i>	<i>34</i>
<i>Isleham Road</i>	<i>B1102 Freckenham Road</i>	<i>Isleham Road / Beck Road / Freckenham Road junction</i>	<i>25</i>	<i>50</i>
<i>C610 Newmarket Road (Worlington)</i>	<i>Access D</i>	<i>B1102 Freckenham Road</i>	<i>25</i>	<i>50</i>
	<i>Red Lodge Roundabout / Elms Road</i>	<i>Access D</i>	<i>28</i>	<i>56</i>
<i>Elm Road</i>	<i>NB A11 Slip off</i>	<i>Access C</i>	<i>22</i>	<i>44</i>
		<i>Red Lodge / Newmarket Road</i>	<i>25</i>	<i>50</i>
	<i>Access C</i>	<i>B1102 Freckenham Road</i>	<i>0</i>	<i>0</i>
<i>C576 Newmarket Road (Baton Mills)</i>	<i>NB A11 Slip off</i>	<i>Access I</i>	<i>12</i>	<i>24</i>
<i>Golf Links Road</i>	<i>C576 Newmarket Road (Baron Mills)</i>	<i>C610 Newmarket Road (Worlington)</i>	<i>0</i>	<i>0</i>
<i>Dane Hill Road B1085</i>	<i>A11 slip</i>	<i>Access C Dane Hill Road</i>	<i>17</i>	<i>34</i>
<i>La Hogue Road</i>	<i>A11 slip</i>	<i>Access A La Hogue Road</i>	<i>28</i>	<i>56</i>
<i>Short Road, Snailwell</i>	<i>A14 Junction 37</i>	<i>Access D</i>	<i>5</i>	<i>10</i>
<i>Short Road, Snailwell</i>	<i>A14 Junction 37</i>	<i>Access B</i>	<i>20</i>	<i>40</i>

Proposed Construction Movements Controls (Based on Plate 2 Of the Transport Assessment [APP-117] except 1: Table 6-1 of the Transport Assessment

Note that these figures have not been adjusted to allow for the change request submitted by the Applicant in August 2022.

13.134 It is strongly advised that a trigger point below the maximum number of movements is agreed so that action can be initiated before HGV movements exceed those assessed in the ES.

Protective Provisions

13.135 Protective provisions, similar to those included in the DCO for other statutory undertakers, are necessary to allow the two County Councils as the Local Highway Authorities to discharge their responsibilities to access, inspect and maintain the public highway within the order

limits. Examples of such protective provisions are included in the DCOs for East Midlands Gateway Rail Freight Interchange and the Northampton Gateway Rail Freight Interchange.

13.136 The need for such protective provisions is exacerbated by the lack of appropriate information at this examination stage.

13.137 The Councils consider it reasonable to pursue either protective provisions for the LHAs similar to those which are proposed for National Highways, or alternatively a side agreement with the LHAs to ensure that the LHA can control works to the public highway and recovers reasonable costs for doing so.

13.138 Detailed comments on highways powers proposed in the draft DCO are provided at **ANNEX I**.

Planning Obligation

13.139 The Councils consider that the following contributions are necessary to mitigate the impacts of this project. These should be secured through a S106 agreement or other appropriate deed or agreement:

13.140 An obligation to undertake visual and structural surveys of all routes intended to carry construction HGVs prior to, during and after the construction period and to undertake or pay for the highway authority to undertake any such work that is deemed necessary to return the carriageway to its original condition.

13.141 A contribution for review of submitted materials for monitoring the CTMP and for monitoring the TP for the life of the project.

13.142 The sum of 7.5% of the cost of total off-site highway works on or before the commencement of construction, to be applied to cover the full audit, legal costs, S278 agreements, dedication of land into highway, land compensation events and supervision fees for the transport schemes to be implemented by the Applicants under the DCOs.

13.143 Reimbursement of the Highway Authority for all costs associated with assessments of highway structures and the moving, removing, installed and reinstalling street furniture, streetlights, traffic signals, traffic islands and all other highway infrastructure including structures necessary for safe movement of AILs and any associated traffic management and temporary traffic orders.

Side Agreement

13.144 In principle, the Councils consider that a number of issues including technical approvals of highway works, traffic management measures, and monitoring of damage to the local highway network could be dealt with by a side agreement which would cover the same ground as an agreement pursuant to s278 of the Highways Act 1980.

Contributions to Works

13.145 Junction improvements funded by the developers of Hatchfield Farm are planned at the A14/A142 junction. These improvements mitigate the additional traffic generated by this development, but as they predate this project no consideration has been made for Sunnica traffic. If alterations to the developers design or further improvements are necessary, for example due to turning HGVs or AILs, then the Councils consider it would be reasonable for

the Applicant to make proportionate contributions to any further works or deliver the further works themselves.

14 Public Rights of Way (PROW)

Summary

- 14.1 The local PROW network has important recreational and amenity value, and will be negatively impacted by the development in a number of ways.
- 14.2 Users of the PROW network are visual and noise receptors in the landscape. Therefore, the proposals will have, where not sufficiently obscured by vegetation, a negative impact on PROW users. There are a number of locations identified where this is particularly important. These impacts require both temporary (while hedges grow) and permanent mitigation measures.
- 14.3 The Councils are concerned that the applicant proposes a number of disruptions of PROW during construction, including PROW closures.
- 14.4 Once operational, there may be noise impacts of the operational solar farm, however, the information in the ES is not detailed to consider impacts.
- 14.5 The Councils do not consider that the proposed permissive paths adequately mitigate/compensate for the disruption to the existing PROW network. The Councils consider that currently, opportunities for PROW improvements, and new PROW/permissive paths, during operation have not been maximized and there is only very limited benefit from what is proposed, which is a missed opportunity to allow for mitigation for residual amenity impacts and/or legacy benefit.
- 14.6 It is also noted that there are missing data on the Access and Rights of Way Plans.

Table 11: Summary of impacts – Public Rights of Way (PROW)					
Ref No.	Description of Impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
1x	Detrimental impact to PROW - PROW are both historic and living features that are part of the landscape, and need to be assessed as such in order to identify appropriate treatment.	C/O	Negative	Reassessment to ensure that PROW as historic and living features of the landscape have been appropriately captured and mitigated for.	National Planning Policy Framework para 100 DEFRA Rights of Way Circular (1/09) Cambridgeshire Rights of Way Improvement Plan (2016 Update) Cambridgeshire Health & Well-being Strategy. DM45 Rights of Way ECDC policies COM7, ENV2, ENV1,EMP6
1y	Glare and Shielding: Impact on users of the PROW network in the vicinity of the development, particularly FP1 Chippenham/FP1 Snailwell, FP2 Chippenham and BR5 Snailwell. NMUs are visual and noise receptors in the landscape and are sensitive to changes in the environment which can result in behavioural change, leading to adverse effects on mental and physical health and wellbeing.	C/O	Negative	Reassessment through ES. Consideration needs to be given to mitigation measures needed to shield Public Rights of Way and Permissive Paths during construction and operation until any planting is of sufficient height in order to maintain the quality of the user experience as much as possible.	National Planning Policy Framework para 100 DEFRA Rights of Way Circular (1/09) Suffolk LTP CPCA's Local Transport Plan 3 ('LTP3') Cambridgeshire Rights of Way Improvement Plan (2016 Update) Cambridgeshire Health & Well-being Strategy DM45 Rights of Way ECDC policies COM7, ENV2, ENV1,EMP6

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1z	Closure of PROW for lengthy periods of time can result in significant changes to people's behaviours, leading to adverse effects on mental and physical health and wellbeing.	C/D	Negative	PROW closures must be minimised. The A&ROW plans need to include proposed diversions for temporarily stopped up PROW. Agreed with the Local Highway Authority. Must be documented in the Construction Management Plan.	National Planning Policy Framework para 100 DEFRA Rights of Way Circular (1/09) Suffolk LTP CPCA's Local Transport Plan 3 ('LTP3') Cambridgeshire Rights of Way Improvement Plan (2016 Update) Cambridgeshire Health & Well-being Strategy DM45 Rights of Way ECDC policies COM7, ENV2, ENV1, EMP6
1aa	Damage by vehicles using or crossing PROW, including to the substructure, resulting in difficulty in reinstatement to the same standard that was previously present and ongoing maintenance liabilities.	C/D	Negative	Applicant to confirm internal haulage routes and identify PROW impacted. Mitigation measures to be agreed with the Local Highway Authority, including commuted sums e.g., for compaction that might result in flooding, reinstatement of boundary features. Must be documented in the Construction Management Plan.	National Planning Policy Framework para 100 DEFRA Rights of Way Circular (1/09) Suffolk LTP CPCA's Local Transport Plan 3 ('LTP3') Cambridgeshire Rights of Way Improvement Plan (2016 Update) Cambridgeshire Health & Well-being Strategy DM45 Rights of Way ECDC policies COM7, ENV2, ENV1, EMP6
1bb	Noise impact to equestrian users – Bridleway 204/5 . BHS advice on Solar Farms noise explains that noise from	O	Negative	Applicant to undertake assessment of noise impact from solar stations on equestrians and	National Planning Policy Framework para 100

	inverters can be intrusive, and could potentially be disturbing to equestrian users of the Bridleway 204/5. It should be noted that a horse's range of hearing is wider than a humans.			to agree details of any proposed mitigation with the LHAs	DEFRA Rights of Way Circular (1/09) Suffolk LTP CPCA's Local Transport Plan 3 ('LTP3') Cambridgeshire Rights of Way Improvement Plan (2016 Update) Cambridgeshire Health & Well-being Strategy Advice on Solar Farms – The British Horse Society (ANNEX X) DM45 Rights of Way ECDC policies COM7, ENV2, ENV1, EMP6
1cc	Extending works into Saturdays during construction could negatively impact upon healthy lifestyle behaviours of users of the PROW network	C/O	Negative	The Applicant must assess the impact of extending work into Saturdays for the duration of the construction on the behaviour of NM users of the PROW network and propose appropriate mitigation measures to counter any negative impact in order to maintain existing standards of health and well-being of affected communities.	NPPF para100 DEFRA Rights of Way Circular (1/09) Suffolk LTP Cambridgeshire Rights of Way Improvement Plan (2016 Update) Cambridgeshire Health & Well-being Strategy DM45 Rights of Way ECDC policies COM7, ENV2, ENV1, EMP6
1dd	Highway extent data missing data on Access & Rights of Way Plans (A&ROW Plans). LHA unable to ascertain impact of construction and mitigation measures on PROW legal extent and boundary features.	C/O	Negative	The A&ROW plans must show the pre-existing extent of all affected highways, including PROW, and the effect that the proposed works will have on the extent of the highway once physical changes are delivered on the ground.	NPPF para100 DEFRA Rights of Way Circular (1/09) Suffolk LTP Cambridgeshire Rights of Way Improvement Plan (2016 Update):

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					SOA3 prevention of damage and encroachment DM45 Rights of Way ECDC policies COM7, ENV2, ENV1, EMP6
1ee	<i>Opportunity: The PROW network in this area of Cambridgeshire is particularly poor, and the public health indicators are also poor. Therefore there is a real missed opportunity for the developer to provide a permanent new paths as part of the development to enhance the network in accordance with Para 100 NPPF and Health and Well-being objectives.</i>	O	Could be positive	The applicant needs to provide a permanent path or paths dedicated as public rights of way that provide real value to the local communities, such as the creation of a circular route around the perimeter of plot E05 with a small car park for users to be able to access it. Alternatively a path linking back into the village and on to another path or specific destination to enable safe connectivity with community infrastructure. Currently proposal is for a permissive path on one side of E05 with not link to existing PROW.	NPPF para100 Cambridgeshire Rights of Way Improvement Plan (2016 Update): SOA2; SOA3; SOA5 ECDC policies COM7, ENV2, ENV1, EMP6

Policy Context

National Policy Statements

Overarching National Policy Statement (EN-1)

- 14.7 Potential impacts on open space as a result of the location of energy infrastructure projects are identified in NPS EN-1 (Section 5.10). This aligns with government policy to ensure there is adequate provision of high-quality open space (including green infrastructure) and sports and recreation facilities to meet the needs of local communities. Open spaces, sports and recreational facilities all help to underpin people's quality of life and have a vital role to play in promoting healthy living. Green infrastructure in particular will also play an increasingly important role in mitigating or adapting to the impacts of climate change. Paragraph 5.10.24 identifies Rights of way, National Trails and other rights of access to land as important recreational facilities for example for walkers, cyclists and horse riders.

National Planning Policy Framework

- 14.8 Paragraph 100 of the National Planning Policy framework (NPPF) requires development to protect and enhance public rights of way and access, including new links.

DEFRA Rights of Way Circular (1/09)

- 14.9 Circular 1/09 sets out that local highway and planning authorities and others are required to comply with the guidance that covers PROW and Non-motorised user (NMU) access (pages 23, 46-48).

Other Relevant Local Policy

Suffolk Local Transport Plan 2011-2031 (Suffolk LTP)

- 14.10 The current Suffolk LTP states about Public Rights of Way (page 37/38):

“Improvements to the access network focuses on the needs of non-motorised users. Most improvements enhance access for people with limited mobility or those with sensory disabilities, enhancing their quality of life. Encouraging use of the network also promotes healthier lifestyles, the Suffolk countryside, and sustainable travel options. It also supports stronger communities by enabling people to be actively involved in managing their countryside. Use of the network also supports local economies, particularly in rural areas.”

- 14.11 It then lists the following short to medium-term priorities:

- “Investment:
 - Protect, maintain and improve priority routes, devolving activities to local communities, where practicable.
 - Use the local transport plan programme, planning process and external sources to invest in countryside access, improving connectivity, inclusiveness and sustainable access to services.
- Develop coastal access in line with Marine and Coastal Access Act 2009 and continue to safeguard public access where the coast is changing.

- Continue work with the Highways Agency to address the issue of routes severed by trunk roads.
- Devolve services to local communities and other providers where cost-effective and in line with service standards.
- Consolidate the Definitive Map and add a working copy of it onto Suffolk County Council website.
- Develop the Discover Suffolk project in partnership with other providers to promote access, develop healthier communities and promote the rural economy.”

Suffolk Green Access Strategy (2020-2030)

14.12 This is the statutory Rights of Way Improvement Plan produced by SCC as required by the Countryside and Rights of Way Act 2000 (Section 60 and 61). It provides a clear direction as to how the rights of way and access network is managed, maintained, and improved to meet the needs of all users.

14.13 Improving the quality of the experience on urban and rural rights of way has become increasingly important politically and strategically. The Green Access Strategy highlights the importance of the rights of way and access network for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. It represents SCC’s commitment to making the very most of this asset and to provide residents, business community, and visitors with an array of different and innovative opportunities to use, enjoy and benefit from.

14.14 Objectives within the Strategy include protecting the network from adverse impacts from new developments and to create a more connected network and to seek opportunities to enhance public rights of way, including new linkages and upgrading routes, improving access for all and supporting healthy and sustainable access between communities and services with funding sought from developers.

Cambridgeshire Local Transport Plan (Cambridgeshire LTP)

14.15 The Strategic objectives for Transport in Cambridgeshire are set out in the CPCA’s Local Transport Plan 3 (APPENDIX 27).

Cambridgeshire Rights of Way and Improvements Plan

14.16 The Cambridgeshire Rights of Way and Improvements Plan (2016 Update) (APPENDIX 16), provides a statement of action to protect and bring about improvements to the rights of way network and enhancing countryside access:

- SOA2: A safer and health-enhancing activity: Countryside access provision should be safe for users and encourage healthy activities.
- SOA3: 72, 500 new homes: new development should not damage countryside provision. Where appropriate, development should contribute to the provision of new links and/or improvement of the existing PROW network.

- SOA5: Filling the gaps: Countryside provision should build on the platform of the historical network to meet the needs of today's users, particularly equestrians, and land managers.

Cambridgeshire Health & Well-being Strategy

14.17 The Cambridgeshire Health & Well-being Strategy (APPENDIX 28) sets out a number of priorities to benefit health and wellbeing for residents:

- Priority 2 *Support older people to be independent, safe and well*, which encourages older people to stay active
- Priority 3 Encourage healthy lifestyles and behaviours in all actions and activities while respecting people's personal choices, which promotes physical activity
- Priority 4 *Create a safe environment and help build strong communities, wellbeing and mental health*, which recognises the strong link between physical and mental health. Rights of way and access to green space is an important, free source for people.
- Priority 5 *Create a sustainable environment in which communities can flourish*, which acknowledges the importance that good transport planning, green spaces and the built environment play a vital role in determining health and wellbeing, together with the benefits that these bring to the local economy.

14.18 Development proposals should be considered against Cambridgeshire County Council's General Principles for Development (GPD) (APPENDIX 29) and Cambridgeshire County Council's Housing Estate Road Construction Specifications (HERCS) (APPENDIX 30).

Missing Data on the Access & Rights of Way (A&ROW)

14.19 The A&ROW plans do not show the pre-existing extent of the highway. Nor do they display the effect that the proposed works might have on the extent of the highway once physical changes are delivered on the ground. Therefore, it is difficult for the highway authority to assess if all proposed works are within or will be within the highway, and thus the full implications for users of the highway and for the LHA's maintenance liability.

14.20 The term 'highway' includes PROW. It is equally important for the Applicant to know what the extent of the highway in order to ascertain how to manage the impact of the development:

- i. haul roads over PROW, so that all parties know where to apply any TTROs, protective measures and the extent of damage/reinstatement.
- ii. where shielding hedging will be located to ensure that they do not encroach on the legal width of PROW.

14.21 The A&ROW plans also do not show the proposed permissive paths, so it is impossible for anyone to know what is proposed or to assess the implications.

Construction Phase Impacts

Positive

14.22 None identified or anticipated.

Neutral

Glare and Shielding

14.23 Users of the PROW network are visual and noise receptors in the landscape. Therefore, the proposals will have, where not sufficiently obscured by vegetation, a negative impact on PROW users. The following PROW locations are sufficiently obscured that there is no significant impact – however it is important to note that other PROW adjacent to the site are not sufficiently obscured (see below):

14.24 Public Footpath No. 1 Chippenham/Footpath No.1 Snailwell is to the east of Sunnica West Site B. There are a number of existing tree belts in the landscape that obscure views to Sunnica West Site B, and Sunnica West Site A

14.25 Footpath No.2 Chippenham is north of Sunnica West Site B. A section runs through woodland. The southern section to Park Farm has sufficient interrupted views to both Sunnica West site A and Sunnica West Site B.

Negative

14.26 Users of the PROW Network are visual and noise receptors in the landscape. The proposals will have therefore an impact on PROW users. The Councils acknowledge that the proposed planting measures to screen the development from PROW will reduce the visual impacts of the development with planting.

Glare and Shielding

14.27 The Applicant has not adequately assessed the impact of the development on users of PROW as visual receptors in the landscape. This is particularly the case for equestrian users on Public Bridleway No. 5 Snailwell on the southern boundary of Sunnica West Site A. It is noted from the south there is established vegetation that provides a level of shielding. However, consideration should be given to equestrian users, who sit much higher than pedestrians, and if this is of sufficient height to avoid glare. It is noted planting and infilling is proposed for part of the boundary. Officers managing PROW should be consulted on the details of the proposals alongside landscape officers.

14.28 The Councils request that the Applicant reassesses the impact of the development on users of PROW as visual receptors in the landscape. In particular equestrian users on Public Bridleway No. 5 Snailwell on the southern boundary of Sunnica West Site A.

Impact on U6006

14.29 As discussed in the landscape section, the U6006 is an important landscape, recreation, and ecological feature and potentially also historically significant (Icknield Way); while classified a road, the U6006 or Badlingham Lane, between Elms Road and Newmarket Road, does not present as a road, but as a well-used footpath, with diverse habitats and, particularly in the southern stretch, mature trees and shrubs on either side, forming a

substantial tree belt. As noted in that section, the current proposals are not entirely clear but it appears that they include the use of this road as an access to some of the solar plant parcels and as such would have a devastating effect on the character of the route, its amenity value, and its value as a well-connected wildlife corridor. The Councils consider that the impact and resulting landscape and visual effects would be greater than assessed. (see Landscape and Visual Amenity Section 10 - Major Adverse Landscape Effects, Sunnica East B, Within and Alongside the U6006). The impacts in relation to heritage and ecology are further discussed in the relevant sections above (see Sections 7 and 8), which again will also impact the amenity and PROW value of the U6006.

Disruption of PROW during construction

- 14.30 The PROW network is an important part of the overall highway network and, as noted above under policy context, is vital to supporting community physical and mental well-being. Closure of a PROW for lengthy periods of time can result in significant changes to people's behaviours, and thus it is critical that any closures are minimised. Closures also lead to possible additional risks to PROW users if diverted onto less suitable routes, delays to PROW users, and disruption discourages the use of rights of way and / or reduces amenity value.
- 14.31 The A&ROW plans do not currently show any proposed diversions for temporarily stopped up PROW.
- 14.32 Article 11(2) of the DCO requires the Applicant to provide reasonable access for 'pedestrians going to or from premises abutting a public right of way affected by the temporary stopping up, prohibition, restriction, alteration or diversion of a public right of way under this article if there would otherwise be no such access'.
- 14.33 The Councils are concerned that the Applicant does not consider less disruptive methods such as the use of banksmen used on other similar DCO projects (such as East Anglia 1 and East Anglia 2) nor commit to providing safe and suitable diversions for all users if Rights of Way are Closed. Of particular concern is the length and nature of potential diversions, for example walkers, cyclists and equestrians being diverted onto local roads that are being used by local and construction traffic. For example, closure of Freckenham Footpath 003 (PRoWC5B to C in APP-010) would divert walkers onto Elms Road, the main construction traffic route for Sunnica East.
- 14.34 The need to understand Councils also whether it is intended to use any of the PROW to deliver the development e.g., as haul routes. Written confirmation is needed that internal haulage routes will not use sections of PROW, only cross PROW. The latter would still potentially have a significant detrimental impact on PROW users and cause damage to the PROW and its boundary features. The LHAs seek for article 11 of the DCO to be amended to remove the ability of the developer to travel along PROW as is currently implied. It will be sufficient for crossing of PROWs to be dealt with through the Construction Management Plan.
- 14.35 The Councils note that all proposed temporary measures concerning PROW during construction must be:

- Agreed with the relevant LHA, including its Rights of Way Management Team and Streetworks Team.
- Shown on the A&ROW Plans.

14.36 Documented in the Construction Management Plan together with the methodology to be employed so that any temporary closures or diversions can be properly managed together with temporary closures of other parts of the highway network.

Operational Phase Impacts

Positive

14.37 None identified or anticipated.

Neutral

14.38 The proposed new permissive path as part of Sunnica East site A, aligned with Beck Road south of Isleham, whilst welcome, has limited value because it is temporary for the duration of the development only, and the route in Cambridgeshire provides little benefit. The proposed path near Isleham, off Beck Road is an isolated offering, with no connection at either end except along a fast road. There is therefore no permanent enhancement to the PROW network with reference to that envisaged by NPPF paragraph 100, or the Statements of Action 3 and 5 of the Cambridgeshire Rights of Way Improvement Plan and Priorities 3 and 4 of the Health & Wellbeing Strategy.

Negative

14.39 As noted above with respect to PROW during construction, users of the PROW network are visual receptors in the landscape. The impacts related to construction above also apply to the operational stage – particularly in relation to glare and shielding. The impacts below are in addition to those matters raised above.

PROW as Landscape and Living Features

14.40 PROW are both historic and living features that are part of the landscape, and need to be assessed as such in order to identify appropriate treatment. There are very few public rights of way (PROW) in this area, and public health indicators are poor, so it is vital that the existing network is protected and enhanced in accordance with paragraph 100 of the NPPF. Defra's 25 year Environment Action Plan supports additional dedicated PROW (Chapter 3: Connecting people with the environment to improve health and wellbeing). CCC currently has 3 applications to record bridleways in this area. Whilst some mitigation measures are proposed to protect the PROW from glare, the ES has not assessed the PROW as historic features within the landscape, and has not proposed any measures to enhance them e.g., through the creation of permanent new PROW to enable connectivity that would assist the long term health and well-being of local communities and non-motorised Users. For a development of this large size and impact on local communities, opportunities to enhance PROW provision in the area has not been realized.

Noise Impact on Non-Motorised Users

14.41 At this stage there is insufficient detail provided in the documents to consider the location of the Solar Stations containing inverters, switchgear and other associated equipment. The Preliminary Environmental Information Report in section 4.7.5 predicts the effects of noise to be negligible. However, The British Horse Society advice on Solar Farms noise explains that noise from inverters can be intrusive, and could potentially be disturbing to equestrian users of the Bridleway 204/5. It should be noted that a horse's range of hearing is wider than a humans and sounds are audible at lower decibels.

14.42 At a meeting with the Councils on 3 October 2022 the Applicant stated that they now propose to extend constructions works into Saturdays. This could have a significant impact on users of the PROW network, as more leisure use of PROWs tends to occur at the weekend than during the week. If this change is confirmed, the impact will need to be assessed in full.

U6006

14.43 As discussed in the Landscape Section (see Section 10), during operation of the solar farm the U6006 road would remain accessible for recreational use. The Councils expect that there will be negative impacts on this recreational route and its character during operation, in terms of its appearance, related to views of solar panels and impact of mitigatory planting.

Required Mitigation

Glare and Shielding

14.44 The Councils request that the Applicant reassesses the impact of the development on users of PROW as visual receptors in the landscape, and proposes additional mitigation for impacts identified. In particular equestrian users on Public Bridleway No. 5 Snailwell on the southern boundary of Sunnica West Site A. Any planting must not encroach on the legal extent of the PROW. LHA officers managing PROW should be consulted on the details of the proposed planting and infill on this section alongside Landscape officers.

Disruption of PROW during Construction

14.45 The proposed temporary closures and/or diversions, and any proposed use of the PROW to deliver the scheme, need to be discussed and agreed with the LHA to enable the LHA to assess the implications for users and advise the applicant accordingly.

14.46 All proposals to temporarily close or divert PROW agreed with the LHA, including its Rights of Way Management Team and Streetworks Team, and formally documented (as defined below in the requirements and obligations subsection).

PROW as Landscape and Living Features

14.47 The Councils request that the Applicant consider the creation of rights of way that provide real value to the local communities to help improve local health and well-being as a lasting benefit of the scheme. The councils request the Applicant to engage with them to consider the creation of permanent new PROWs to enhance the existing limited network and enable better connectivity that would assist the long term health and well-being of local communities and Non-Motorised Users, in accordance with NPPF para 100 and the Cambridgeshire ROWIP and Health & Wellbeing Strategy. Such improvements would provide

mitigation for residual amenity impacts, and/or provide some legacy benefit.

Recommendations are the creation of a circular route around the perimeter of the application plots, with an outreach education facility about the purpose of the development, perhaps with a small car park for users to be able to access it. Alternatively, a path could be provided linking back into the village and on to another path or specific destination to enable safe connectivity with the community infrastructure.

Noise Impact

- 14.48 The assessment of noise needs to consider the impact on NMUs and particularly horses outlined above and needs to agree details of proposed mitigation where appropriate with the LHAs, and implement it.

Construction Works on Saturdays

- 14.49 The Applicant must assess the impact of extending work into Saturdays for the duration of the construction on the behaviour of NMUs of the PROW network and propose appropriate mitigation measures to counter any negative impact in order to maintain existing standards of health and well-being of affected communities.

Requirements and Obligations

- 14.50 The councils requires that planting landscaping and other shielding mitigation adjacent to (not on) PROW and permissive paths be a condition of any DCO consent and that the Applicant be required to provide more detail to the relevant Council for approval through the detailed design process to ensure a minimum width of two metres must be left between the legal boundary of a PROW and any new planting, to allow for growth without unlawful obstruction of the highway.

Missing Data on Access & Rights of Way Plans

- 14.51 The pre-existing legal highway boundary extents and proposed new physical and legal extents for all roads and PROW must be added to the A&ROW Plans so a) the LHA can assess the implications for users and its maintenance liability and advise the developer accordingly; b) the Applicant can implement appropriate mitigation measures for any temporary closures and reinstatement work that might be required; and so it knows the correct legal location for the shielding measures; and c) the LHA can plan its future asset management of the highway network and infrastructure appropriately.
- 14.52 All proposed permissive paths must be added to the plans.

15 Air Quality

Summary

- 15.1 It has been demonstrated within Chapter 14 of the Environmental Statement that Sunnica will not cause a significant impact upon nitrogen dioxide (NO₂), or fine particulate matter (PM₁₀ or PM_{2.5}) from vehicle movements during the construction phase of the development. During the operational phase of the development vehicle movements will be minimal and no detailed assessment was considered necessary. The methodology and standards used to undertake this assessment was appropriate and the Councils are satisfied with these findings.
- 15.2 Operational impacts could result from unplanned atmospheric emissions from the Battery Energy Storage Systems in the result of a fire. This has been assessed by the applicant and the assessment reviewed on behalf of SCC. There are a number of unknowns with the exact nature of the BESS and this impacts the findings of the assessment. There will need to a refinement of the assessment following the completion of the detailed design and specification of the BESS. This will need to be secured by the terms of the DCO.
- 15.3 Decommissioning may cause additional traffic, but this is unlikely to be of a greater magnitude than the construction phase and vehicle technology will have allowed for cleaner vehicles and overall better local air quality.

Policy Context

National Policy Statements

- 15.4 NPS EN-1 states infrastructure development can have adverse effects on air quality during the construction, operation, and decommissioning phases. These phases can involve emissions to air which can have adverse impacts on health, on protected species and habitats, or the wider countryside. The content of the policies below aligns with that of the NPS.
- 15.5 Policy DM14 of the Joint Development Management Policies Document states that proposals for all new developments should minimise all emissions ... and ensure no deterioration to either air or water quality.

Construction Phase Impacts

Positive

- 15.6 None identified or anticipated.

Neutral

- 15.7 The assessments identified that there would be no significant impact from the vehicle movements associated with the construction phase.

Negative

- 15.8 None identified or anticipated.

Operational Phase Impacts

Positive

- 15.9 None identified or anticipated.

Neutral

15.10 None identified or anticipated.

Negative

15.11 There is the potential for negative impacts from unplanned atmospheric emissions from the Battery Energy Storage Systems in the result of a fire, however, it is not possible to clearly quantify this impact at the moment. Further assessment will be required following detailed design. This will need to be secured by the terms of the DCO, together with any consequential mitigatory measures.

16 Contaminated Land

Summary

- 16.1 In terms of contaminated land, the Applicant is using the correct procedures as outlined by the relevant guidance (General Principles for Land Contamination, BS10175:2011+A2:2017 and Land Contamination Risk Management). The reports submitted so far with regards to land contamination have been done to an acceptable level. These reports also made recommendations for further intrusive investigations and there will need to be a commitment that these recommendations are complied with, which would be secured through a requirement of the Development Consent Order.
- 16.2 An investigation and risk assessment must be completed in accordance with an investigation scheme which is subject to the approval in writing of the Local Planning Authority. The investigation and risk assessment must be undertaken by competent persons and conform with prevailing guidance (including BS10175:2011+A2:2017 and the Land Contamination Risk Management) and a written report of the findings must be produced. The written report is subject to the approval in writing of the Local Planning Authority.
- 16.3 Where remediation is necessary a detailed remediation method statement must be prepared and is subject to the approval in writing of the Local Planning Authority. The remediation method statement must include detailed methodologies for all works to be undertaken, site management procedures, proposed remediation objectives and remediation criteria. The approved remediation method statement must be carried out in its entirety.
- 16.4 Following completion of the approved remediation scheme a validation report that demonstrates the effectiveness of the remediation must be submitted to and approved in writing by the Local Planning Authority.
- 16.5 In the event that contamination which has not already been identified to the Councils is found or suspected on the site it must be reported in writing immediately to the Local Planning Authority.

Construction Phase Impacts

Positive

- 16.6 Opportunity to improve soil conditions where historic local contamination may have occurred.

Neutral

- 16.7 None identified or anticipated.

Negative

- 16.8 Possible localised minor contamination or shallow soil impact from machinery or compound construction.

Operational Phase Impacts

Positive

16.9 None identified or anticipated.

Neutral

16.10 None identified or anticipated.

Negative

16.11 None identified or anticipated.

Requirements and Obligations

16.12 A Land Contamination Intrusive investigation is required to assess the risks of land contamination identified in the initial desk top studies. Any identified contamination should be remediated.

17 Climate Change

Summary

- 17.1 National policy is clear that the purpose of the planning system is to contribute to the achievement of sustainable development. It identifies three dimensions within sustainable development; economic, social, and environmental. This section focusses on climate change impacts – socio-economic and biodiversity impacts are covered elsewhere in this LIR.
- 17.2 The main adverse climate change impacts relate to carbon emissions and resources required for the construction of the project. Once operational, there will be climate change benefits to generating low carbon energy compared to the alternative of fossil fuel generating stations.

Table 12: Summary of impacts – Climate Change

(Note: this section focusses on climate change impacts – socio-economic and biodiversity impacts are covered elsewhere in this LIR)

Ref No.	Description of Impact	Construction (C) / Operation (O)	Negative / Neutral / Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy context
	Greenhouse gas emissions from construction activity	C	Negative	Reduce: the applicant should set out an approach to reduce fuel consumption and associated emissions. Mitigate: set a CEEQUAL target. Compensate / Mitigate: consideration of offsetting of impacts.	Local Plan Policy DM7: Sustainable Design and Construction: All proposals for new development will be expected to adhere to broad principles of sustainable design and construction.
	Use of resources and generation of waste during construction (particularly materials)	C	Negative	Compensate / mitigate: consideration of offsetting of impacts.	

	Low carbon energy generation	0	Positive		Local Plan Policy DM8: notes the Council will support low carbon energy developments where certain criteria are met. Policies GROWTH 5 and ENV6 of the East Cambridgeshire Local Plan.

Policy Context

National Policy Statements

- 17.3 Section 4.8 of NPS EN-1 addresses climate change adaptation in energy infrastructure development. It notes that the IPC (now ExA) should take the effects of climate change into account when developing and consenting infrastructure, referring also to the potential long-term impact of climate change.
- 17.4 New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure (paragraph 4.8.5). The IPC (now ExA) should be satisfied that applicants for new energy infrastructure have considered the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure (paragraph 4.8.6).
- 17.5 EN-1 notes the energy NPSs should speed up the transition to a low carbon economy and thus help to realise UK climate change commitments sooner than continuation under the current planning system.
- 17.6 Paragraph 2.2.5 notes the UK economy is reliant on fossil fuels, and they are likely to play a significant role for some time to come. Most of our power stations are fuelled by coal and gas. The majority of homes have gas central heating, and on our roads, in the air and on the sea, our transport is almost wholly dependent on oil. Paragraph 2.2.6 identifies that the UK needs to wean itself off such a high carbon energy mix: to reduce greenhouse gas emissions, and to improve the security, availability, and affordability of energy through diversification.
- 17.7 EN-1 also notes that storage has a key role to play in achieving net zero and providing flexibility to the energy system.

Local Plan Policy

- 17.8 Policy DM8: Low and Zero Carbon Energy Generation: encourages renewable energy generation where developments demonstrate carbon benefits and have mitigated against landscape, visual, habitat, and soil impacts.
- 17.9 Policy DM7: Sustainable Design and Construction: All proposals for new development will be expected to adhere to broad principles of sustainable design and construction.
- 17.10 Policy GROWTH 5 of the East Cambridgeshire Local Plan promotes sustainable development. Policy ENV6 promotes renewable energy, unless the benefits are outweighed by significant adverse effects.

Context

- 17.11 The NPPF is clear that the purpose of the planning system is to contribute to the achievement of sustainable development. It identifies three dimensions within sustainable development; economic, social, and environmental.

17.12 The Councils recognise sustainability comprises these three elements, but this section focuses on environmental sustainability in relation to climate change. The social and economic aspects of sustainability are addressed in Section 12 of this report.

17.13 The Government has identified that, in order to meet its energy and climate change objectives, there is an urgent need for new electricity generating stations. The government has committed to sustained growth in solar capacity. This is identified in the NPS EN-1 and draft EN-3.

17.14 The Government has committed to Net Zero by 2050.

17.15 The Councils consider that the proposed development could provide a positive impact in terms of clean, green, renewable energy production.

17.16 The Councils recognise that the positive impact of renewable energy generation will have to be balanced against the potential environmental impacts of the proposed development. The construction (and decommissioning) of a development of this scale will produce significant carbon emissions. Whilst these may be offset by the carbon benefits during operation, they should still be minimised as far as this is possible.

Construction Phase Impacts

Positive

17.17 None identified or anticipated.

Neutral

17.18 None identified or anticipated.

Negative

17.19 The primary adverse impact will be the result of greenhouse gases during construction.

17.20 The construction of any large-scale infrastructure project would be resource intensive and have the potential to generate waste. Building the solar farm would involve the daily movement of large numbers of construction workers and significant amounts of materials and equipment.

17.21 Fuel consumption during construction will be significant with an estimated 312,500 L to be used for site construction and 37,500 L to be used for cable route construction. The carbon footprint of this fuel use is substantial.

17.22 The Councils do not feel that the Considerate Constructors Scheme (CCS) is a robust enough standard to ensure that a development of this size and national significance is appropriate for managing and reducing the environmental impacts arising – especially in relation to the fuel inputs, vehicle journeys, waste generated, and water usage.

17.23 The construction period will cause large amounts of greenhouse gases to be emitted. It is estimated that over the 2-year construction period, approximately 452,015 tonnes of CO₂ would be emitted.

17.24 The majority of greenhouse gas emissions during construction are associated with the embodied carbon within the materials (93%) with transport of materials to site and construction worker commuting totaling 6%.

Required Mitigation

- 17.25 In order to improve the sustainability of construction, the applicant should set out an approach to reduce fuel consumption and associated emissions. Clear targets for reducing consumption and emissions should be set out and monitored, with consideration to the region's net zero goals. Electric and hybrid plant machinery should be the first choice, where available, and plant drivers should be trained to improve efficiency and the use of eco-modes. Where practical, the Applicant's compounds should include electric charging points for the construction vehicles and the workforce.
- 17.26 It is recommended that this development sets a CEEQUAL target to achieve and enhance the level of monitoring of key emissions sources during construction and works to manage and reduce these emissions to achieve the CEEQUAL standard.
- 17.27 However, even if mitigation is carried out, the carbon footprint of construction products remains substantial. The Councils encourage the Applicant to consider ways to off-set the carbon footprint of the development.

Operational Phase Impacts

Positive

- 17.28 The sustainability of solar farms is founded on attributes of low carbon energy generation.
- 17.29 The Applicant states in the Environment Statement that the amount of greenhouse gases emitted during the construction period is small in comparison to the savings that will be achieved once the solar farm is operational.

Neutral

- 17.30 None identified or anticipated.

Negative

- 17.31 None identified or anticipated.

18 Battery Fire Safety

Summary

- 18.1 Delivery of the fire and rescue services in Suffolk is the responsibility of Suffolk County Council. The Cambridgeshire and Peterborough Fire Authority is the governing body responsible for delivering fire and rescue services in Cambridgeshire and Peterborough. Cambridgeshire and Suffolk Fire and Rescue Services (CRFS and SFRS) can't define the impact of the battery fire safety in the absence of sufficient detail (including type and scale) being provided by the Applicant. Instead, these points will narrowly consider the reasonable worst case scenario from an operational firefighting point of view only.

National Policy

- 18.2 EN-1 gives general guidance on safety considerations in relation to the provision of energy infrastructure (in section 4.11) but does not provide any specific guidance on battery fire safety. This section of the LIR is based upon professional judgement and considers points that pose concern to Cambridgeshire and Suffolk Fire and Rescue Services in discharging their responsibilities under the Fire and Rescue Services Act 2004 and Civil Contingencies Act 2004.

Construction Phase Impacts

- 18.3 No impacts are identified or anticipated for the construction phase.

Operational Phase Impacts

Water Supplies for the Use of Firefighting Purposes

- 18.4 The water supply requirement will be dependent on the operational and extinguishing system that is identified as the most appropriate, which will depend on for example (not exhaustive) the final configuration of the battery housing, and clarification regarding reasonable worst case scenario emergency planning. The Outline Battery Fire Safety Management Plan Table 5 includes the Water UK National Guidance Document on the Provision of Water for Fire Fighting document which will be utilised for reference. The Councils are aware this document (3rd edition, 2007) is currently under a significant review and its scope is considered for general firefighting rather than specific risks e.g., Battery Energy Storage Systems (BESS). The Councils request that this scheme considers any alterations to this guidance document that may be appropriate if they emerge during the Examination.
- 18.5 It is noted that during the Victoria, Australia big battery fire on 30th July 2021 it is estimated that approximately 900,000 litres of water was utilised to protect adjacent units. The Councils require sufficient information regarding the system design to inform detailed operational response plans which will, in turn, impact on the requirement for water on site.
- 18.6 Water supply for any automatic suppression system will be covered by the relevant standard/design depending on which system chosen as appropriate for the risk. For manual water, amounts should come from performance based requirement rather than a reference

to a code, unless it can be shown that the code specifically covers BESS. Regarding water storage tanks, volumes will again need to be informed on a performance based need and not referenced to Approved Document B volume 2 (ADB) which is not appropriate for this use as a BESS is not a 'common building' design for which the approved documents are appropriate.

- 18.7 Any calculations for sufficient water supply for an appropriate suppression system will need to be completed by a competent person considering the appropriate risk and duration of any fire.
- 18.8 The number and location of Fire Hydrants will be determined following Risk Assessment and with reference to guidance contained within the "National Guidance Document on the Provision of Water for Fire Fighting" 3rd Edition, as above.

Access to and Around the Sites for Attending Emergency Vehicles

- 18.9 The Councils note the inclusion of Outline Battery Fire Safety Management Plan Table 3 item 16. The Councils will require detail in relation to access points taking into account prevailing wind and emergency response plans. There should be accommodation for relevant fire service assets to navigate throughout the site which may be of differing size and weight.
- 18.10 Access and facilities for the Fire Service should also be provided in accordance with the Building Regulations Approved Document B5 Vehicle Access. Dwellings Section 13 and/or Vol 2. Buildings other than dwellings Section 15 Vehicle Access. The Fire & Rescue Services have specific vehicle details available, and the Councils will share these, on request, to account for the specific vehicles operated.

Operational Emergency Preparedness Including the Completion of Detailed On-site and Off-site Emergency Procedures

- 18.11 Without a final design of the system being implemented at the sites, the level of risk the systems may pose if a fire were to occur on site is difficult to assess. The report entitled *6.2 Appendix 16D: Unplanned Atmospheric Emissions from Battery Energy Storage Systems (BESS)* under 3.1.2 states '*As a definitive emission rate will not be known until later in the detailed design stage*'. An assumed emission rate of 1 µg/m³/s has been utilised in relation to the tests with a 5-rack fire, however with the absence of the final design of the systems these assumptions will need to be challenged to understand an accurate test relating specifically to the site in question. It is noted that 2.1.7 states that the containers are unlikely to hold any more than 35 racks and that with thermal barriers it is likely that the fires will burn out before spread of fire is realised. These assumptions will be reliant on the final system design and proof of evidence in relation to testing and suitability of extinguishing system.
- 18.12 The report states under 3.2.2 that 'Near source temperatures in excess of 300 °C can be reasonably expected to be present, which would result in the plume rising rapidly'. This assumes immediate escape of fire gases which the Councils believe may not be the case as it is contained within a container, this will have effect on heat build up, fire behaviour and smoke spread, and needs to be considered. The wind speed, direction and neighbouring units will also cause interference in the movement of the products of combustion. Although this is mentioned within 3.5.1 there may be localised variations in smoke behaviour. The

associated risk with the smoke movement and toxins found within the smoke may cause additional risk to fire crews attending any fire situation on site. The relation of smoke behaviour with temperature variants alongside the wind variants would also be of use as this will directly impact the spread of any fire gases.

- 18.13 The Councils note the omission of 2018 as a sample year in favour of 2014 for modeling purposes, and seek additional clarification around the omission of this year.
- 18.14 The Councils request the Applicant to confirm the gases present in relation to the specific battery units proposed for these sites. It is noted in the Arizona fire report that Hydrogen Cyanide was also detected in high levels. The *Fire Protection Research Foundation (FPRF) report (Ref 2) on 'Hazard Assessment of Lithium Ion Battery Energy Storage Systems* is cited however the Councils require additional confirmation regarding the battery technology utilised on site and the exact relevance of this report.
- 18.15 A number of detailed methodological points are raised by a third-party review of the Unplanned Atmospheric Emissions report commissioned by the Councils, which is attached at Appendix 26.
- 18.16 The modelling undertaken to date includes a number of assumptions including the temperature of the fire, a limited spread between stacks and wind direction and strength. The levels of toxic gases produced need to be relevant to the exact system being requested for the sites. The assumption of 5 racks involved in fire will need to be proved as there can be up to 35 racks in each container. The containment of the fire gases may cause increased and sustained temperatures, the Councils seek further clarification in relation to the thermal barriers to prevent larger scale fires. The levels of toxic gases being emitted may differ based upon the design and construction of the units.
- 18.17 As part of the emergency planning phase the Councils will need to use this information to identify safe locations for our crews which will directly impact on their ability to tackle any fire present. It is understood that any fire within a BESS will be protracted and could last for a number of hours. It is noted as example that Hydrogen Fluoride has an Acute Exposure Guideline Level (AEGL) 2 (Disabling) of 24 ppm at 60 minutes. The tests highlighted in the emissions report state 30 – 50 ppm at the exhaust throughout the duration of test. The ventilation status of the fire will also directly impact on the rate of release and concentration of toxic fumes present. This will need to be factored in for the specific design of the systems on site.
- 18.18 Any protracted incident that may cause harm to people or the environment may warrant a multi-agency response incorporating partners of the Local Resilience Forum. These partners will need to be fully engaged with during planning and prior to any commencement of construction. Detailed multi agency response plans based upon reasonable worse case scenarios will need to be created to inform local residents and identify suitable response for relevant agencies.
- 18.19 The BESS fire in Arizona, 19 April 2019, also experienced a significant and sudden deflagration of the BESS unit. Although the final detailed analysis report is awaiting

publication the initial fire report highlights the need to understand the true emission of flammable gases in the event of a fire to support our response, as the potential for a deflagration/explosive event needs to be considered.

- 18.20 Within their Integrated Risk Management Plan the Councils plan for future development within the respective counties. Although mentioned within the Human Health chapter of the ES [APP-047], when forming the operational plans, it will be important to understand any committed building schemes that are in proximity to the BESS sites.

Environmental Impact Caused by Any Fire on Site and the Subsequent Application of Firefighting Media

- 18.21 The fire and rescue service require detailed analysis of the environmental impacts of the sites, namely the battery units in event of fire. Consideration for the service in relation to its operational tactics will be based upon the components of any products of combustion and subsequently the water run off following application in the event of a fire. The Victoria big battery fire utilised approximately 900,000 litres of water to protect adjacent battery units.
- 18.22 The Councils will require fire and plume prediction models relating to the specific systems to be created to understand the local impact of any smoke which will directly impact the response for the sites. This includes understanding the proximity of the Battery storage units to buildings, settlements and future planning considerations for the area. The Councils also have concerns with the containment of any such water run-off from fires, any suppression of fire gases or firefighting activities may lead to contaminated water run off which will need to be contained for safe removal.
- 18.23 When considering the environmental impact the Councils require detailed assessment of any environmental sensitivities that may be affected by any fire situation on sites. This will include ground receptors and detailed reports relating specifically to the impacts of fire gases to nearby residents, relating specifically to the systems being used on site.
- 18.24 It must be acknowledged firefighting tactics when dealing with BESS, in all of the potential configurations, are still evolving given the rate of technological change and unknowns when dealing with these relatively new risks. Whilst generic commonalities between incidents of similar types may be able to be drawn to inform pre-planning, each incident is unique with multiple informing and influencing external factors. Therefore, it must further be acknowledged, environmental impact will need to be considered in relation to differing fire and rescue service tactics which may range from offensive (suppressing the fire) to defensive (controlled burning and boundary cooling) or somewhere in between.

Design, Testing, Construction and Decommission of the Site

- 18.25 The final design and construction of the systems will directly impact our response arrangements. Within the considerations of the final design of the system, areas of specific interest for us include:
- 18.26 Details on the specific safety and monitoring systems present throughout all stages of build, testing, maintenance and decommission. This is to take into account lessons learned from the Victoria Big Battery incident.

- 18.27 Ensuring all automatic systems, including all suppression systems and site infrastructure are operational prior to any power testing or operational use of the site.
- 18.28 Design considerations in relation to the learning from Victoria report, UL9540A did not test to the wind speeds experienced on the Victoria fire. Full details regarding fire separation and venting systems to be provided and with emergency use plans included.
- 18.29 The Councils note the inclusion of information on Table 3 item 7 relating to the water based suppression system, which is currently listed as a water mist system, Water mist systems are a different water based suppression technology to sprinklers in how they interact/suppress the fire. Water mist systems are far more bespoke as reflected in the relevant standards, which cite appropriate test protocols and data. The choice of water mist over sprinkler would need to be taken in liaison with a competent person who can relate the system choice to the risk identified and the duration of its required activation. This will directly impact the water provision for the sites. In addition, it would prove prudent to include a Fire and Rescue Services (FRS) inlet into the suppression system design as FRS can then supplement supply, where safe to do so.
- 18.30 Any distance identified for separation of the units will need to be identified through the analysis by a competent fire engineer. There should be consideration for the fire separation internally and the total realistic load of fire.
- 18.31 VESDA (Very Early Smoke Detection Apparatus) systems may be appropriate however the Councils are unaware of any studies that prove them the best system to use within the BESS environment. For example, due to risk of off gassing, are there any plans to include any gas monitoring equipment in and around the site to highlight levels of toxic gas release in the event of a fire? The Councils also require detail as to how the system will be monitored.
- 18.32 The proposal includes the option to double stack containers. The fire services do not support this based upon the level of risk in relation fire loading, potential spread of fire and access.
- 18.33 4.2.1 states the site is constructed to BS 9999 however this code does not contain BESS within its scope, it may be appropriate for the ancillary accommodation/structures e.g. offices and warehouse (depending on use) but not the BESS.
- 18.34 Applicable Safety Standards – When selecting appropriate safety standards the Councils seek additional clarification regarding the specific relevance to BESS facilities. It is noted that there is significant text in the ‘National forward’ of the New BSI standard (BS EN 14972-3:2021 Fixed firefighting systems. Water mist systems.) that states the UK committee are of the opinion that BS EN 14972 does not meet all of the requirements that they would like to see, and are of the opinion it is ‘sub-optimal’ compared to the BS 8489 series, which does not have any test protocols for a BESS. It is most likely any water mist system will not take account of the effects of natural or artificial ventilation in this area which will still provide the greatest challenges for the effective application of mist.
- 18.35 There is clear relationship between the design of the system and the potential hazards and risks posed to responders and the local environment alike. Once further information is

received regarding the system design and the appropriate evidenced based emergency mitigation solutions the Councils will be in a more informed position to advise further.

19 Minerals and Waste

Summary

- 19.1 The County Councils as minerals and waste planning authorities have responsibility for the safeguarding of planned and operational minerals and waste facilities as well as underlying minerals resources.
- 19.2 No planned or operational minerals or waste facilities would be directly negatively affected by the proposed development. There would be a positive impact upon these facilities arising from the demand for sand and gravel and waste disposal. Waste created during construction, operation and decommissioning should be treated in accordance with the waste hierarchy of: a) prevention; b) preparing for re-use; c) recycling; d) other recovery, and; e) disposal.
- 19.3 In terms of the underlying sand and gravel resources most of the proposed development is not irreversible and has a planned life of 40 years, during which time extraction within the affected area would not be possible. Where minerals are extracted on site during construction then they should be used in the construction of the proposed development where possible. Removal of the development following cessation of generation should be required.

Table 13: Summary of impacts – Minerals and Waste					
Ref No.	Description of Impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
1ff	Impact upon planned or existing minerals development	C/D	Positive	n/a	NPS/NPPF/SMWLP
1gg	Impact upon planned or existing minerals development	O	Neutral	n/a	NPS/NPPF/SMWLP
1hh	Impact upon planned or existing waste development	C/D	Positive	n/a	NPS/NPPF/SMWLP
1ii	Impact upon planned or existing waste development	O	Neutral	n/a	NPS/NPPF/SMWLP
1jj	Impact upon underlying minerals resources	C/O	Negative	Removal of development at the end of the consent period	NPS/NPPF/SMWLP
1kk	Impact upon underlying minerals resources	D	Neutral	Removal of development at the end of the consent period	NPS/NPPF/SMWLP
1ll	Parts of the proposed site lie within a Sand and Gravel Mineral Safeguarding Area. Connection lines are unlikely to involve extensive groundworks that may result in the extraction of minerals resource.	C	Neutral		Policy 5 of the Cambridgeshire and Peterborough Minerals and Waste Local Plan (July 2021)
1mm	Cable route passes near the following safeguarded waste management sites: Kennett Landfill; Plantation Farm, Kennett; Snailwell Road (Land off), Snailwell; and the Burwell Waste Water Treatment Works. Cambridgeshire County Council is content that the proximity of the proposed cable is unlikely to adversely affect these waste	O	Neutral		Policy 16 of the Cambridgeshire and Peterborough Minerals and Waste Local Plan

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	sites or be adversely affected by these sites.				

Policy Context

National Policy Statements

Overarching National Policy Statement for Energy, EN-1:

- 19.4 Para. 5.10.9 “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.”
- 19.5 Para. 5.10.22 “Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the IPC should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.”
- 19.6 Para. 5.14.6 “The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.”

National Planning Policy

National Planning Policy Framework, July 2021:

- 19.7 “Planning policies should:”
- 19.8 Para. 210 “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);”
- 19.9 Para. 210 “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);”
- 19.10 Para. 210 “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);”

National Planning Policy for Waste, October 2014:

- 19.11 Para. 8. “When determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, ensure that:”
- 19.12 “the likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities;”

- 19.13 “the handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities, and minimises off-site disposal.”

Local Plan Policies

Suffolk Minerals & Waste Local Plan, Adopted July 2020:

- 19.14 Paras. 1-3 Policy MP9: Safeguarding of port and rail facilities, and facilities for the manufacture of concrete, asphalt and recycled materials. “When proposals are made which would result in the loss of or might potentially compromise the use of: a) an existing, planned or potential rail head, wharf or associated storage, handling or processing facilities for the bulk transport by rail or sea of minerals, including recycled, secondary and marine-dredged materials, and/or; b) an existing, planned or potential site for concrete batching, the manufacture of coated materials, other concrete products or the handling, processing and distribution of substitute, recycled and secondary aggregate material.”
- 19.15 Para.1 Policy MP10: Minerals consultation and safeguarding areas. “The County Council will safeguard: a) those Minerals Safeguarding Areas located within the Minerals Consultation Areas identified on the Proposals Map from proposed development in excess of five Ha; b) areas falling within 250m of an existing, planned or potential site allocated in the Plan for sand and gravel extraction.”
- 19.16 Para. 1 Policy WP18: Safeguarding of waste management sites. “The County Council will seek to safeguard existing sites and sites proposed for waste management use as shown on the Proposals & Safeguarding Maps and will object to development proposals that would prevent or prejudice the use of such sites for those purposes unless suitable alternative provision is made.”

Cambridgeshire and Peterborough Minerals and Waste Local Plan, Adopted 2021:

- 19.17 The current development framework for minerals and waste development in Cambridgeshire is the Cambridgeshire and Peterborough Minerals and Waste Local Plan adopted in 2021. Policies 5 and 16 respectively seek to protect mineral resources from sterilisation and waste management facilities from other forms of competing development

Construction Phase Impacts

Positive

- 19.18 The proposed development will include the utilisation of locally sourced construction materials namely sand and gravel, asphalt and concrete from existing facilities and require the recycling or disposal of waste items therefore stimulating the local economy.

Neutral

Sand and Gravel Mineral Safeguarding Area

- 19.19 Parts of the proposed site lie within a Sand and Gravel Mineral Safeguarding Area which is safeguarded under Policy 5 of the Cambridgeshire and Peterborough Minerals and Waste Local Plan (July 2021). This policy seeks to prevent mineral resources of local and/or national importance being needlessly sterilised. Policy 5 sets out a number of exemptions (criteria (a) – (h)), for when Policy 5 is not applicable, none of which relevant in this case. It then goes on

to set out that that development will only be permitted in certain circumstances (criteria (i) – (k)). Criteria (l) states that “development will only be permitted where it has been demonstrated that there is an overriding need for the development (where prior extraction is not feasible)” (see **APPENDIX 8**).

19.20 It is noted that the proposed development is, as a solar farm and connection lines unlikely to involve extensive groundworks that may result in the extraction of minerals resource. The Councils consider that, in this instance, where there are reserves of safeguarded minerals, prior extraction is unlikely to be feasible. Should the decision-maker be of the view that there is an overriding need for the development, the Councils will be content that Policy 5 has been addressed.

Negative

19.21 None identified or anticipated.

Operational Phase Impacts

Positive

19.22 None identified or anticipated.

Neutral

Proximity to Safeguarded Waste Sites

19.23 Policy 16 of the Cambridgeshire and Peterborough Minerals and Waste Local Plan seeks to safeguard waste management facilities from encroachment of inappropriate development. It is noted that the proposed cable route passes near the following safeguarded waste management sites: Kennett Landfill; Plantation Farm, Kennett; Snailwell Road (Land off), Snailwell; and the Burwell Waste Water Treatment Works. The Councils are content that the proximity of the proposed cable is unlikely to adversely affect these waste sites or be adversely affected by these sites.

Negative

19.24 The proposed development would prevent underlying sand and gravel resources being exploited for a period of forty years. The Restoration Overlap Plan [APP-018] shows that the proposed solar farm generally misses the existing Worlington Quarry and the proposed extension areas to the north. The small area of overlap in the south-western corner of the quarry will not be worked as the mineral is of poor quality. Maps 1 and 2 below show the extent of the exposed sand and gravel resources with the Order Limits superimposed. It should be noted that within the Order Limits significant areas are mapped as having no sand and gravel or it not being workable.

Decommissioning Phase Impacts

Positive

19.25 The proposed development will require the recycling or disposal of waste items therefore stimulating the local economy.

Neutral

19.26 None identified or anticipated.

Negative

19.27 None identified or anticipated.

Required Mitigation

19.28 Where minerals are extracted on site during the course of construction then they should be used in the construction of the proposed development where possible.

19.29 Waste created during construction, operation and decommissioning should be treated in accordance with the waste hierarchy of: a) prevention; b) preparing for re-use; c) recycling; d) other recovery, and; e) disposal.

19.30 All structures including buildings, foundations, plant and machinery should be removed within 12 months following the cessation of electrical generation and storage.

Requirements and Obligations

19.31 Where not included in the submitted proposals requirements should be added to secure the required mitigation.

The sand and gravel resources of the country north of Newmarket, Cambridge and Suffolk



20 Cumulative Impacts

Summary

- 20.1 In recent years there have been a number of proposals for energy related development in the East of England. There are several solar farm proposals, a number of consented and operational offshore windfarms, with onshore infrastructure, the proposed nuclear power station at Sizewell C, and proposals for further offshore windfarms and interconnectors. Accompanying this are related demands on the National Grid and therefore Grid extension proposals required by the developments.
- 20.2 In addition, there are a number of larger scale non-energy developments which may exacerbate local impacts. While many have been included in the Applicant's Cumulative Scheme Appendix of the ES [APP-055], a few important scheme are not listed.
- 20.3 The potential for cumulative impacts that would further exacerbate the issues identified in the previous sections, particularly in relation to socio-economic impacts, is significant, and adds to the complexity of reviewing and assessing the impacts of proposal and considering the required mitigation measures.

Table 14: Summary of impacts – Cumulative Impacts					
Ref No.	Description of Impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
	Ecology: Cumulative impact on Stone Curlew, due to inter-relationship of this proposal with others	C	Negative	See ecology section above.	See ecology section above. NPS EN-1: consider “how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place”.
	Transport: Potential exacerbated impact of transport effects as a result of cumulative impacts – including potential impacts on the feasibility of some of the modelling and assumptions	C	Negative	Co-ordination of likely highway works in relation to forthcoming projects, with Highways England and the local highway authorities. See also transport section above.	See transport section above. NPS EN-1: consider “how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place”.
	Socio-economic: Consideration of the significant number of large-scale solar and other energy projects in planning within the local area and region in combination with the Sunnica proposal opens some wider opportunities for skills, supply chain and local businesses	C	Positive	Positive strategy, with key targets for financial investment contribution towards the growth of local supply chains and businesses.	See socio-economic section above. NPS EN-1: consider “how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a

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					whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place”.
	Socio-economic: Cumulative impact on workforce availability to local/regional businesses and supply chain due to workforce displacement and churn, as a result of combination of Sunnica proposals and other solar and energy infrastructure developments in the wider local area.	C	Negative	Positive strategy needed for skills, supply chain and local businesses, coordinated with other regional energy developments.	See socio-economic section above. NPS EN-1: consider “how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place”.
	Socio-economic: Potential conflict with extant permission DC/15/2109/FUL at Bay Farm in Worlington.	C	Negative	To be considered.	See socio-economic section above. NPS EN-1: consider “how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place”.

Policy Context

National Policy Statements

20.4 The current NPS EN-1 directs the IPC (now ExA) to consider “how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place”.

20.5 Paragraph 5.12.3 of Section 5.12 (Socioeconomics) identifies the potential cumulative impact of development proposals. It notes that if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.

20.6 Draft NPS EN-1 notes that when “considering any proposed development, in particular when weighting its adverse impacts and its benefits, the Secretary of State should take into account: [...] its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce, mitigate or compensate for any adverse impacts. In this context, the Secretary of State should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.”

Other key projects under development

20.7 There are a number of key developments that will have an interrelationship with the Sunnica Energy Farm, the Applicant has identified some of the schemes in its ES (Appendix 5A, [APP-055]) and have additionally scoped projects into a figure in the Cumulative Assessment within the ES (Figure 5.1, [APP-178]). The projects that the Councils consider of substantive relevance to cumulative impacts of the Sunnica Energy Farm are listed below.

Energy related projects

20.8 The local area is a hotspot for solar developments, this is primarily due to its open, flat, undeveloped rural landscape with significant swathes of farmland providing an ideal location for energy farms and the closeness to Burwell Electricity Substation. Table 17 below lists solar farms and other energy developments in close proximity to the development site. Cumulative impacts between Sunnica Energy Farm and these developments needs to be comprehensively considered.

Table 15: Solar and Other Energy Developments in Proximity to the Development Site

Name	Location	Application	Capacity	Comment
Solar Farm developments in proximity to the site				
Toggam Farm	Lakenheath West Suffolk		12.4MW	Connected in 2016. Owned by WSC.
Bay Farm	Worlington Suffolk	WSC: F/2012/0464/FL	7.5MW	Consented 2012
Triangle Solar Farm	Soham, East Cambs		12MW	Connected in 2017. Owned by CCC

North Angle Solar Park	Soham, East Cambs (adjacent to Triangle Solar Farm)	CCC: CCC/20/051/FUL	29.4MW	Under development; approved 19 November 2020. Owned by CCC.
Cadenham Solar Farm	Very close to Sunnica site, Land North of New England Farm, Heath Road, Swaffham Bulbeck (Site is within Parish of Swaffham Prior)	ECDC: 21/01276/SCOPE	49.9MW	Currently in pre-application stage. Owned by EDF.
Solar Farm	Land to the East of Breach Farm Ness Road Burwell (West Suffolk/East Cambs)	ECDC: 21/00706/ESF WSC: DC/21/0968/FUL	49.995MW	Approved 10 December 2021
Solar Farm	Site North of Hightown Drove Burwell Cambridgeshire	ECDC: 20/00557/ESF	49.995MW	Approved on the 13 August 2020
Solar farm and associated works including inverter stations	Site South West of Meadow View Farm The Butts Soham Cambridgeshire	ECDC: 20/00522/FUM	28MW	Approved 8 October 2020.
Other energy developments				
Creation of an Energy Centre to serve the village of Swaffham Prior via a heat supply network	Land At Goodwin Farm 1 Heath Road Swaffham Prior.	CCC: CCC/20/054/FUL		Approved 25 November 2020
49.9 MW battery energy storage system facility	Weirs Drove Burwell.	ECDC: 17/02205/FUL	49.9MW	In operation
30MW battery energy storage system facility (extension to above)	Weirs Drove Burwell.	ECDC: 21/00816/FUL	30MW	Approved 10 December 2021.

20.9 Beyond the immediate surroundings of the development site, there is a growing cluster of solar farm proposals in other areas in the wider locality, particularly in the surroundings of National Grid's Bramford substation (near Ipswich). In total (including those in planning from the table above), the Councils are aware of up to 10 large solar farm projects within the region that are in planning, with five of these proposed to have a 49.90MW. All of these are expected to be in construction around the same period as the applicant's development. Whilst the proposals further away from the development site will not affect cumulative landscape and

community issues, they do need to be considered as part of the socio-economic cumulative impacts, alongside other large scale energy developments in the region.

20.10 Additionally, there are other major energy projects taking place around the region that would likely require some of the same skills and workforce needed for the construction of this project (see table 18 below for the energy NSIPs in the East of England). In its impact assessment of this project, the applicant has not considered the implications of these other projects, and the cumulative impact of the projects on the local and regional workforce availability for businesses in the area.

Table 16: Energy NSIPs in the East of England listed on the Planning Inspectorate website (on 18/10/2022)

Project	Developer	Stage
East Anglia ONE North Offshore Windfarm	East Anglia ONE North Limited	Operational
East Anglia ONE Offshore Windfarm	East Anglia One Ltd	Operational
Galloper Offshore Wind Farm	Galloper Wind Farm Ltd	Operational
Progress Power Station (gas-fired power station)	Progress Power Limited	Under construction - Consented July 2015
East Anglia THREE Offshore Wind Farm	East Anglia THREE Limited	Under construction - Consented August 2017
Hornsea Project Three Offshore Wind Farm	Orsted Hornsea Project Three (UK) Ltd	Consented December 2020
Norfolk Boreas Offshore Wind Farm	Norfolk Boreas Limited	Consented December 2021
Norfolk Vanguard	Norfolk Vanguard Limited	Consented Feb 2022
East Anglia TWO Offshore Windfarm	East Anglia TWO Limited	Consented March 2022
The Sizewell C Project	NNB Generation Company (SZC) Limited	Consented July 2022
Longfield Solar Farm	Longfield Solar Energy Farm Limited	Examination
Rivenhall IWMF and Energy Centre	Indaver Rivenhall Ltd	Pre Application
Bradwell B new nuclear power station	Bradwell B	Pre Application
Nautilus Interconnector	National Grid Ventures	Pre Application
Five Estuaries Offshore Wind Farm	Five Estuaries Offshore Wind Farm Ltd	Pre Application
East Anglia Green Energy Enablement (GREEN) Project	National Grid Electricity Transmission (NGET)	Pre Application

Table 16: Energy NSIPs in the East of England listed on the Planning Inspectorate website (on 18/10/2022)

Project	Developer	Stage
Bramford to Twinstead	National Grid Electricity Transmission	Pre Application
North Falls Offshore Wind Farm	North Falls Offshore Wind Farm Ltd	Pre Application
Sheringham and Dudgeon Extension Projects	Equinor	Pre Examination

Non-energy developments

20.11 There are a number of significant schemes that could have a relationship with the applicant's project, either from the perspective of transport demands, those that will also create a demand for labour, or those where the applicant's project will prevent future development. Appendix 5A of the ES [APP-055] lists a significant number of schemes which are considered by the Applicant as part of the cumulative assessment. The Councils consider that, while others need to be considered in the cumulative assessment, of those included in Appendix 5A, the following applications are of particular importance:

Table 17: Non-Energy Developments in Proximity to the Development Site

Name	Location	Application/Local plan Ref	Status	Comment
Kennett Garden Village	Fordham Village	ECDC 18/00752/ESO 22/00471/RMM 22/00472/RMM	Outline Permitted (April 2020) Reserved Matters still to be determined	500 houses, adjacent to the B1085
Residential development of up to 400 dwellings plus associated open space (including areas of habitat enhancement), foul and surface water infrastructure, two accesses onto the A142,	Hatchfield Farm Fordham Road Newmarket Suffolk CB8 7XL	DC/13/0408/OUT	Pending decision	Particularly the access arrangements onto the A142 are to be considered in terms of cumulative impact

internal footpaths, cycle routes and estate roads.				
Forest Heath District Council Site Allocations Local Plan policy SA4 - Land to the West of Mildenhall	1.2km north of the closest part of the Sunnica DCO site	Forest Heath District Council Site Allocations Local Plan policy SA4	Masterplan being prepared	Mixed use to include 1300 dwellings with a local centre, a minimum of 5ha employment land, a 10ha SANGS and primary school
Commercial polyhouses with office and welfare area; hardstanding and loading bays, car parking, reservoir, landscaping and associated works; new access	located immediately to the south of parcels E28 and E29	DC/21/0217/FUL	Pending decision	

20.12 The following developments which are important to be considered by the Applicant in their cumulative assessment are not included in Appendix 5A. The Councils consider it essential for these to be considered:

Table 18: Additional Developments not included in Appendix 5A of the ES [APP-055]

Name	Location	Application	Status	Comment
Western Way Leisure Centre	Western side of Bury St Edmunds	DC/19/2335/FUL	Permitted	Creation of a new public services village
A11 Red Lodge to Fiveways Roundabout safety improvements	A11	N/A	Under consultation by National Highways	Involving closing gaps in the A11 central reservation
Bay Farm Anaerobic Digester Plan	Worlington	DC/15/2109/FUL	Permitted	In operation

Construction Phase Impacts

Positive

Socio-economic impacts

20.13 While the positive benefit to local supply chains and businesses from this project on its own may be limited and transient, the significant number of large-scale solar projects in planning within the local area and region, alongside other large scale energy infrastructure developments, opens some opportunity for investing in local supply chain and businesses that can support the development of these projects (see Socio-Economic Section 12).

Neutral

20.14 DC/21/1621/HYB - Land Required for Bexwell to Bury St Edmunds Anglian Water Pipeline for Anglian Water, Moulton Road, Gazeley.

Negative

Ecology

20.15 The in-combination ecological impacts with local developments need to be considered, particularly with regard to Stone Curlew. Planning applications and a local plan allocation in the immediate area of the development have the potential for cumulative effects with this proposal on Stone Curlew. Details are provided in the Ecology and Biodiversity Section 8 above; in summary, the applications and allocation to be considered in terms of cumulative impacts on stone curlew are:

- Forest Heath District Council Site Allocations Local Plan policy SA4 - Land to the West of Mildenhall
- Planning application DC/21/0217/FUL Commercial polyhouses with office and welfare area; hardstanding and loading bays, car parking, reservoir, landscaping and associated works; new access.

Transport

20.16 In general, there is the potential for negative cumulative transport impacts as a result of multiple large construction projects being delivered in the area at the same time.

20.17 Specifically, consideration needs to be given to the A14/A142 Newmarket junction which is due to be improved to accommodate additional traffic from the permitted Hatchfield Farm development (DC/13/0408/OUT). It is understood that the developer for this site has not considered AIL movements within the design as this is not a DfT preferred high or heavy load route. If Ipswich is considered as the port of origin for AILs travelling to Sunnica East these will need to be reversed at this junction as there is no westbound access from the A14 to the northbound A11 (see Transport Section 14).

20.18 The A11 Red Lodge to Fiveways Roundabout safety improvements includes closing a number of gaps in the central reserve for safety reasons. These works need to be considered by the Applicant in terms of cumulative transport impacts, as well as potential impacts on the routing of traffic used in the TA (see Transport Section 14).

Socio-economic impacts

- 20.19 The Councils consider there is a likely negative impact on workforce availability to local/regional businesses and supply chain due to workforce displacement and churn. This is considerably exacerbated by cumulative impacts on skills and workforce demand. However, the assessment of cumulative impacts on skills demand is incomplete (see Socio-economic Section 12). Due to the significant pipeline of major infrastructure works in Suffolk, there is a reasonable expectation that there will be pressure on the regional civils workforce in the near-to-medium term.
- 20.20 Agricultural businesses: The Councils raise concerns regarding potential conflict on this proposal and conditions on extant permission DC/15/2109/FUL at Bay Farm in Worlington, which may affect the feasibility of the Bay Farm proposals.

Operational Phase Impacts

- 20.21 Cumulative impacts during the operational phase of the proposal are less critical.

Requirements and Obligations*Transport mitigation*

- 20.22 In order to ensure that impacts are minimised as much as possible there needs to be a clear understanding of the potential co-ordination of likely highway works – attributed to consented or forthcoming projects, or being proposed by Highways England and the local highway authorities, to coordinate works in order to minimise disruption.

Socio-economic mitigation

- 20.23 By utilising existing programmes across the County, the cumulative impact of growth across the Counties and region can be managed to secure improvements and expansion in existing skills and education programmes. Other projects including that of Sunnica will be expected to positively impact on the Councils' ability to develop any such programmes and aspirations further.
- 20.24 The Councils expect the applicant to provide a positive strategy, with key targets for financial investment contribution towards the growth of local supply chains and businesses, enabling these businesses to play key roles in supporting other large solar farm developments, regionally and nationally. The applicant would be expected to work with the Councils on the structure on how the financial investment would be used in terms of local business targets and schemes to develop local supply chain. A successful strategy may be able to compensate, to an extent, some of the residual negative impacts on the local economy (see Socio-economic Chapter 12).

Annex and Appendices

21 ANNEX Additions to the Main LIR Document

- A An Ecological Vision and Ambitions for the Sunnica Energy Farm
- B Wildlife Trust Nature Network Priorities for Sunnica
- C Map Showing East Cambridgeshire Interim Nature Recovery Network
- D Transport – Detail of Assessment Methodology Disagreements
- E Transport – Site Accesses Review
- F Transport – Comments on the draft DCO and Supporting Documents

22 APPENDIX Policy, Strategy and Reference Documents

- 1 Forest Heath Core Strategy Development Plan 2001-2026 (2010)
- 2 Joint Development Management Policies Document (JDMPD) (2015)
- 3 West Suffolk's Emerging Local Plan Part 1 (Strategic Policies)
- 4 West Suffolk's Emerging Local Plan Part 2 (Non-Strategic Policies)
- 5 West Suffolk's Emerging Local Plan Part 3 (Site Allocations)
- 6 East Cambridgeshire Local Plan (2015)
- 7 Suffolk County Council Minerals and Waste Local Plan (2020)
- 8 Cambridgeshire and Peterborough Minerals and Waste Local Plan (2021)
- 9 Newmarket Neighbourhood Plan
- 10 Freckenham Neighbourhood Plan Area Designation Statement
- 11 Fordham Neighbourhood Plan
- 12 Isleham Neighbourhood Plan
- 13 Suffolk County Council Local Transport Plan Part 1
- 14 Suffolk County Council Local Transport Plan Part 2
- 15 Green Access Strategy (Rights of Way Improvement Plan)

- 16 Cambridgeshire County Council Rights of Way Improvement Plan (2016 update)
- 17 Suffolk County Council Travel Plan Guidance
- 18 Suffolk Guidance for Parking
- 19 NALP Economic Strategy for Norfolk and Suffolk 2022
- 20 NALP Integrated Transport Strategy for Norfolk and Suffolk
- 21 Suffolk County Council Energy Infrastructure Policy
- 22 Draft Overarching National Policy Statement (EN-1)
- 23 Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)
- 24 East Cambridgeshire Natural Environment Supplementary Planning Document (2020)
- 25 Community Acceptance for Large Solar Farms
- 26 Air Quality Assessment Sunnica Energy Farm
- 27 Cambridgeshire Local Transport Plan 3 (2015)
- 28 Cambridgeshire Health & Well-being Strategy
- 29 Cambridgeshire County Council's General Principles for Development (GPD)
- 30 Cambridgeshire County Council's Housing Estate Road Construction Specification (HERCS)
- 31 British Horse Society Advice on Solar Farms
- 32 DEFRA Rights of Way Circular Guidance
- 33 West Suffolk Council Local Development Scheme
- 34 Fens Biodiversity Audit
- 35 West Suffolk Landscape Character Assessment
- 36 West Suffolk Contaminated Land Strategy

Annex A: An Ecological Vision and Ambitions for the Sunnica Energy Farm

An ecological vision and ambitions for the Sunnica Energy Farm

This document represents the collective views of the ecology stakeholder members of the Sunnica ecology group.

Background

Sunnica Energy Farm is a proposed 500MW ground-based solar PV array scheme located in East Cambridgeshire and West Suffolk. The scale of the proposed scheme means that development consent will be decided through the Development Consent Order process for Nationally Significant Infrastructure Projects.

In December 2021, the Planning Inspectorate accepted an application for Examination for an Order Granting Development Consent.

Sunnica Ecology Stakeholder Group

In early 2022, affected planning authority ecologists began meeting with nature conservation NGOs and the Government's statutory nature body, Natural England, to discuss matters of ecology in relation to the Sunnica Energy Farm proposals with the collective aim of securing the best outcomes for wildlife and the natural environment from the design, construction, operation, and decommissioning of the scheme.

Our vision

Sunnica Energy Farm should be an exemplar of ecology-led design, construction, operation, and decommissioning to protect, restore and enhance nature, healthy functioning ecosystems, and ecological connectivity. It should leave the natural environment in a measurably better state and make a significant and meaningful contribution to the creation of a Nature Recovery Network in East Cambridgeshire and West Suffolk.

Principles

1. Apply the mitigation hierarchy by prioritizing the avoidance of adverse impacts on ecology first, mitigating unavoidable impacts through good ecological design, and compensating for residual impacts only after the first two steps have been rigorously applied.
2. Prevent any adverse impacts on:
 - a. statutory wildlife sites (SSSIs, SACs, SPAs and Ramsar sites, Local Nature Reserves and National Nature Reserves)
 - b. non-statutory wildlife sites (Local and County Wildlife Sites)
 - c. the features and qualifying species for which they are designated

following the precautionary principle where the potential for significant adverse impacts exists but is uncertain.

3. Have a significant positive impact on biodiversity and ecology.

Ambitions

- Mitigation plans will include plans for adaptive management to ensure measures can be adapted if mitigation is not initially successful.
- Areas of habitat created and/or enhanced as part of Sunnica's mitigation, compensation, or net gain measures will be designed to **maximise connectivity with the wider ecological network**.

- Design of the scheme's solar array areas including **habitats within and around the solar panels will maximise biodiversity value of these areas** and minimize any fragmentation and/or ecological barrier effects.
- **Long term ecological monitoring** of the Sunnica Energy Farm development and mitigation, compensation, and enhancement areas, for the life of the development, will provide valuable scientific evidence for the ecological effects of large-scale solar farm schemes and inform the **adaptive management** of habitats retained or created for wildlife through this scheme, as well as design and delivery of future schemes.
- Sunnica will demonstrate a **best practice approach to planning and delivery of Biodiversity Net Gain**, guided by local, regional, and national conservation priorities for species and habitat, and with long term ecological monitoring in place to provide evidence of changes in species abundance and diversity across a range of taxa in habitat areas delivering BNG.¹
- **Habitats** created and/or enhanced as part of the scheme's ecological delivery (mitigation, compensation, and net gain) should be retained beyond the lifetime of the development (after decommissioning) and **secured in perpetuity to provide a legacy for nature and people as part of a Nature Recovery Network in Cambridgeshire and Suffolk**.
- Access for people to areas of newly created or enhanced habitats for mitigation, compensation or Biodiversity Net Gain will be carefully planned, designed, and managed to deliver benefits from access to nature without compromising or reducing the value of these areas for wildlife.²
- A multi-agency Ecological Advisory Group will be retained in the long term to guide and support the ongoing management of the conservation interests of the site.

Areas of particular concern / interest

- Stone-curlews: creation, management and monitoring of offsetting habitat
- Chippenham Fen SAC: buffering and potential impact on flying aquatic invertebrates (that lay their eggs in water), potential for hydrological and soil impacts, opportunities for improving habitat connectivity
- Impacts on hedgerows.
- Lack of coherent consideration of ecology, landscapes, geology, archaeology, recreation, and hydrology in relation to the design, construction, operation and decommissioning of the scheme.
- Assessment of cumulative effects in combination with other plans and projects.
- Avoiding conflict between protecting archaeology and ecological outcomes / delivery of mitigation, compensation, and enhancement for biodiversity.
- Inconsistencies within the OLEMP and lack of clarity (even at a high level) regarding intentions for habitat creation at various locations and proposed long-term management methods (the latter may feed into construction requirements / panel and cable configurations e.g., to allow grazing)
- Long-term partnership with an ecological advisory group comprising ecologists from relevant NGOs, Natural England and local authorities to scrutinise monitoring data and adapt habitat management / site conditions and working practices where necessary to meet the ambitions of the Scheme, as set out above.

¹ Suffolk Wildlife Trust has drafted principles and ambitions for Biodiversity Net Gain

² This is of utmost importance for the stone-curlew mitigation areas.

Priority species, habitats, sites, and ecological communities

Birds: Stone-curlew and other Schedule 1 species, skylark, farmland bird assemblage including turtle dove, and wintering birds.

Plants: Breckland plant communities, including arable plants and semi-natural grass heathland species. Fen wetland plant communities at Chippenham Fen

Invertebrates: those associated with Chippenham Fen SAC and acid grassland habitats, areas of disturbed open and sandy ground around arable margins, River Snail.

Sites: Chippenham Fen NNR, Chippenham Fen and Snailwell Poor's Fen SSSI (part of the Fenland SAC), Brackland Rough SSSI, Havacre Meadows and Deal Nook CWS, Worlington Heath CWS, Badlington Lane CWS, and other County Wildlife Sites.

Habitats: chalk stream habitats and fen wetland habitats adjacent to scheme. Hedgerows. Mature trees and woodland. Acid and calcareous grassland. Arable field margins.

Opportunities to deliver for species conservation and wider ecosystem services benefits

- Supporting environmental delivery in farmland, e.g. through the Brecks Farm Wildlife Network – for species including stone-curlew, skylark and turtle dove, and for catchment sensitive farming and plants of arable field margins.
- Supporting efforts to reduce nitrate and phosphate inputs and mitigate impact of nutrient enrichment on Brecks plant communities, e.g. through the Brecks Shared Nitrogen Action Plan (Natural England led project).
- Opportunities to contribute to emerging Nature Recovery Networks.

Annex B: Wildlife Trust Nature Network Priorities for Sunnica

Nature Network Priorities in relation to Sunnica Solar Farm

For Sunnica Local Impact Report

Prepared by

**The Wildlife Trust for Bedfordshire, Cambridgeshire &
Northamptonshire**

October 2022



**Wildlife Trust for
Beds, Cambs
& Northants**

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1. INTRODUCTION

1.1 Background

The Environment Act introduces a requirement for the preparation and implementation of Local Nature Recovery Strategies. Locally, Natural Cambridgeshire¹ has set out a vision to double nature:

“Our Vision is that by doubling the area of rich wildlife habitats and natural greenspace, Cambridgeshire and Peterborough will become a world-class environment where nature and people thrive, and businesses prosper.”

Natural Cambridgeshire has identified six priority landscapes across Cambridgeshire & Peterborough where action for nature can have the most immediate benefit. One of these is the “Connected Fens”, which includes Chippenham Fen, along with the other internationally important nature conservation sites in the Cambridgeshire Fens. In preparation for the forthcoming Local Nature Recovery Strategy, the Wildlife Trust has been undertaking further work to identify and assess priority areas where nature recovery would have the most benefit in a number of locations including East Cambridgeshire.

Within East Cambridgeshire we have identified nine such priority areas, including two which are directly impacted by the Sunnica Solar Farm proposals. These are the Chippenham Fen & River Snail Priority Area and the Breckland Edge Priority Area. The value and importance of these areas is described in section 3 below in more detail, showing the critical components of a nature network in each area according to the ¹Lawton principles of More, Bigger, Better, and More Joined Up.

1.2 Methods

The Wildlife Trust has identified **Priority Areas** for large-scale, strategic biodiversity and landscape enhancement based on a mixture of desk study, using available natural environment datasets, and field work to assess and refine the boundaries.

During fieldwork, detailed analysis of the priority landscape areas was undertaken, including targeted site surveys to update habitat information where this was out of date (most of the phase 1 habitat data dates from the 1990s). These site visits helped us gain a better understanding of local opportunities and constraints that may not be evident from desk-based studies. Analysis of the updated habitat information was used to refine the boundaries of the **Priority Areas** and to identify core habitat and buffer areas, and key linkages and stepping-stones within the study area, in line with the Lawton principles. Connections to the wider Nature Recovery Network across Cambridgeshire and beyond were also considered.

The identification of robust ecological networks can be undertaken using a variety of methods, see ²Natural England Research Report NERR081 *Nature Networks Evidence Handbook* (2020). Many of these methods are modelling approaches that rely on large amounts of habitat and other spatial data and require significant inputs of time and money to produce robust outputs.

For the short timescale and level of detail required for our study we therefore decided to use a simpler approach based on use of up-to-date high-quality information on habitats, soils, and discussion with landowners regarding better and poorer quality agricultural land. **This in effect is a more local and refined version of the approach Natural England have taken to their National Habitat Network Framework and Maps and their Habitat Potential data layers.** By incorporating a component of site visits and habitat mapping within the Priority Areas, this simplified approach will produce at least as good results as any ecological modelling result for a similar level of effort.

¹ Natural Cambridgeshire is the Local Nature Partnership covering Cambridgeshire and Peterborough. See <https://naturalcambridgeshire.org.uk/>

2. PRIORITY AREA NATURE NETWORK COMPONENTS

2.1 Nature Network Rules of Thumb

There are different approaches that can be adopted to develop a nature network, based on local conditions. However, there are some broad principles that influence the design of functional and robust ecological networks (²Natural England Research Report NERR081). The following represents a hierarchical approach based on the ¹Lawton principles (Lawton et al, 2010), listing the most important elements in order. The key elements are then each considered in turn.

Better site quality > Bigger sites > More sites > Stepping stones & permeable matrix (nature friendly farming) > Corridors

Better site quality: Maintaining the quality of core sites within a network is the starting point, as these will represent the best quality areas of habitat supporting the largest range and number of key species. To achieve the best site quality, there needs to be sufficiently large habitat patches to allow for a complex mosaic of different habitats and micro-habitats, along with dynamic processes to allow the fullest range of species to flourish.

Core sites with long-term continuity of habitats, whether ancient woodland, or long-standing grassland and wetland habitats need to have strong protection as they will support more species and have more complete and carbon-rich soil structures than more recent examples of these habitats.

These core habitat patches should be buffered from adverse adjacent land uses by at least 50m, and ideally 100m of less intensive land uses. In some cases, e.g. where predation from urban cats would affect important species, a larger distance of up to 500m may be required.

The final critical element to achieving better quality core habitat patches is to ensure suitable management that allows key ecological processes such as grazing or natural regeneration to occur. Where this is not possible, for example on small sites, management interventions can attempt to replicate these processes, but this tends to be more costly with less natural results.

Bigger sites: Bigger sites with significant buffer zones have reduced edge effects, and provide larger core habitat patches that can support wider ranging species. They are also likely to have more habitat variation and better support those species with specialist habitat requirements. In the context of climate change, bigger sites are likely to provide more micro-climates and therefore be more resilient than smaller sites.

The aim should be to have core habitat patches of at least 100 Ha with a minimum habitat patch size of 40 Ha. If there are choices to be made, when expanding the size of sites, it will usually be better to choose the smallest core site to increase first (for example increase a site of 30 Ha to 40 Ha before increasing a site of 70 Ha to 100 Ha).

In the context of recreational pressure, bigger sites are usually able to cope with larger numbers of people because of the greater scope to provide areas with no / low disturbance to act as refuges for sensitive species.

More sites: When selecting locations for creating new sites, it will often be better to choose areas with greater variation of topography and aspect. Larger sites are better than smaller sites, but if the former is not possible, larger numbers of smaller sites can work so long as they are well connected to the core sites and each other.

Stepping stones & permeable matrix: Across a defined habitat network the aim should be for there to be at least 30% semi-natural habitat. For specialist species, habitat patches should be less than 200m apart, but for more generalist species less than 1 Km apart is acceptable.

Landscape-scale habitat mosaics help improve the stability of populations and may be important for wide-ranging species. In agricultural landscapes a more heterogeneous landscape can help counter the impacts of intensive farming practices. A landscape with a good variety of different types of habitats can often support a greater variety of species than would be predicted by just considering the number and type of habitats present (i.e. a Nature Network as a whole is potentially more valuable than each individual Priority Area).

Nature-friendly farming, with a variety of farm habitat features and some high quality habitat stepping stones will support a habitat network by providing a more permeable matrix through which some species can move. Work at RSPB Hope Farm and the work of the Nature Friendly Farming Network (Georgina Bray & Martin Lines, *pers. comm.*) has shown that giving 10% of farms over to wildlife features is the level required to allow nature to recover. This is also achievable through using the least productive / unproductive parts of fields along with retaining existing farm wildlife features. This approach increases the area of breeding, foraging or sheltering habitats for some species. It is also likely that different landowners will take different approaches based on their own interests, so will increase the variety of the landscape in between habitat patches, and support a wider diversity of species.

Habitat corridors: For most habitat specialist species, corridors are of little value unless they are a minimum 100m wide, due to edge effects reducing the habitat quality along a linear corridor. Natural corridors, such as rivers function better than man-made corridors. Most species will “see” corridors differently to humans. For example, hedgerow corridors are a landscape feature that are of little value to wildlife unless they are dense and tall (i.e. they act as good scrub edge habitat) and they form part of a permeable landscape or part of a woodland habitat network.

Extent of nature-rich habitats: As well as the individual site size, the other critical aspect for the development of a coherent and functioning ecological network is the extent of nature-rich habitats. A minimum land cover of 30% is ideally required to allow species to thrive and respond to naturally fluctuating conditions across a landscape. While in some instances a lower % cover might suffice, this will inevitably require a significantly larger proportion of wildlife-friendly farmland habitats or extensive nature-friendly farming practices.

The following section considers each of the Priority Areas in terms of these principles and identifies the components of the habitat network and opportunities for enhancing it. The opportunities identified have been discussed with key stakeholders, but detailed discussions have not taken place with most landowners. This would be a valuable subsequent task once work to prepare a Local Nature Recovery Strategy commences. Land use and land management opportunities will evolve over time, so the Nature Recovery Network priorities shown should be seen as identifying the best opportunities and indicative of what could be achieved.

2.2 Chippenham Fen & River Snail Priority Area

2.2.1 Summary

The historic remnant fenland site of Chippenham Fen SSSI forms the main focus of this area. The Chippenham Fen sub-area comprises the historic fen, area of peat soils adjacent to it, the surrounding farmland and the River Snail chalk stream, which connects the River Snail to Snailwell Meadows SSSI and Fordham Woods (Brackland Rough SSSI). This area is relatively well defined geographically. The conservation priorities are provision of wetland mosaics, lowland fen and grassland habitats to buffer, extend and connect the core sites. Restoration of the River Snail could entail a range of in-channel habitat enhancements for this chalk stream priority habitat as well as ensuring natural flows from the chalk springs.

South of Chippenham Fen, the area includes part of Chippenham Park and the farmland which forms the catchment of Chippenham Fen. The farmland includes a mixture of free draining chalky soils and wetter soils typical of the Fen edge. Conservation priorities for the farmed areas include the provision of grassland habitats of various types and small wetland areas which could also be created around the ditch networks.

To the south and east, this area adjoins the Breckland Edge Priority Area, which has sandier soils overlying the Cretaceous Chalk; the boundary between the two areas is predominantly based on this difference in soil type.

2.2.2 Key Facts

Total area: 949 Ha

Area of core habitats: 294.71 Ha (31.05% of total area)

Core sites: Chippenham Fen SSSI / SAC, Brackland Rough (Fordham Woods) SSSI, Snailwell Meadows SSSI, Snailwell Grasslands & Woods CWS, Chippenham Park CWS, and Old Rectory Meadows CWS.

Important habitats: Lowland fen, wet woodland, lowland meadow, chalk stream.

Important species:

Fauna: Fen invertebrates, including many nationally scarce and rare species, particularly flies, but also moth and spider species. Breeding woodcock & snipe and a range of scrub nesting birds such as warblers (Chippenham Fen).

Flora: Cambridge milk-parsley, black bog rush, bogbean, bog pimpernel, saw-wort, and marsh helleborine, southern marsh and fragrant orchids.

2.2.3 Network Approach:

Better Management

Chippenham Fen has formed within a topographical depression on the Cretaceous West Melbury Marly Chalk which is fed from a series of chalk spring arising from the base of the overlying Totternhoe Stone and Zig Zag Chalk. This allows calcareous fen conditions to be created with frequent ditches, pools and wet depressions making this a highly diverse wetland. The lack of drainage has allowed peat soils to develop on the site which vary from centimetres to 2m thick.

The top priority in this area is maintaining the quality of Chippenham Fen, which is nationally and internationally important. This relies of management to maintain open fen areas and prevent succession to woodland, and maintenance of sufficient quantities of clear calcareous water.

Similarly, Snailwell Meadows SSSI are spring-fed from the underlying Cretaceous chalk though the soils comprise patchy sand and gravel deposits from the former river bed, creating a variety of soil conditions. Some areas are dry calcareous pasture, and others are wet neutral and marshy acidic grassland. Like Chippenham Fen they rely on management to maintain open grassland and fen areas and sufficient

supplies of clean water. The adjacent Snailwell Grasslands & Woodlands CWS forms an extension and complementary habitats to Snailwell Meadows.

Brackland Rough SSSI known locally as Fordham Woods is a wet woodland with alder and willows lying adjacent to the River Snail. The River Snail is a chalk stream emanating from the springs at Chippenham Park and Snailwell Meadows. However, for much of its length it flows within a modified (over-deepened and straightened) channel created to drain the adjacent farmland. It eventually joins the Soham Lode.

Maintaining sufficient water requires action to limit water abstraction and ensure the natural spring flows. Ensuring the sites are fed by clean water is best achieved by moving to more extensive farming methods within the catchment, or through the creation of buffering habitats. This has been partially done to the south of Chippenham Fen, where former arable land has been reverted to grassland and is currently grazed extensively by cattle.

The fen and grassland areas of Chippenham Fen and Snailwell Meadows are kept open through grazing, with a mixture of cattle, sheep and at Chippenham Fen, water buffalo. Chippenham Park also supports cattle grazing, with some former arable areas also reverted back to grassland within the Park. Continuation of grazing is critical for achieving favourable ecological condition at these sites.

Buffering & Extending Core Areas

The nature network priorities in this area are the buffering and extending of the four core nature sites to create a larger contiguous area of high quality habitats. The current core areas cover approximately 365 Ha and there is potential to create a single, large, connected core habitat area of over 550 Ha.

This has already been done to the south of Chippenham Fen, where a 38 Ha grassland buffer / extension to the SSSI has been created and added to the original SSSI.

Many of the new habitats would be grasslands, though in wetter areas or where there are remnant peat soils, there may be potential to create wetland mosaics. Areas of scrub and woodland would complement the open habitats. The larger area of extensive grazing could help support more sustainable grazing regimes, to bring about better ecological condition of the core sites. It could also support the creation of high quality open grassland and fen habitats in the extensions to the core areas.

Stepping Stones

The creation of a single large core area by buffering and extending Chippenham Fen, Brackland Rough and Snailwell Meadows SSSIs means there is no need to create stepping stone habitats within the Priority Area.

Nature Friendly Farming

Beyond an expanded core area, nature-friendly farming would provide complementary habitats for farmland birds, as well as help support improved water quality in the catchment. Nature-friendly farming will also play a role on land within the proposed extensions to the core areas, in the intervening period ahead of habitat creation. Measures to buffer water courses and drains, as well as provision of field edge habitats such as hedgerows and a variety of field margins for pollinators and farmland birds would be the priorities.

2.2.4 Objectives:

Short-term

- To enhance the buffer habitats around Chippenham Fen to create a mosaic of species-rich grassland and other habitats complementary to the historic fen.
- To restore species-rich grasslands to parts of Chippenham Park and Snailwell Grasslands & Woodlands CWS.
- To create a wider buffer of non-cropped land along the full length of the River Snail.

Long-term

- To create a single, large (over 500 Ha) core habitat area, connecting Chippenham Fen, Snailwell Meadows and Brackland Rough SSSIs. The area will comprise a mosaic of species-rich habitats including wildflower meadows, wetland mosaics, scrub and woodland.
- To restore a more natural channel and flow to the River Snail, particularly between Snailwell and Fordham, but also potentially downstream of Fordham.
- To adopt nature-friendly farming across the majority of the area.

2.2.5 Priority Area Vision:

A single, large, core habitat area incorporating Chippenham Fen, Snailwell Meadows and Brackland Rough SSSIs, and other adjacent sites will be created with a mosaic of species-rich habitats including priority lowland fen and grassland habitats, wetland mosaics, scrub and woodland. The chalk springs will flow naturally feeding the Chippenham Fen and Snailwell Meadows with clean water. Likewise, the River Snail will support natural flows and will be restored along at least part of its length. The whole catchment of Chippenham Fen will be farmed in a nature-friendly way further increasing the extent of breeding, foraging and sheltering habitats and supporting increased populations for invertebrates and farmland birds.

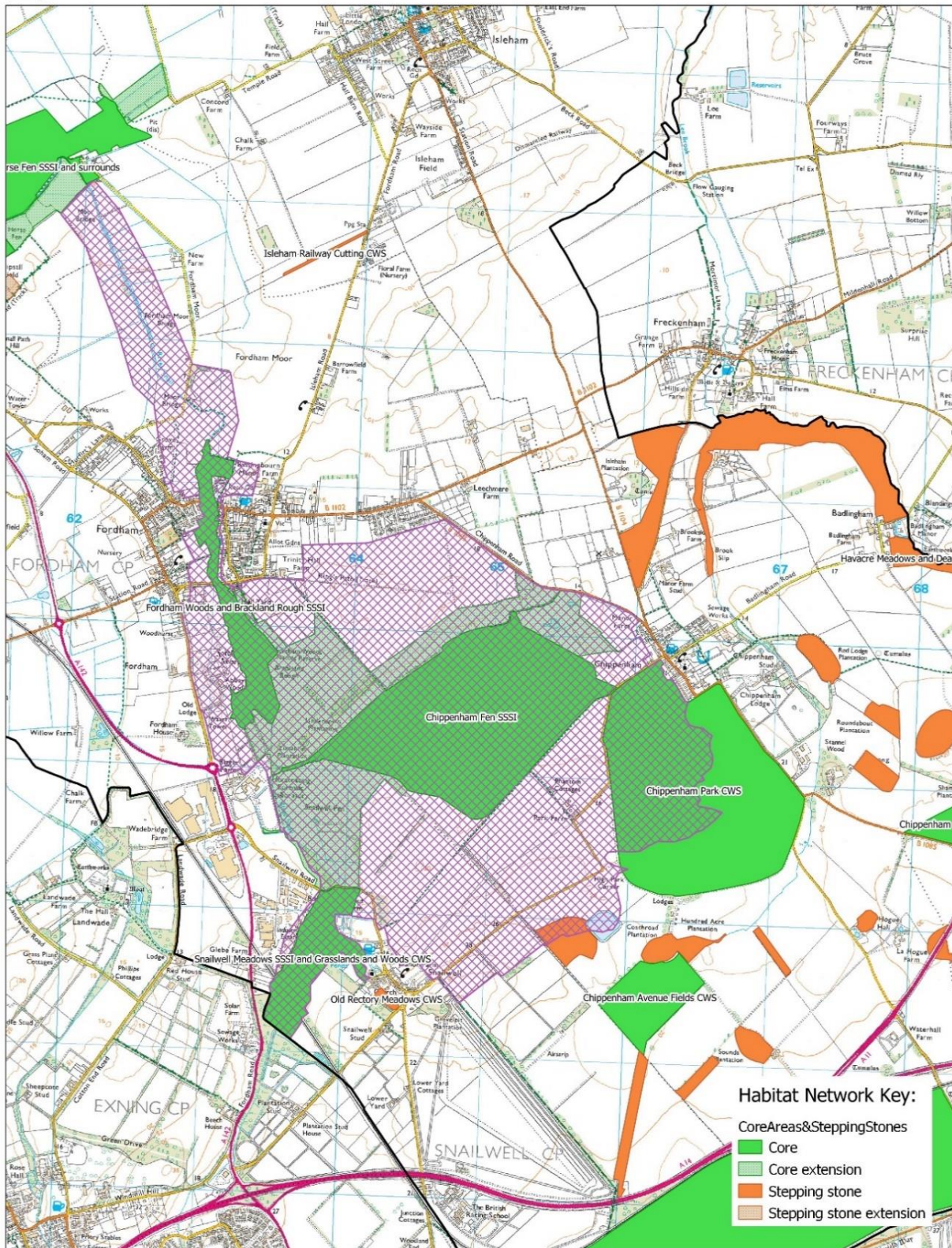
2.2.6 Delivery Mechanisms:

The significant habitat creation proposed around Chippenham Fen could be funded in a number of ways. While the use of agri-environment schemes is one, there is potential to fund habitat creation through the establishment of a habitat bank to provide biodiversity credits for development. Elsewhere in the Priority Area the main delivery mechanism particularly for nature-friendly farming will be the use of agri-environment schemes. Restoration of the River Snail may be funded through Environment Agency or water Company grants whether related to biodiversity, flood risk management or water supply.

Map 1: Chippenham Fen & River Snail Habitat Network



Chippenham Fen & River Snail Habitat Network July 2022



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2.3 Breckland Edge Priority Area

2.3.1 Summary

This Priority Area forms an extension to the main area of Breckland in Suffolk and Norfolk. It comprises areas with Quaternary sand and gravel deposits overlying the Cretaceous Chalk and includes former sand pits that support a range of Breckland specialist flora and invertebrates. The Priority Area also includes the River Kennett and adjacent land within the river corridor, in places forming the border with Suffolk. River gravel terrace deposits form the main component of the surface geology, but the area also includes some shallower soils over the chalk along the River Kennett. The main conservation sites are Red Lodge SSSI (in Suffolk) and Chippenham Gravel Pit, Halfmoon Plantation Pit and Kennett Restored Gravel Pit County Wildlife Sites.

The western part of this area is farmland adjoining the Chippenham Fen Priority Area. The area includes the sandy soils in the eastern part of the Breckland Edge area as well as the calcareous soils in the west, forming a direct connection to the Newmarket chalk grasslands Priority Area. The farmland includes a mixture of free draining sandy or chalky soils, often with damp hollows, and wetter soils typical of the Breckland Edge and contains areas known to support rare arable flora, including Chippenham Avenue Fields County Wildlife Site.

Conservation priorities in this area include the provision of habitats suitable for Breckland flora and invertebrates, whether grasslands of various types or arable areas suitable for assemblages of rare arable flora. Small wetland areas could also be restored and created around watercourses including the River Kennett along with in-channel enhancements and seasonally damp hollows. Other habitats such as tree belts and hedgerows would provide complementary habitats.

2.3.2 Key Facts

Total area: 1,325 Ha

Area of core habitats: 247.69 Ha (18.7% of total area)

Area of core & stepping stone habitats: 368.26 Ha (27.8% of total area)

Core sites: Red Lodge SSSI, Halfmoon Plantation Pit CWS, Chippenham Gravel Pit CWS, Chippenham Park CWS (part), Chippenham Avenue Fields CWS.

Important habitats: Acid grassland and heath, arable margins and other disturbed ground, woodland and scrub.

Important species:

Fauna: Breck invertebrates, particularly bees, wasps, ants and beetles, stone curlew.

Flora: Breck acid grassland flora (e.g. smooth rupturewort, dense silky-bent, bearded fescue, Spanish catch-fly, smooth cat's-ear, long-stalked crane's-bill, sickle medick, bur medick).

Rare arable plants (e.g. corn chamomile, corn marigold, fine-leaved fumitory, wild pansy, common cudweed, sharp-leaved fluellen, round-leaved fluellen, grass-poly).

2.3.3 Network Approach:

Better Management

The extent of Breckland acid grassland and heath type vegetation is limited to Red Lodge SSSI and to a number of former minerals sites dug for sand and gravel. The conservation of the typical Breckland flora and invertebrates present at these sites depends on continued management and disturbance, sometimes by rabbits, but at present often through anthropogenic activities such as arable farming, mining and even off-road driving and motocross (Chippenham Gravel Pit CWS is currently an outdoor activity centre). In the future, if the amount of disturbance decreases due to changing management, alternative, mechanical forms of disturbance may be required to maintain the open, sandy conditions on which many of the scarce

species depend. Managing the core sites well is critical to maintaining the presence of many of the scarce species in Cambridgeshire at this western edge of the Brecks as there is limited scope in the wider landscape to re-create such habitats and future minerals working to create suitable conditions is also unlikely to occur.

Buffering & Extending Core Areas

There are limited opportunities for buffering and extending the core areas, but some creation of additional areas of grassland, ideally managed by grazing, on suitable sandy soils would be beneficial if it could support better management of the core sites. Alternatively, agri-environment schemes may provide funding for areas of uncropped, cultivated (disturbed) soil along arable field margins which encourage the scarce flora which depends on more transient conditions. Specifically, buffers of habitat around Chippenham Gravel Pit and Halfmoon Plantation Pit CWSs would help to preserve the core habitat, and the latter site will need a sustainable long-term management approach on completion of the current minerals and restoration scheme. It is critical that these habitats are not threatened by the nearby development of Kennet Garden Village.

Stepping Stones

Many of the stepping stone habitats are broadleaved or mixed broadleaved and conifer plantations, with few areas of acid grassland or wetlands. Other habitats in the landscape include various arable field margins, and the priorities for these must be to provide suitable conditions for the rare arable flora and associated invertebrates, which will act as stepping stones for the more permanent areas of sandy grassland and heath.

Nature Friendly Farming

Current cropping patterns have maintained suitable conditions for the rare arable flora over a long period, but there has been a reduction in the distribution and abundance of species, and some are likely to have been lost locally. There is therefore scope to provide more by way of suitable conditions through a range of nature-friendly arable field margins and headlands, and several areas of cultivated but uncropped soils have already been created within the Chippenham Park Estate. This will be critical to the conservation and recovery of the special flora and fauna of this Priority Area going forward. The wide-scale adoption of suitable arable cropping patterns and arable field margin / headland / fallow options through agri-environment schemes should be promoted.

2.3.4 Objectives:

Short and long-term

- Implement suitable management regimes at the core Breck acid grassland sites to support the distinctive flora and fauna.
- Adopt nature-friendly farming practices, based on suitable cropping patterns and provision of cultivated, unsprayed areas to support the rare arable flora and invertebrates.
- Increase the extent of high quality (non-arable) habitats to over 30% of the Priority Area through limited buffering of the core sites and enhancement and restoration of stepping stone sites.

2.3.5 Priority Area Vision:

The vision for this Priority Area is to restore and maintain the range and abundance of key Breckland species, at the western edge of the Brecks. This will involve the adoption of suitable management regimes at the core Breck acid grassland sites, with sufficient grazing and disturbance to maintain open, sandy conditions. Much of the area will remain arable, but with cropping patterns and arable margin and headland options selected to favour the rare arable flora and invertebrates.

2.3.6 Delivery Mechanisms:

The predominant delivery mechanism will be the use of agri-environment schemes whether to promote arable options favourable to the rare flora and invertebrates or to support management of acid grassland sites.

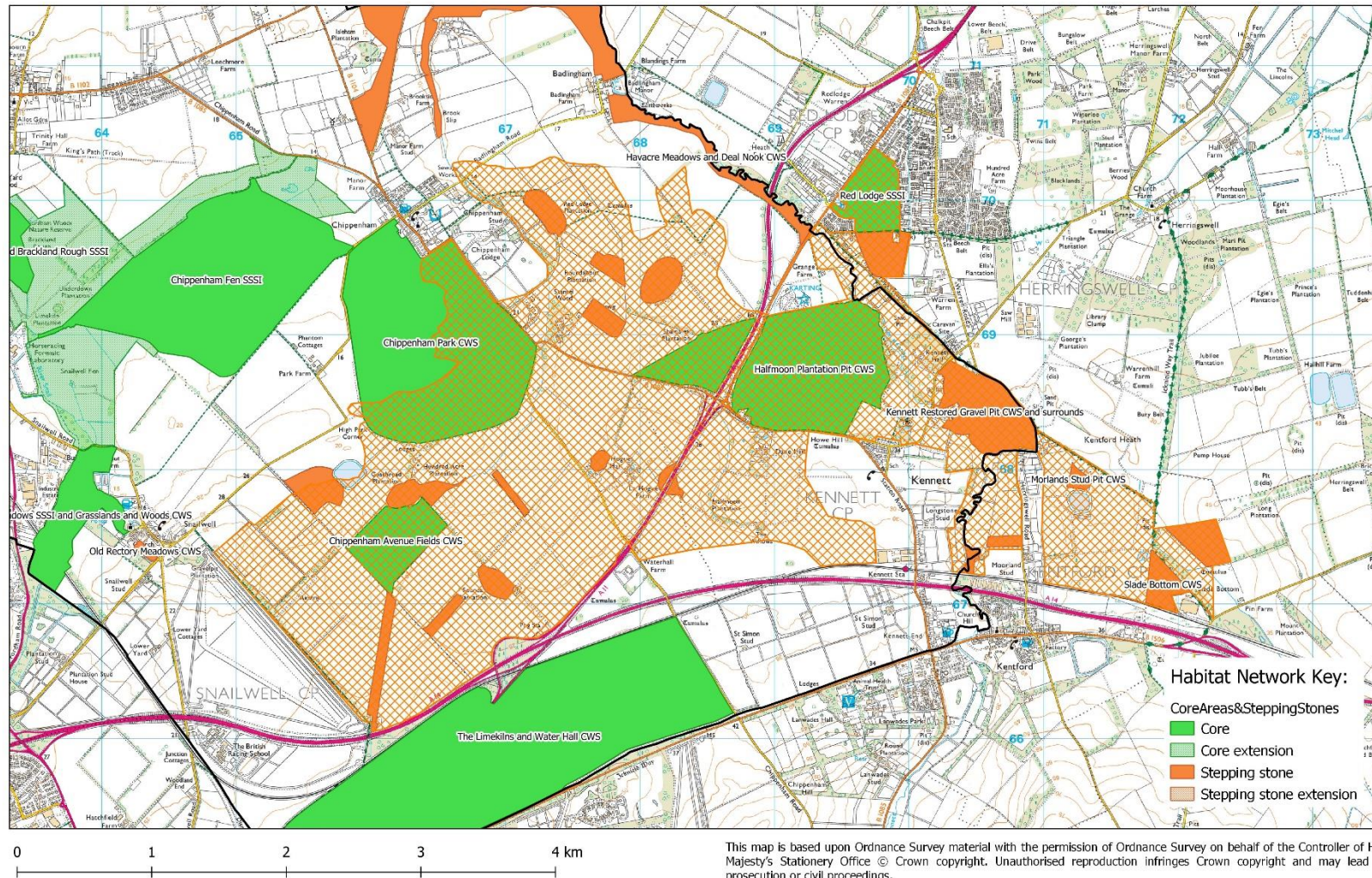
Development S106 contributions may play a role in supporting the management of some of the core sites, whether that be through mitigation measures that might be required to protect Red Lodge SSSI, associated with the motor sports business operating within Chippenham Gravel Pit CWS, or the minerals restoration scheme at Halfmoon Plantation Pit. The development of Kennett Garden Village is close to this latter site, and there may be opportunities to support its conservation.

Elsewhere, there is currently an application for a major solar park across much of this Priority Area. This may bring opportunities to create a range of Breck type grasslands associated with the solar panels, however, there is also a severe risk that the loss of arable farming and regular disturbance will result in further declines in the distribution and abundance of the specialist arable flora and invertebrates.

Map 2: Breckland Edge Habitat Network



Breckland Edge
Habitat Network July 2022

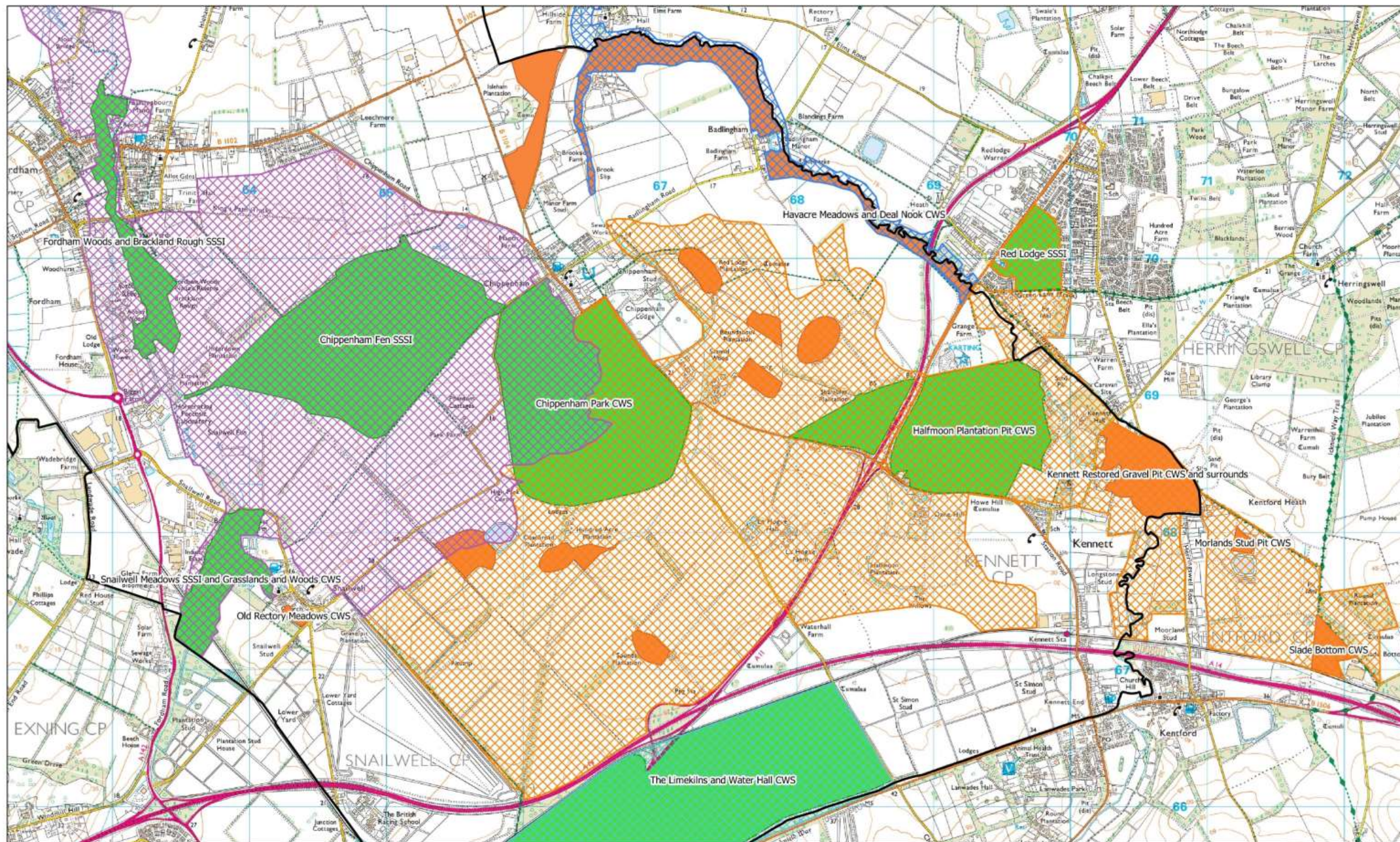


3. References

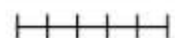
¹Lawton, J. et al (2010). Making Space for Nature: A review of England's Wildlife Sites and Ecological Network. *Report to Defra*.

²Natural England Research Report NERR 081 - Nature Networks Evidence Handbook (2020). *Humphrey Crick, Ian Crosher, Chris Mainstone, Sarah Taylor, Andy Wharton, Pippa Langford, Jonathan Larwood, Jane Lusardi, David Appleton, Peter Brotherton, Simon Duffield & Nicholas Macgregor. Natural England*.

Annex C: Map Showing East Cambridgeshire Interim Nature Recovery Network



0 100 200 300 400 500 m



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Cambridgeshire County Council 100023205 (2022)

Annex D: Transport – Detail of Assessment Methodology Disagreements

Annex F: Transport – Detail of Assessment Methodology Disagreements

1. 6.1 Environmental Statement – Chapter 13 – Transport and Access (APP-045)

Change Request

- 1.1 The change request submitted by the Applicant on the 30th August 2022 does not include an updated Environmental Statement or Transport Assessment and therefore the Councils cannot assess any cumulative impacts associated with relocation of the substations and changes to HGV and worker movements.

Scope

- 1.2 The scope of the assessment was discussed in early meetings with the applicant. However, the information provided at this time was limited in detail and the Councils were unable to give anything more than high level comments with significant caveats pending seeing the full assessment.
- 1.3 It is recognised at Paragraph 13.3.1 that no baseline data on pedestrian and cycle usage has been used for the assessment. This brings additional risk to the classification of the sensitivity of links and the consideration of impacts by the Applicant, when commenting on the link sensitivity, SCC have used local knowledge and available data sources, particularly when considering non-motorised uses (NMUs).
- 1.4 Plate 13-1 shows the location where traffic data was collected. With the exception of 1 and 2 (Red Lodge), B1506 (Kentford) and 9 (a14/A142 Newmarket) these are in Cambridgeshire. The lack of data on the roads in Suffolk was supplemented by sources set out in 13.4.8 and it is understood that the Applicant is currently undertaking more surveys. The uncertainty resulting from the lack of primary data is a factor that should be considered when analysing the findings of the Environmental Statement and Transport Assessment.
- 1.5 Paragraph 13.4.3 sets out the method for determining staff home locations. The Councils' comments on this are covered in the social and economics section of the LIR. It is important to note that uncertainties in this methodology and the

results as they form a primary source of data will have an impact on the accuracy of the assessment of transport impacts.

- 1.6 As set out at Paragraph 13.6.35, no assessment has been undertaken of traffic impacts on a Saturday; as set out in SCC's RR [RR-1340] this is unevidenced and may lead to additional impacts not being identified as the construction peak may coincide with the network peak. The potential exists particularly for greater leisure use of the highway network by NMUs on weekends and it is assumed that the worker shift pattern on a Saturday would potentially crossover with greater use of the highway network by both vehicles and NMUs particularly given the 13:00 finishing time, although it is understood that the Saturday finish time is now proposed to be 19:00 hours and so consistent with the weekdays.
- 1.7 The Applicant sets out that the operational phase has been scoped out at Paragraph 13.8.254, as set out in SCC's RR [RR-1340], the Applicant should confirm that there is no likelihood of significant maintenance, such as wholesale replacement of solar panels or batteries, during this phase. Article 2(1) of the Draft DCO [APP-019] allows for partial replacement and the limitation in Article 5(3) on maintenance works which have a new or different environmental effects to those assessed. The Councils will be seeking clarification and confirmation as to what is intended given that baseline conditions for environment can alter significantly over time.

Definition of Links

Scope

- 1.8 At the request of the Councils, the Applicant provided a plan showing the location of the links assessed in the Environmental Statement. The links assessed do not include some of the roads from which access is been taken for the project, specifically accesses E, F, G and H. The Applicant has justified scoping out these roads on the basis that the peaks in construction traffic show an increase of less than 30% (i.e. IEMA Rule 1). Consideration of Rule 2 (sensitive areas with a greater than 10% increase) has not been applied to any link. The analysis in 13.4.6 has not been shared with the Councils.
- 1.9 With the lack of baseline and cumulative construction traffic movements the Councils remain to be convinced that HGV, minibuses and cable corridor traffic does not increase traffic flows by more than 30% during the peak hours or across the working day on these roads, particularly with the location of the 400kV

substation in plot 33 and the reliance on professional judgement is open to debate.

Sensitivity

- 1.10 The proposed assessment method for impacts on NMUs is detailed in paragraphs 13.4.21 to 13.4.24 . Pedestrian and cycle amenity should include consideration of relative changes in proportions of HGVs, and importantly the assessment should include consideration of the daily changes in traffic flows, and its HGV proportions, and not just an assessment of the hours of greatest change. It does not appear that an assessment of daily traffic flows has been undertaken by the Applicant, and whilst it is recognised that the hourly changes in HGVs are likely to be small in number, with low baseline flows the proportion may be significant. Consideration of the increased daily HGV movements on local roads should be undertaken as indicated within the Guidance of Environmental Assessment of Road Traffic (GEART). The Applicant's view that HGV movements will be equally spaced across the working day is not substantiated, particularly with the restrictions during network peak hours, although it is noted that additional work is being undertaken to look at the potential implications of this by the Applicant. The Councils' experience is that HGVs decrease significantly from mid-afternoon and particular time critical activities such as concrete pours concentrate HGV movements. Further information is also needed on the level of HGV movements on Saturdays and the associated impact.
- 1.11 The categorisation of impacts on driver delay is set out in paragraph 13.4.25, which is, broadly, based on the hierarchy of the road types. Whilst it is recognised that this reflects relative use of these links, it is not fully understood why this hierarchy has been used. Significant increases in delay on rural junctions or roads will have noticeable impacts on drivers at those locations and could be considered material. An example would be the slip off from the northbound A11 onto Elms Road where the performance of the junction could result in queues stretching back onto the A11 or delays provoking poor driver behaviour such as pulling out of the junction into smaller gaps in traffic. The local roads are narrow, and as a result vehicles may need to stop to allow opposing vehicles to pass, and the traffic management proposed by the Applicant will also delay road users. The Councils consider the sensitivity used by the Applicant is not reflected in the judgement applied to driver delay.

- 1.12 As set out in SCC's Relevant Representation (RR) [RR-1340] SCC would disagree with the allocation of trunk road slips (set out at paragraph 13.6.65) as being 'very low sensitivity' given their strategic importance but as these are the responsibility of National Highways would defer to them on this matter.
- 1.13 Paragraph 13.4.26 and 13.6.64 sets out the methodology for categorising the sensitivity of links in terms of NMUs. The Councils have significant concerns with the categorisations, as it results in the majority of the local highway links being in a 'very low' category and does not fully consider the local characteristics of the network or importantly its use. The method also bases sensitivity on the presence of infrastructure for vulnerable road users, and although it may potentially indicate use the lack of such infrastructure or its quality does not preclude or define the scale of use. As a result, the absence of appropriate infrastructure is likely to result in a greater impact. The method does not appear to consider relevant users and vulnerabilities, nor does it appear to consider the quality of the infrastructure, as indicated as appropriate within GEART. As a result, the categorisation of links by this method ensures that in the majority of cases it is unlikely that an impact will be identified.
- 1.14 In recent discussions the Applicant has commenced to engage with the Councils on the sensitivity of links and the parties are looking to reach agreement or identify areas of disagreement.

Magnitude of Impact

- 1.15 The assessed car occupancy is assumed in Paragraph 13.4.10 as 1.5 members of staff per vehicle. The Councils do not agree with this figure (as set out in response to [APP-117]), as it is not supported by monitoring evidence from a similar project. Sizewell C and Hinkley Point are referenced but the employment profile, residency and provision of mitigation such as site campuses and buses are integral to these projects but not Sunnica. However, if suitable monitoring, reporting and controls are embedded in the project to ensure that this car share occupancy occurs then the assessment method can be agreed. Such a process was undertaken for East Anglia 1(N) and EA2. This is considered to be a reasonable and proportionate approach.
- 1.16 As set out in greater detail below in our response to [APP-117], the data collected to assess the project's impacts is limited, and as such the conclusions drawn regarding the impacts should be treated with additional caution, especially at

any location where impacts are close to a threshold or may be considered to be material. This is especially important as GEART itself sets out that the thresholds provided should *'be used cautiously in any environmental assessment'*.

- 1.17 Paragraph 13.6.39 provides information on the conversion factors used for assessing development impacts in the 'development peak hours'. The use of generic conversion factors lacks consideration of very local specific traffic patterns that may occur, particularly in rural locations, and increases the uncertainty of the conclusions which are already based on limited data. The development is resulting in a significant increase in traffic at specific locations and it is unknown whether a more site-specific factor could result in a different magnitude of impact at these. The Applicant should submit the calculations used for obtaining these conversion factors so that they can be reviewed.
- 1.18 In paragraph 13.7.1 the Applicant sets out that arrival and departure times for HGVs will be managed to 'minimise' the number of HGVs travelling to the order limits during the network peak hours; however, it is understood from [APP-118] Environmental Statement Appendix 13C: Framework Construction Traffic Management Plan and Travel Plan (FCTMP&TP) that there will be timing restrictions on arrivals and departures. Further clarity is sought from the Applicant on this control, specifically in terms of the maximum number of HGVs per hour, and if movements will also be restricted in the peak construction traffic hours (0600-0700 and 1900-2000).
- 1.19 Paragraph 13.7.6 sets out that staff will be encouraged to car share; however, the FCTMP&TP sets out that the Applicant will be required to achieve the 1.5-person car occupancy rate. It should be confirmed whether the occupancy rate is mandatory (rather than staff just being encouraged) and if so, what mechanisms are in place to monitor, report and enforce.
- 1.20 Details on the minibus movement are set out in paragraph 13.7.10; these movements are not assessed within the ES nor a distribution over the working day, and should be considered as part of the cumulative construction traffic. The Applicant has not provided information to show if internal movements are practical. A specific concern would be opposing minibus trips leaving the main car park and workers entering during the arrival times.

- 1.21 The impacts of HGV movements have been dismissed in paragraph 13.8.67 based on the relatively small peak hour increase. It is worth noting that these vehicle movements have not been included in the assessed peak hour traffic changes. It is recognised that due to their low number that they may not affect any conclusions; however, it is reasonable to assume that this could be as many as 30 movements in one hour (assuming the flat profile) at the busiest month and may slightly affect any conclusions and would certainly represent a significant proportional increase in HGVs on Elms Road. An assessment of the daily change in HGV flow should be undertaken, particularly on the lower traffic roads where even a few HGV movements may reach or exceed the threshold of 30% (IEMA rule 1). As set out in its RR, SCC remain concerned about the broad-brush approach to a flat profile for HGV traffic that based on our experience of other projects is unlikely to be representative of the profile of movement.
- 1.22 The Applicant should review Tables 13-18 and 13-15 for the traffic flows at B1104/B1102 as there appears to be an error on the flows being presented. Can the traffic flows at Table 13-15 for the A14 Junction 37 and Dane Hill Turnpike be reviewed for both peak hours and the Landwade Road in the PM peak hour.
- 1.23 In Table 13-29 there is no traffic on Herringswell Road and the traffic on Gazeley Road appears too high when compared to Annex F of [APP-117]. This needs to be reviewed / corrected by the applicant.
- 1.24 Given that the Councils have not agreed the link sensitivity and have queries around the calculated impacts, there is limited value in providing a thorough review on the specific impacts on locations within Suffolk and Cambridgeshire, as these are liable to change; however, in order to provide a starting point for discussion, summary comments from SCC for Suffolk locations have been provided below. The comments are based on the traffic impacts occurring during the assessed hours (06:00 to 07:00 and 19:00 to 20:00), which, if they were different, or potentially if an assessment of daily HGVs has been undertaken, may significantly alter any conclusions.

Table xx.x: Sensitivity and Magnitude of Impact of Links				
Location	Reference	Driver Delay	Non-Motorised Users	SCC Comments
U6003 Elms Road	13.8.172, 13.8.179, Table 13-31	Major Adverse magnitude of change resulting	Major Adverse magnitude of change resulting in	The link sensitivity has not been agreed. Whilst due to residual capacity

	and Table 13-32	in a Minor Adverse impact as a result of the link's very low sensitivity.	a Minor Adverse impact as a result of the link's very low sensitivity.	SCC do not believe that there would be a material impact on Driver Delay. There would be a negative impact on recorded cyclists and other NMUs on this corridor.
C610 Newmarket Road South (northern dumbbell roundabout)	13.8.173, 13.8.181, Table 13-31 and Table 13-32	Moderate and Major Adverse magnitude of change resulting in a Minor Adverse / Negligible impact as a result of the very low highway sensitivity.	Minor Adverse magnitude in the AM and Major Adverse in the PM resulting in Minor Adverse / Negligible impact as a result of the link's very low sensitivity	The link sensitivity has not been agreed. Whilst due to residual capacity SCC do not believe that there would be a material impact on Driver Delay. There would be a negative impact on recorded NMUs on this corridor.
C610 Newmarket Road North (southern dumbbell roundabout)	13.8.174, 13.8.182, Table 13-31 and Table 13-32	Major Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's very low sensitivity.	Minor Adverse magnitude of change in the AM and Major Adverse in the PM resulting in Minor Adverse / Negligible impact as a result of the link's very low sensitivity	The link sensitivity has not been agreed. Whilst due to residual capacity SCC do not believe that there would be a material impact on Driver Delay. There would be a negative impact on recorded NMUs on this corridor.
A11 Southbound Off-Slip to U6003 Elms Road	13.8.175, Table 13-31 and Table 13-32	Major Adverse magnitude of change resulting in a Moderate Adverse impact. The Applicant determines that this effect would be not significant.	Major Adverse magnitude of change resulting in a Negligible impact as a result of the link's very low sensitivity.	The link sensitivity has not been agreed. SCC are concerned about the resulting spike in movements and potential resulting operation of the approach. The Applicant does not identify this as a residual effect within Table 13-34.
C611 Warren Road, Red Lodge	13.8.176, 13.8.183, Table 13-31 and Table 13-32	A Minor Adverse magnitude of change resulting in a Negligible impact.	A Minor Adverse magnitude of change resulting in a Minor Adverse impact.	The link sensitivity has not been agreed. The link is the main through route through Red Lodge and includes a school, a playground and provides access to a local centre. It is likely to see high levels of NMUs. The assessment of the change at Warren Road

				is also based on the flow at the approach to the roundabout, and not on different locations along the link, which may affect conclusions.
B1506 Bury Road (East)	13.8.185, 13.8.189, Table 13-31 and Table 13-32	A Minor Adverse magnitude of change in the AM and a Moderate Adverse in the PM resulting in a Minor Adverse impact as a result of the link's low highway sensitivity.	A Minor Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's medium sensitivity.	The link sensitivity has not been agreed. It is considered unlikely that there would be a residual impact on Driver Delay; however, no assessment has been undertaken of the increase in right turning traffic at this location. Bury Road East provides access to a small number of properties and there would be an impact on recorded NMUs on this corridor.
C655 Gazeley Road South	13.8.186, 13.8.190, Table 13-31 and Table 13-32	A Major Adverse magnitude of change in the AM and a Moderate Adverse in the PM resulting in a Minor Adverse / Negligible impact as a result of the link's very low highway sensitivity.	A Major Adverse magnitude of change resulting in a Minor Adverse in the AM as a result of the link's very low sensitivity.	As noted above, the impact at Gazeley Road should be reviewed by the Applicant. The link sensitivity has not been agreed. It is considered unlikely that there would be a residual impact on Driver Delay.
B1506 Bury Road West	13.8.187, 13.8.191, Table 13-31 and Table 13-32	A Minor Adverse magnitude of change resulting in a Negligible impact as a result of the link's low highway sensitivity.	A Negligible Magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
C612 Herringswell Road	13.8.192, Table 13-32	A Major Adverse magnitude of change in the PM resulting impact in a Minor Adverse impact as a result of the link's very low	A Minor Adverse magnitude of change in the PM resulting in a Minor Adverse Impact. The link's sensitivity is low.	As noted above, the impact at Herringswell Road (Table 13-29) should be reviewed by the Applicant, although the impact is very close to the threshold of being a Moderate Adverse

		highway sensitivity.		impact. The link sensitivity has not been agreed. Herringswell Road provides access to a number of properties and forms part of the east / west pedestrian route and there would be an impact on recorded NMUs on this corridor.
A142 North	13.8.220	A Minor Adverse magnitude of change in the AM resulting in a Minor Adverse impact as a result of the link's medium sensitivity.	A Negligible magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
A142 South	13.8.221	A Minor Adverse magnitude of change in the PM resulting in a Minor Adverse impact as a result of link's medium sensitivity.	A Negligible magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
A142 Fordham Road North	13.8.222, 13.8.225	A Minor Adverse Magnitude of Change in the PM resulting in a Minor Adverse classification as a result of the link's medium sensitivity.	A Negligible magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
A14 Eastbound Off-Slip	13.8.226, Table 13-30	There is some confusion over which link is being referred to, it is assumed it should be the westbound off-slip. A Moderate Adverse magnitude of change resulting in a Minor Adverse impact	A Major Adverse magnitude of change in the PM with a Minor Adverse impact as a result of the link's very low sensitivity.	The link sensitivity has not been agreed.

		as a result of the link's low highway sensitivity.		

2. 6.2 Environmental Statement – Appendix 13B – Transport Assessment (APP-117)

Change Request

- 1.25 The change request submitted by the applicant on the 30 August 2022 did not include an updated Transport Assessment. The Applicant is requested to clarify any changes in transport movements that would result.

Data Collection

- 1.26 The Councils recognise that opportunities for data collection have been limited since the start of the Pandemic, that current travel patterns may still be of limited value for future forecasting, and that the Applicant has investigated the information that is available to look to assess impacts and draw conclusions. However, because of these limitations conclusions need to be treated with additional caution.
- 1.27 Paragraph 3.4.17 and 3.4.18 of [APP-117] sets out the sources of the collected data to which the Councils provides the following comments:
- Forest Heath District Council Site Allocation Plan Cumulative Impact Study (FHCIS): This is a single day survey (28 June 2017) between the hours of 0700 to 1000 and 1600 to 1900. It is therefore subject to potential risks of variance within a single day traffic count and is over 6 years old.
 - DC/18/0628/HYB: This is a single day survey (7 November 2017 between the hours of 0700 to 1000 and 1500 to 1900. It is therefore subject to potential risks of variance within a single day traffic count and is almost five years old.
 - 19/00376/OUM: This is a single day survey (30 October 2018) between the hours of 0730 to 0930 and 1615 to 1815. It is therefore subject to potential risks of variance within a single day traffic count and is now almost four years old.

- 17/00880/OUM: This is a single day survey (29 March 2017) between the hours of 0700 to 1000 and 1500 to 1900. It is therefore subject to potential risks of variance within a single day traffic count and is now five years old.

1.28 Bearing this in mind, whilst the data collected may be the best available it still brings additional risk to the conclusions that a more extensive data collection exercise that may have been able to be undertaken in different circumstances would have reduced. It is understood that the Applicant has commissioned further data collection and the Councils look forward to this being made available.

1.29 The assessment is based on an assumed development peak hours of 06:00 to 07:00 and 19:00 to 20:00, rather than traditional network peak hours. Limited data was available in terms of traffic counts in these hours. Paragraph 3.4.37 and 3.4.39 sets out the method that has been used to estimate the traffic flow, and this involved calculating the proportional difference between the traffic flows between the traditional network peak hours and the development peak hours at two different locations and applying these factors to the data. This is a generic approach and, to a degree, lacks consideration of very local specific traffic patterns that may occur, particularly in rural locations, it also adds on additional risk to the conclusions, which are already based on limited data and cautious thresholds. The development is resulting in a significant increase in traffic at specific locations and it is unknown whether a more site-specific factor could result in a different impact, especially where conclusions are drawn based on a comparison with peak hour traffic flows. The evidence to support the methodology used has also not been identified within the report meaning that it cannot be corroborated. Please can the Applicant provide the supporting evidence.

1.30 When considering traffic impacts (paragraphs 6.3.19 to 6.3.36) on the local highway network impacts are generally dismissed based on three sets of reasoning. The first is the difference between the 2023 base peak hour flows and the flows during the assessed off-peak periods, the second is where assessment was undertaken in the FHCIS and where the junction operated with spare capacity, and the third is by the number of vehicles per minute. These dismissals have been considered below for each assessed junction within Suffolk. It is noted

that many of the lower category roads and junctions have not been included in the assessment and the Councils are seeking justification for scoping these out.

Junction 1: Red Lodge Dumbbell Roundabout North

- 1.31 Paragraph 6.3.23 sets out that the FHCIS included 40 to 50% spare capacity and so should operate efficiently with the additional 134 vehicles.
- 1.32 Paragraph 6.3.28 identifies that there is an increase of eight vehicles per minute (which is 474 vehicles according to Table 6-8). Paragraph 6.3.29 goes on to state that this is still less traffic than the PM network peak in general. Whilst paragraph 6.3.30 sets out that the FHCIS included 40 to 50% spare capacity in the PM peak hour.
- 1.33 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them, given the location's proximity to the site they are more likely to occur in a short 15-minute period, meaning that the impact could be significant albeit for a short time period.
- 1.34 Whilst the results within the FHCIS are a material consideration, a short-term increase on a specific junction arm may potentially cause capacity issues which are not being fully reported.

Junction 2: Red Lodge Dumbbell Roundabout South

- 1.35 Paragraph 6.3.23 sets out that there will be an increase of 134 staff vehicles onto the A11 Southbound off-slip in the AM period; however, this is in combination with an increase of 85 vehicles on Warren Road. The paragraph goes on to state that the FHCIS included 40 to 50% spare capacity and so should operate efficiently with the additional 134 vehicles.
- 1.36 Paragraph 6.3.28 sets out that there will be an additional 314 vehicles travelling southbound on the A11 slip and 85 travelling southbound on Warren Road in the PM period and identifies that this is eight additional vehicles per minute and only four to five per minute more than the PM network peak. Paragraph 6.3.29 goes on to state that this is still less traffic than the PM network peak in general. Whilst paragraph 6.3.30 sets out that the FHCIS included 40 to 50% spare capacity in the PM peak hour.
- 1.37 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the

impacts by averaging them across the hour is likely to be underestimating them, given the locations proximity to the site they are more likely to occur in a 15-minute period, meaning that the impact could be significant albeit for a short time period.

- 1.38 Whilst the results within the FHCIP are a material consideration, a short-term increase on a specific junction arm may potentially cause capacity issues which are not being fully reported.

Junction 3: B1056 Bury Road / Herringswell Road / Gazeley Road

- 1.39 Paragraph 6.3.22 sets out that there will be an increase of 144 staff vehicles at this junction in the AM peak hour, but this equates to two extra vehicles per minute and is not considered to have a significant impact. No commentary is provided on the PM peak hour impact; this is assumed because the impact is the same. It is worth noting that Figure F-1 and Figure F-2 indicate that the impacts are actually 155 vehicles, but this would not affect the reasoning.
- 1.40 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them as they are more likely to occur in a 30 or even 15-minute period. It is not understood why an increase of c70 vehicles turning into or out of Herringswell Road would not require further consideration.
- 1.41 The traffic data provided for junction 2 and 3 strongly supports the Councils' view that a significant proportion of workers will use local roads to travel from the A14 westbound to the A11 northbound / Red Lodge.

Junction 10: A14 Junction 37

- 1.42 No commentary is provided on the impacts in the AM period; however, this is a 143 vehicle increase in left turn movements onto the A14; it is likely that the same reasoning would be applied for the PM period.
- 1.43 Paragraph 6.3.33 sets out that there is a 142 vehicle increase in movements in the PM peak hour and that this equates to two vehicles per minute and so is considered to not be significant.
- 1.44 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them as they are more likely to concentrate in a 30 or even 15-minute period. It is not

understood why an increase of c143 vehicles turning right onto the A142 would not be considered further.

- 1.45 It is difficult to conclude that there is not an impact at a number of locations due to the uncertainty resulting from methodology used. The proposals will result in an increase in turning movements at a number of locations and whilst these may be fewer than the movements that occur in the peak periods, assuming that relevant controls are in place for the assessed shift patterns, a concentrated impact may still occur, and the development will result in increased queueing and delay.

Trip calculation and assignment

- 1.46 One of the most critical risks to the assessment is set out a paragraph 3.4.16, which identifies that:

“The working hours for staff will be from 07:00 to 19:00, therefore the peak hours during the construction period for staff arrival will be between 06:00 to 07:00 and staff departure between 19:00 to 20:00. Therefore, 06:00 to 07:00 forms the development traffic peak hour in the AM and 19:00 to 20:00 forms the development traffic peak hour in the PM.”

- 1.47 These are very long shifts and the Councils are yet to identify any control within the DCO that secures these shift patterns (although the Applicant has informally suggested these are controlled through the FCTMP&TP). Any control that was in place would require relevant monitoring, enforcement and reporting. Paragraph 4.5.7 sets out that the shift patterns are an ‘important mitigation’ and as such they should be appropriately controlled through the DCO, and paragraph 4.5.15 sets out that they will be secured as part of the DCO application. If the shift patterns are not achieved then impacts would occur in unassessed time periods and likely result in a more significant impact, particularly on highway capacity (and potentially road safety as a result) that has not been assessed.
- 1.48 Evidence from similar schemes to show that such shift patterns are realised throughout the year would be a welcomed as evidence to allay our concerns regarding the practicality of such long working days.
- 1.49 The Applicant should review Tables 3-3, 3-5, 3-9 and 3-17 for the traffic flows at B1104/B1102 junction as there appears to be an error on the flows being presented. The Applicant should review these flows and amend as appropriate to ensure that the correct data is being presented throughout the report.

- 1.50 It would be beneficial if the Applicant could set out the method used for calculating the flows at Table 3-12, as the Councils have not been able to recreate the results presented, and clarification of this would be appreciated.
- 1.51 It would be beneficial if the Applicant could set out the method used for calculating the flows at Table 3-17 for the PM peak hour for the A142 / Snailwell Road / Landwade Road roundabout and for the A14 J37 and Dane Hill / Turnpike Roundabouts, as the Councils have not been able to recreate the results presented, and clarification of this would be appreciated.
- 1.52 Aside from those junctions specifically mentioned, the Councils have been able to broadly match the resultant flows to the method that has been described.
- 1.53 The Figures in Annex F appear to show the main car park for Sunnica East to be to the west of Elms Road whereas it is understood that the main entrance to the car park is Access C to the east. The Applicant is requested to clarify this matter.

HGV calculation

- 1.54 The term 'HGV' is not defined in the Application. Common practice would imply that that term relates to vehicles greater than 7.5tonnes although a number of NSIPs have defined the term to include vehicles heavier than 3.5 tonnes. The Applicant is asked to confirm the definition of the term' albeit through discussions the Councils understand it is vehicles greater than 7.5 tonnes.
- 1.55 Paragraph 4.5.2 states that the measures for reducing the potential impacts of HGVs are set out in [APP-118] 6.2 Environmental Statement - Appendix 13C - Framework Construction Traffic Management Plan and Travel Plan, which are commented on below:
- 1.56 Paragraph 5.4.7 and 5.4.12 set out the peak HGV movements for the West Sites A and B and East A and B respectively. The figures do not include the substations. The figures are based on predictions of required materials as set out at Appendix E and are very difficult to corroborate. Tthere are concerns that movements to supply and remove aggregate for haul roads and peaks associated with concrete pours may not have been considered. In order to ensure that the development does not exceed its assessed impacts, the Councils require relevant controls, monitoring, enforcement and reporting on the peak HGV movements for the development.
- 1.57 The Councils are disappointed that following the change request to Option 3, location of two 400kV substations within Sunnica East, Applicant has chosen not

to update the Transport Assessment nor the transport section of the Environmental Statement

- 1.58 The total peak movements are shown at Table 6-1 and do not assume any slippage in the site's delivery or crossover between the different development peak periods at the different site locations. This results in a peak impact of 155 HGVs (310 movements); however, this relies on these profiles occurring and the potential exists for a greater impact if the profiles are different highlighting the importance of controls.
- 1.59 Paragraph 5.4.8 and 5.4.13 set out that the assessment assumed a 10-hour typical construction window with movements spread evenly across the day. It is the Councils' experience that a flat profile of deliveries is unlikely, and that the profile of movements is more likely to be weighted towards the morning period.
- 1.60 It is noted that HGV movements are weighted towards the first eight months of the project and that on that basis the more significant impacts of development traffic are short term, albeit still result in a noticeable increase in HGV movements along rural roads.

LGV Movements

- 1.61 It is unclear how the assessment has considered LGVs, i.e. those vehicles that are not HGVs (presuming these are >7.5 tonnes) nor workers 'cars'. The term LGV would include vans and the like traveling to all areas of the site unless specifically prohibited to do so which does not appear to be the case. Volumes are included in Appendix E of the Transport Assessment, but it is unclear how these have been considered in the ES or TA.
- 1.62 It is presumed that all these movements will however travel to the central car park on Elms Road and distributed by mini bus. The applicant is asked to confirm this is the case and that no LGV movements occur elsewhere on the network. The LHA is concerned that if this assumption is not correct these may represent a considerable volume of traffic that has not been assessed.

Workforce calculation

- 1.63 To generate the number of staff vehicle movements from the total workforce movements a car share factor of 1.5 has been applied.
- 1.64 The Council do not agree with this method for the following reasons:
- Sizewell C and Hinkley Point are much larger developments with a larger workforce potentially making car sharing more likely.

- The transitory nature of the workforce i.e., staying in shared accommodation whilst working on the Sizewell C project may make them more likely to car share.
- 1.65 Whilst it is noted the Applicant has undertaken additional work on this issue, REP2-046 of the Sizewell C Transport Assessment ([EN010012-004849-D2 - Sizewell C Project - Other- Consolidated Transport Assessment Appendices Part 1 of 6.pdf \(planninginspectorate.gov.uk\)](#)) sets out the methodology used and Table 4 of Appendix 7B provides the surveyed car share figures from Hinkley Point, importantly the car share factors being experienced at that time were approximately 1.3 workers per car. The use of 1.54 workers per car was for non-home based workers only with home based workers remaining at 1.1 workers per car. Further information is needed on the workforce to determine which of the figures above would be most appropriate for the development's workforce. It is not considered reasonable to quote agreed car share factors from other DCOs without specific consideration for each development.
- 1.66 The measures for achieving car share factors will reflect a number of factors, including:
- The size of the workforce.
 - The location of the workforce.
 - The travel plan measures in place at that DCO
- 1.67 Hinkley Point, Sizewell C, and other DCOs, are very different from the application for these reasons. That being said, assuming that viable controls, monitoring and enforcement were placed on the construction workforce movements to reflect the assessed car share profiles then the car share factor used may be considered to be reasonable.
- 1.68 Paragraph 4.5.12 and 4.5.13 refer to an on-site minibus that will use the local highway network to move staff around the site; whilst the number of movements associated with this minibus are likely to be low they may occur at the same time as the peak workers movements or the network peak; the figures should be included in the assessment of impacts, including the assessment of daily traffic flow changes within the ES. The limited impact on the peak hour set out at paragraph 4.5.13 relies on the staff shift patterns being achieved.

- 1.69 The Applicant should commit to the staff minibus (paragraph 4.5.14) for ensuring sustainable travel patterns for commuter journeys. The Councils do not expect a minibus to run at very low occupancy, and relevant management measures could be put in place to ensure this is not the case, but given the Applicant's assessment method (e.g. that the workforce will be drawn from the 30km immediate area), it is reasonable to assume that staff will be located in such a way to make a minibus viable. Any employee who is on a minibus route should not be provided with a car parking permit. Again paragraph 4.5.15 sets out that this measure will be secured as part of the DCO application, but the measure is to investigate a minibus service, not to deliver one, so no weight should be placed on this as a mitigation measure.
- 1.70 Paragraph 5.4.32 sets out the peak numbers of staff required at the site. The figures are based on predictions of required materials as set out at Appendix E and are very difficult to corroborate. In order to ensure that the development does not exceed its assessed impacts, the Councils require relevant controls, monitoring, enforcement and reporting.
- 1.71 The total peak movements do not assume any slippage in the site's delivery or crossover between the different development peak periods at the different site locations. This means that the assessment is based on 931 vehicle movements rather than 1,020 if the peak at both sites were to coincide.
- 1.72 Annex E indicates a peak impact of 556 staff vehicles movements at Sunnica East and 518 at Sunnica West, which is contrary to Paragraph 7.1.17; this should be reviewed, and confirmation provided on the peak impact. Alongside this, the traffic flow diagrams at Annex F indicate that the assessed scenario has 494 vehicle movements at Sunnica East and 443 at Sunnica West. Confirmation is sought from the Applicant on the scenario that is being tested.

Traffic Modelling

- 1.73 No traffic modelling is undertaken within the Transport Assessment, therefore those impacts that have been dismissed based on relative junction performance should be treated with caution.

Comments on 6.2 Environmental Statement – Appendix 13C – Framework Construction Traffic and Travel Plan (FCTMP&TP) [APP-118]

1.74 In paragraph 6.1.2 of the FCTMP&TP it is anticipated that a final Plan would be submitted for the approval of the relevant planning authority. The Councils consider that the County Councils as the LHAs are best placed to be the authorisation body for construction traffic management plans and travel plans, where these relate to public highways under our control and have relevant technical knowledge. As set out in SCC's RR [RR-1340], the Applicant should include such a mechanism within the Draft DCO.

1.75 The Applicant sets out a number of measures and controls:

- Delivery Management System
- HGV Routes
- HGV Timing Restrictions
- HGV Emission Standards
- Communications Strategy
- Site Accesses
- Cranes and AIL Management Measures

Delivery Management System

1.76 FCTMP&TP paragraph 7.2.3 sets out that a (Traffic Management and Monitoring System) TMMS will be developed, which will monitor compliance with HGV routes, numbers and timing restrictions. The FCTMP&TP should include reference to the controls on HGV Routes and numbers in tabular format so that it is clear the limits that are being controlled.

1.77 Paragraph 7.2.4 sets out that the Delivery Management System (DMS) 'could' include a three-strike system. As set out in SCC's RR [RR-1340], it is unclear what mechanism is in place to ensure that the contractor would be subject to the agreed controls and what enforcement measures would be required that would ensure compliance. The Councils are concerned about:

- the lack of detail particularly what further actions would be undertaken in event of a breach. Can the Applicant provide examples of approved CTMPs and their effectiveness?
- the lack of visibility of this process, data only being made available to local authorities on request,

- that the data is not made publicly available in a similar manner to Hinkley Point C and other projects.

HGV Delivery Routes

- 1.78 In this section it is pertinent to note the Councils' concerns regarding the suitability of some of the local roads used for access, discrepancies between the Applicant's Plans for example whether the route to Sunnica East is via the B1102 Freckenham Road or Isleham Road.

HGV Timing Restrictions

- 1.79 Paragraph 7.2.6 includes a statement that arrival and departure profiles will be managed to minimise the number of HGVs travelling to the site during the highway peak hours. Given the travel distances that may be involved it is assumed that this refers to the local highway network based on paragraph 7.2.8, although this should be confirmed. The timing restrictions should include no arrivals or departures outside of the agreed shift patterns to reduce impacts as a result of HGV traffic during unsociable hours and to reduce inappropriate waiting on the highway network or antisocial behaviour. Consideration should be given to appropriate waiting places for HGVs on the local and strategic network if required as a method of managing the timing of deliveries.
- 1.80 The Councils welcome the proposed monitoring mechanism included at paragraph 7.23.10; however, a commitment is needed to include identification of relevant measures and reporting to the local authorities.

HGV Emission Standards

- 1.81 HGVs for this project should be compliant with EURO VI to keep vehicle emissions to appropriate levels (Paragraph 7.2.11). Compliance should be monitored and reported within the TMMS.

Communications Strategy

- 1.82 The communications strategy is internal and does not include any measures to inform local authorities or the public of what is contained within the information pack and any subsequent changes to these. This is key to develop confidence that these measures are appropriate.

Workers (Staff) Movements and Controls

- 1.83 The Applicant sets out a number of measures and controls in Paragraph 7.2.20, specifically:
- Lift Sharing
 - Staff Routing

- Staff Arrival and Departure Times
- Car Parking Strategy and Permit Scheme
- Mini-bus

1.84 As noted elsewhere clarity is required regarding the definition of a LGV. The presumption is that it includes all vehicles <7.5 tonnes and that all such vehicles are routed to and from the main site car park as no LGVs have been assessed on the remainder of the network.

Lift Sharing (Car Occupancy)

1.85 FCTMP&TP paragraph 7.2.22 states that the average vehicle occupancy of 1.5 persons per vehicle will be required to be achieved throughout the project. However, limited information is provided on how this will be monitored, reported and enforced to ensure compliance. The Applicant should commit to ATCs at the development to monitor and ensure the total vehicle movements do not exceed those assessed and a travel survey after the first month of the project and then every three months thereafter to monitor specific compliance with the car share proportions.

Staff Arrival and Departure Times

1.86 Paragraph 7.2.26 sets out the staff shift patterns; this is the most critical part of the management plan as the whole assessment predicates that no workers will travel in network peak times. The Councils are awaiting confirmation as to how these shift patterns are embedded within the DCO. If robust controls on shift times do not work journeys may occur outside the times considered in the ES and TA with the potential of the impacts exceeding those assessed. The definition of workers requires consideration to ensure that it includes office staff and visitors who may not work the same shift patterns.

1.87 As above, the ATCs would monitor the arrival and departure profile of staff to ensure compliance with the assessed impacts. It is unclear what enforcement measures will be provided in the event of noncompliance with the proposed shift patterns.

Staff Routing

1.88 The Applicant states in paragraph 7.2.25 (APP-118) that staff will be directed to avoid travelling through local villages use the same routes identified for HGVs i.e. the A11, A14 and A142. The trip data provided contradicts this as it shows

significant staff trips through Red Lodge for example as shown in Figure C4 of the Transport Assessment.

Car Parking

- 1.89 The proposed strategy for car parking causes some concern to the Councils regarding practicality. Whilst the proposed shift patterns imply that workers will arrive and depart in 60 minutes, in practice it is likely that these movements will be more concentrated leading to congestion at the single points of entry.
- 1.90 No details have been provided on how the issue and enforcement of a parking permit scheme would operate. Presumably checking permits on entry would, unless done automatically, be impractical due to the time required to check each vehicle.
- 1.91 Questions remain whether staff movements include LGVs that may be required for specific activities, whether these will also be required to use the car parks and that if not such trips have been adequately assessed.

Mini-bus

- 1.92 The FCTMP&TP Paragraph 7.2.13 sets out that *'once staff origin locations are known, investigation will be made into providing a mini-bus service'*. There is little detail on how this process would work and there is no material requirement to deliver this service; without it, the project would fail to deliver any form of sustainable travel patterns, which is contrary to the NPPF 104 and 110. The process for identifying and reviewing the need for a mini-bus should be set out and embedded within the project including when a survey will be undertaken, how it is determined whether a mini-bus is required, how it is ensured that staff use the mini-bus and how use is monitored and reported.

Travel Coordinator

- 1.93 The Applicant should clarify how the appointment of a Travel Co-ordinator is embedded within the project, including when they will be appointed and how any changes will be communicated to stakeholders.
- 1.94 FCTMP&TP paragraph 7.4.2 sets out that the Transport Co-ordinator will monitor data relating to HGVs. This data should be reported to the authorities.
- 1.95 Details of how the Transport Co-ordinator will monitor staff movements are given in Paragraph 7.4.3 and 7.4.4; this is limited to understanding home locations and allocating a relevant car park, and monitoring of arrival and departure of staff. No details are provided on how arrival and departure profiles

will be monitored, but it is implied that directional travel at the accesses will be monitored. Further details should be included on how this will be undertaken, as it is assumed it would require a turning count survey, to ensure good practice from the beginning of the project. The results of this monitoring should be reported to the authorities. details are required on what is considered a breach and what would occur in the result of a breach of the assessed impacts.

Reporting

- 1.96 As indicated in SCC's RR [RR-1340] it is unclear how reporting will work, Paragraph 8.2.2 indicates that there are no requirements to report to the authorities, except in the circumstances of a breach, which would be identified by the Transport Co-ordinator. Regular reporting should be embedded within the CTMP&TP.
- 1.97 As discussed in SCC's RR-1340, the Applicant does not consider how complaints from the public will be collected, assessed and where necessary result in action being undertaken to resolve any issues that arise.

1. 6.1 Environmental Statement – Chapter 13 – Transport and Access (APP-045)

Change Request

- 1.1 The change request submitted by the Applicant on the 30th August 2022 does not include an updated Environmental Statement or Transport Assessment and therefore the Councils cannot assess any cumulative impacts associated with relocation of the substations and changes to HGV and worker movements.

Scope

- 1.2 The scope of the assessment was discussed in early meetings with the applicant. However, the information provided at this time was limited in detail and the Councils were unable to give anything more than high level comments with significant caveats pending seeing the full assessment.
- 1.3 It is recognised at Paragraph 13.3.1 that no baseline data on pedestrian and cycle usage has been used for the assessment. This brings additional risk to the classification of the sensitivity of links and the consideration of impacts by the Applicant, when commenting on the link sensitivity, SCC have used local knowledge and available data sources, particularly when considering non-motorised uses (NMUs).
- 1.4 Plate 13-1 shows the location where traffic data was collected. With the exception of 1 and 2 (Red Lodge), B1506 (Kentford) and 9 (a14/A142 Newmarket) these are in Cambridgeshire. The lack of data on the roads in Suffolk was supplemented by sources set out in 13.4.8 and it is understood that the Applicant is currently undertaking more surveys. The uncertainty resulting from the lack of primary data is a factor that should be considered when analysing the findings of the Environmental Statement and Transport Assessment.
- 1.5 Paragraph 13.4.3 sets out the method for determining staff home locations. The Councils' comments on this are covered in the social and economics section of the LIR. It is important to note that uncertainties in this methodology and the results as they form a primary source of data will have an impact on the accuracy of the assessment of transport impacts.
- 1.6 As set out at Paragraph 13.6.35, no assessment has been undertaken of traffic impacts on a Saturday; as set out in SCC's RR [RR-1340] this is unevidenced and may lead to additional impacts not being identified as the construction peak may

coincide with the network peak. The potential exists particularly for greater leisure use of the highway network by NMUs on weekends and it is assumed that the worker shift pattern on a Saturday would potentially crossover with greater use of the highway network by both vehicles and NMUs particularly given the 13:00 finishing time, although it is understood that the Saturday finish time is now proposed to be 19:00 hours and so consistent with the weekdays.

- 1.7 The Applicant sets out that the operational phase has been scoped out at Paragraph 13.8.254, as set out in SCC's RR [RR-1340], the Applicant should confirm that there is no likelihood of significant maintenance, such as wholesale replacement of solar panels or batteries, during this phase. Article 2(1) of the Draft DCO [APP-019] allows for partial replacement and the limitation in Article 5(3) on maintenance works which have a new or different environmental effects to those assessed. The Councils will be seeking clarification and confirmation as to what is intended given that baseline conditions for environment can alter significantly over time.

Definition of Links

Scope

- 1.8 At the request of the Councils, the Applicant provided a plan showing the location of the links assessed in the Environmental Statement. The links assessed do not include some of the roads from which access is been taken for the project, specifically accesses E, F, G and H. The Applicant has justified scoping out these roads on the basis that the peaks in construction traffic show an increase of less than 30% (i.e. IEMA Rule 1). Consideration of Rule 2 (sensitive areas with a greater than 10% increase) has not been applied to any link. The analysis in 13.4.6 has not been shared with the Councils.
- 1.9 With the lack of baseline and cumulative construction traffic movements the Councils remain to be convinced that HGV, minibuss and cable corridor traffic does not increase traffic flows by more than 30% during the peak hours or across the working day on these roads, particularly with the location of the 400kV substation in plot 33 and the reliance on professional judgement is open to debate.

Sensitivity

- 1.10 The proposed assessment method for impacts on NMUs is detailed in paragraphs 13.4.21 to 13.4.24. Pedestrian and cycle amenity should include consideration of

relative changes in proportions of HGVs, and importantly the assessment should include consideration of the daily changes in traffic flows, and its HGV proportions, and not just an assessment of the hours of greatest change. It does not appear that an assessment of daily traffic flows has been undertaken by the Applicant, and whilst it is recognised that the hourly changes in HGVs are likely to be small in number, with low baseline flows the proportion may be significant. Consideration of the increased daily HGV movements on local roads should be undertaken as indicated within the Guidance of Environmental Assessment of Road Traffic (GEART). The Applicant's view that HGV movements will be equally spaced across the working day is not substantiated, particularly with the restrictions during network peak hours, although it is noted that additional work is being undertaken to look at the potential implications of this by the Applicant. The Councils' experience is that HGVs decrease significantly from mid-afternoon and particular time critical activities such as concrete pours concentrate HGV movements. Further information is also needed on the level of HGV movements on Saturdays and the associated impact.

- 1.11 The categorisation of impacts on driver delay is set out in paragraph 13.4.25, which is, broadly, based on the hierarchy of the road types. Whilst it is recognised that this reflects relative use of these links, it is not fully understood why this hierarchy has been used. Significant increases in delay on rural junctions or roads will have noticeable impacts on drivers at those locations and could be considered material. An example would be the slip off from the northbound A11 onto Elms Road where the performance of the junction could result in queues stretching back onto the A11 or delays provoking poor driver behaviour such as pulling out of the junction into smaller gaps in traffic. The local roads are narrow, and as a result vehicles may need to stop to allow opposing vehicles to pass, and the traffic management proposed by the Applicant will also delay road users. The Councils consider the sensitivity used by the Applicant is not reflected in the judgement applied to driver delay.
- 1.12 As set out in SCC's Relevant Representation (RR) [RR-1340] SCC would disagree with the allocation of trunk road slips (set out at paragraph 13.6.65) as being 'very low sensitivity' given their strategic importance but as these are the responsibility of National Highways would defer to them on this matter.

- 1.13 Paragraph 13.4.26 and 13.6.64 sets out the methodology for categorising the sensitivity of links in terms of NMUs. The Councils have significant concerns with the categorisations, as it results in the majority of the local highway links being in a 'very low' category and does not fully consider the local characteristics of the network or importantly its use. The method also bases sensitivity on the presence of infrastructure for vulnerable road users, and although it may potentially indicate use the lack of such infrastructure or its quality does not preclude or define the scale of use. As a result, the absence of appropriate infrastructure is likely to result in a greater impact. The method does not appear to consider relevant users and vulnerabilities, nor does it appear to consider the quality of the infrastructure, as indicated as appropriate within GEART. As a result, the categorisation of links by this method ensures that in the majority of cases it is unlikely that an impact will be identified.
- 1.14 In recent discussions the Applicant has commenced to engage with the Councils on the sensitivity of links and the parties are looking to reach agreement or identify areas of disagreement.

Magnitude of Impact

- 1.15 The assessed car occupancy is assumed in Paragraph 13.4.10 as 1.5 members of staff per vehicle. The Councils do not agree with this figure (as set out in response to [APP-117]), as it is not supported by monitoring evidence from a similar project. Sizewell C and Hinkley Point are referenced but the employment profile, residency and provision of mitigation such as site campuses and buses are integral to these projects but not Sunnica. However, if suitable monitoring, reporting and controls are embedded in the project to ensure that this car share occupancy occurs then the assessment method can be agreed. Such a process was undertaken for East Anglia 1(N) and EA2. This is considered to be a reasonable and proportionate approach.
- 1.16 As set out in greater detail below in our response to [APP-117], the data collected to assess the project's impacts is limited, and as such the conclusions drawn regarding the impacts should be treated with additional caution, especially at any location where impacts are close to a threshold or may be considered to be material. This is especially important as GEART itself sets out that the thresholds provided should '*be used cautiously in any environmental assessment*'.

- 1.17 Paragraph 13.6.39 provides information on the conversion factors used for assessing development impacts in the 'development peak hours'. The use of generic conversion factors lacks consideration of very local specific traffic patterns that may occur, particularly in rural locations, and increases the uncertainty of the conclusions which are already based on limited data. The development is resulting in a significant increase in traffic at specific locations and it is unknown whether a more site-specific factor could result in a different magnitude of impact at these. The Applicant should submit the calculations used for obtaining these conversion factors so that they can be reviewed.
- 1.18 In paragraph 13.7.1 the Applicant sets out that arrival and departure times for HGVs will be managed to 'minimise' the number of HGVs travelling to the order limits during the network peak hours; however, it is understood from [APP-118] Environmental Statement Appendix 13C: Framework Construction Traffic Management Plan and Travel Plan (FCTMP&TP) that there will be timing restrictions on arrivals and departures. Further clarity is sought from the Applicant on this control, specifically in terms of the maximum number of HGVs per hour, and if movements will also be restricted in the peak construction traffic hours (0600-0700 and 1900-2000).
- 1.19 Paragraph 13.7.6 sets out that staff will be encouraged to car share; however, the FCTMP&TP sets out that the Applicant will be required to achieve the 1.5-person car occupancy rate. It should be confirmed whether the occupancy rate is mandatory (rather than staff just being encouraged) and if so, what mechanisms are in place to monitor, report and enforce.
- 1.20 Details on the minibus movement are set out in paragraph 13.7.10; these movements are not assessed within the ES nor a distribution over the working day, and should be considered as part of the cumulative construction traffic. The Applicant has not provided information to show if internal movements are practical. A specific concern would be opposing minibus trips leaving the main car park and workers entering during the arrival times.
- 1.21 The impacts of HGV movements have been dismissed in paragraph 13.8.67 based on the relatively small peak hour increase. It is worth noting that these vehicle movements have not been included in the assessed peak hour traffic changes. It is recognised that due to their low number that they may not affect any

conclusions; however, it is reasonable to assume that this could be as many as 30 movements in one hour (assuming the flat profile) at the busiest month and may slightly affect any conclusions and would certainly represent a significant proportional increase in HGVs on Elms Road. An assessment of the daily change in HGV flow should be undertaken, particularly on the lower traffic roads where even a few HGV movements may reach or exceed the threshold of 30% (IEMA rule 1). As set out in its RR, SCC remain concerned about the broad-brush approach to a flat profile for HGV traffic that based on our experience of other projects is unlikely to be representative of the profile of movement.

- 1.22 The Applicant should review Tables 13-18 and 13-15 for the traffic flows at B1104/B1102 as there appears to be an error on the flows being presented. Can the traffic flows at Table 13-15 for the A14 Junction 37 and Dane Hill Turnpike be reviewed for both peak hours and the Landwade Road in the PM peak hour.
- 1.23 In Table 13-29 there is no traffic on Herringswell Road and the traffic on Gazeley Road appears too high when compared to Annex F of [APP-117]. This needs to be reviewed / corrected by the applicant.
- 1.24 Given that the Councils have not agreed the link sensitivity and have queries around the calculated impacts, there is limited value in providing a thorough review on the specific impacts on locations within Suffolk and Cambridgeshire, as these are liable to change; however, in order to provide a starting point for discussion, summary comments from SCC for Suffolk locations have been provided below. The comments are based on the traffic impacts occurring during the assessed hours (06:00 to 07:00 and 19:00 to 20:00), which, if they were different, or potentially if an assessment of daily HGVs has been undertaken, may significantly alter any conclusions.

Table xx.x: Sensitivity and Magnitude of Impact of Links				
Location	Reference	Driver Delay	Non-Motorised Users	SCC Comments
U6003 Elms Road	13.8.172, 13.8.179, Table 13-31 and Table 13-32	Major Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's very low sensitivity.	Major Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's very low sensitivity.	The link sensitivity has not been agreed. Whilst due to residual capacity SCC do not believe that there would be a material impact on Driver Delay. There would be a negative impact on recorded

				cyclists and other NMUs on this corridor.
C610 Newmarket Road South (northern dumbbell roundabout)	13.8.173, 13.8.181, Table 13-31 and Table 13-32	Moderate and Major Adverse magnitude of change resulting in a Minor Adverse / Negligible impact as a result of the very low highway sensitivity.	Minor Adverse magnitude in the AM and Major Adverse in the PM resulting in Minor Adverse / Negligible impact as a result of the link's very low sensitivity	The link sensitivity has not been agreed. Whilst due to residual capacity SCC do not believe that there would be a material impact on Driver Delay. There would be a negative impact on recorded NMUs on this corridor.
C610 Newmarket Road North (southern dumbbell roundabout)	13.8.174, 13.8.182, Table 13-31 and Table 13-32	Major Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's very low sensitivity.	Minor Adverse magnitude of change in the AM and Major Adverse in the PM resulting in Minor Adverse / Negligible impact as a result of the link's very low sensitivity	The link sensitivity has not been agreed. Whilst due to residual capacity SCC do not believe that there would be a material impact on Driver Delay. There would be a negative impact on recorded NMUs on this corridor.
A11 Southbound Off-Slip to U6003 Elms Road	13.8.175, Table 13-31 and Table 13-32	Major Adverse magnitude of change resulting in a Moderate Adverse impact. The Applicant determines that this effect would be not significant.	Major Adverse magnitude of change resulting in a Negligible impact as a result of the link's very low sensitivity.	The link sensitivity has not been agreed. SCC are concerned about the resulting spike in movements and potential resulting operation of the approach. The Applicant does not identify this as a residual effect within Table 13-34.
C611 Warren Road, Red Lodge	13.8.176, 13.8.183, Table 13-31 and Table 13-32	A Minor Adverse magnitude of change resulting in a Negligible impact.	A Minor Adverse magnitude of change resulting in a Minor Adverse impact.	The link sensitivity has not been agreed. The link is the main through route through Red Lodge and includes a school, a playground and provides access to a local centre. It is likely to see high levels of NMUs. The assessment of the change at Warren Road is also based on the flow at the approach to the roundabout, and not on different locations along the link, which may affect conclusions.

B1506 Bury Road (East)	13.8.185, 13.8.189, Table 13-31 and Table 13-32	A Minor Adverse magnitude of change in the AM and a Moderate Adverse in the PM resulting in a Minor Adverse impact as a result of the link's low highway sensitivity.	A Minor Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's medium sensitivity.	The link sensitivity has not been agreed. It is considered unlikely that there would be a residual impact on Driver Delay; however, no assessment has been undertaken of the increase in right turning traffic at this location. Bury Road East provides access to a small number of properties and there would be an impact on recorded NMUs on this corridor.
C655 Gazeley Road South	13.8.186, 13.8.190, Table 13-31 and Table 13-32	A Major Adverse magnitude of change in the AM and a Moderate Adverse in the PM resulting in a Minor Adverse / Negligible impact as a result of the link's very low highway sensitivity.	A Major Adverse magnitude of change resulting in a Minor Adverse in the AM as a result of the link's very low sensitivity.	As noted above, the impact at Gazeley Road should be reviewed by the Applicant. The link sensitivity has not been agreed. It is considered unlikely that there would be a residual impact on Driver Delay.
B1506 Bury Road West	13.8.187, 13.8.191, Table 13-31 and Table 13-32	A Minor Adverse magnitude of change resulting in a Negligible impact as a result of the link's low highway sensitivity.	A Negligible Magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
C612 Herringswell Road	13.8.192, Table 13-32	A Major Adverse magnitude of change in the PM resulting impact in a Minor Adverse impact as a result of the link's very low highway sensitivity.	A Minor Adverse magnitude of change in the PM resulting in a Minor Adverse Impact. The link's sensitivity is low.	As noted above, the impact at Herringswell Road (Table 13-29) should be reviewed by the Applicant, although the impact is very close to the threshold of being a Moderate Adverse impact. The link sensitivity has not been agreed. Herringswell Road provides access to a number of properties and forms part of the

				east / west pedestrian route and there would be an impact on recorded NMUs on this corridor.
A142 North	13.8.220	A Minor Adverse magnitude of change in the AM resulting in a Minor Adverse impact as a result of the link's medium sensitivity.	A Negligible magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
A142 South	13.8.221	A Minor Adverse magnitude of change in the PM resulting in a Minor Adverse impact as a result of link's medium sensitivity.	A Negligible magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
A142 Fordham Road North	13.8.222, 13.8.225	A Minor Adverse Magnitude of Change in the PM resulting in a Minor Adverse classification as a result of the link's medium sensitivity.	A Negligible magnitude of change.	The link sensitivity has not been agreed. However, given the magnitude of change this is not considered to be likely to affect any conclusions.
A14 Eastbound Off-Slip	13.8.226, Table 13-30	There is some confusion over which link is being referred to, it is assumed it should be the westbound off-slip. A Moderate Adverse magnitude of change resulting in a Minor Adverse impact as a result of the link's low highway sensitivity.	A Major Adverse magnitude of change in the PM with a Minor Adverse impact as a result of the link's very low sensitivity.	The link sensitivity has not been agreed.

2. 6.2 Environmental Statement – Appendix 13B – Transport Assessment (APP-117)

Change Request

- 1.25 The change request submitted by the applicant on the 30 August 2022 did not include an updated Transport Assessment. The Applicant is requested to clarify any changes in transport movements that would result.

Data Collection

- 1.26 The Councils recognise that opportunities for data collection have been limited since the start of the Pandemic, that current travel patterns may still be of limited value for future forecasting, and that the Applicant has investigated the information that is available to look to assess impacts and draw conclusions. However, because of these limitations conclusions need to be treated with additional caution.
- 1.27 Paragraph 3.4.17 and 3.4.18 of [APP-117] sets out the sources of the collected data to which the Councils provides the following comments:
- Forest Heath District Council Site Allocation Plan Cumulative Impact Study (FHCIS): This is a single day survey (28 June 2017) between the hours of 0700 to 1000 and 1600 to 1900. It is therefore subject to potential risks of variance within a single day traffic count and is over 6 years old.
 - DC/18/0628/HYB: This is a single day survey (7 November 2017 between the hours of 0700 to 1000 and 1500 to 1900. It is therefore subject to potential risks of variance within a single day traffic count and is almost five years old.
 - 19/00376/OUM: This is a single day survey (30 October 2018) between the hours of 0730 to 0930 and 1615 to 1815. It is therefore subject to potential risks of variance within a single day traffic count and is now almost four years old.
 - 17/00880/OUM: This is a single day survey (29 March 2017) between the hours of 0700 to 1000 and 1500 to 1900. It is therefore subject to potential risks of variance within a single day traffic count and is now five years old.

- 1.28 Bearing this in mind, whilst the data collected may be the best available it still brings additional risk to the conclusions that a more extensive data collection exercise that may have been able to be undertaken in different circumstances would have reduced. It is understood that the Applicant has commissioned further data collection and the Councils look forward to this being made available.
- 1.29 The assessment is based on an assumed development peak hours of 06:00 to 07:00 and 19:00 to 20:00, rather than traditional network peak hours. Limited data was available in terms of traffic counts in these hours. Paragraph 3.4.37 and 3.4.39 sets out the method that has been used to estimate the traffic flow, and this involved calculating the proportional difference between the traffic flows between the traditional network peak hours and the development peak hours at two different locations and applying these factors to the data. This is a generic approach and, to a degree, lacks consideration of very local specific traffic patterns that may occur, particularly in rural locations, it also adds on additional risk to the conclusions, which are already based on limited data and cautious thresholds. The development is resulting in a significant increase in traffic at specific locations and it is unknown whether a more site-specific factor could result in a different impact, especially where conclusions are drawn based on a comparison with peak hour traffic flows. The evidence to support the methodology used has also not been identified within the report meaning that it cannot be corroborated. Please can the Applicant provide the supporting evidence.
- 1.30 When considering traffic impacts (paragraphs 6.3.19 to 6.3.36) on the local highway network impacts are generally dismissed based on three sets of reasoning. The first is the difference between the 2023 base peak hour flows and the flows during the assessed off-peak periods, the second is where assessment was undertaken in the FHCIS and where the junction operated with spare capacity, and the third is by the number of vehicles per minute. These dismissals have been considered below for each assessed junction within Suffolk. It is noted that many of the lower category roads and junctions have not been included in the assessment and the Councils are seeking justification for scoping these out.

Junction 1: Red Lodge Dumbbell Roundabout North

- 1.31 Paragraph 6.3.23 sets out that the FHCIS included 40 to 50% spare capacity and so should operate efficiently with the additional 134 vehicles.
- 1.32 Paragraph 6.3.28 identifies that there is an increase of eight vehicles per minute (which is 474 vehicles according to Table 6-8). Paragraph 6.3.29 goes on to state that this is still less traffic than the PM network peak in general. Whilst paragraph 6.3.30 sets out that the FHCIS included 40 to 50% spare capacity in the PM peak hour.
- 1.33 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them, given the location's proximity to the site they are more likely to occur in a short 15-minute period, meaning that the impact could be significant albeit for a short time period.
- 1.34 Whilst the results within the FHCIS are a material consideration, a short-term increase on a specific junction arm may potentially cause capacity issues which are not being fully reported.

Junction 2: Red Lodge Dumbbell Roundabout South

- 1.35 Paragraph 6.3.23 sets out that there will be an increase of 134 staff vehicles onto the A11 Southbound off-slip in the AM period; however, this is in combination with an increase of 85 vehicles on Warren Road. The paragraph goes on to state that the FHCIS included 40 to 50% spare capacity and so should operate efficiently with the additional 134 vehicles.
- 1.36 Paragraph 6.3.28 sets out that there will be an additional 314 vehicles travelling southbound on the A11 slip and 85 travelling southbound on Warren Road in the PM period and identifies that this is eight additional vehicles per minute and only four to five per minute more than the PM network peak. Paragraph 6.3.29 goes on to state that this is still less traffic than the PM network peak in general. Whilst paragraph 6.3.30 sets out that the FHCIS included 40 to 50% spare capacity in the PM peak hour.
- 1.37 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them, given the locations proximity to the site they are more likely to occur in a 15-

minute period, meaning that the impact could be significant albeit for a short time period.

- 1.38 Whilst the results within the FHCIP are a material consideration, a short-term increase on a specific junction arm may potentially cause capacity issues which are not being fully reported.

Junction 3: B1056 Bury Road / Herringswell Road / Gazeley Road

- 1.39 Paragraph 6.3.22 sets out that there will be an increase of 144 staff vehicles at this junction in the AM peak hour, but this equates to two extra vehicles per minute and is not considered to have a significant impact. No commentary is provided on the PM peak hour impact; this is assumed because the impact is the same. It is worth noting that Figure F-1 and Figure F-2 indicate that the impacts are actually 155 vehicles, but this would not affect the reasoning.
- 1.40 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them as they are more likely to occur in a 30 or even 15-minute period. It is not understood why an increase of c70 vehicles turning into or out of Herringswell Road would not require further consideration.
- 1.41 The traffic data provided for junction 2 and 3 strongly supports the Councils' view that a significant proportion of workers will use local roads to travel from the A14 westbound to the A11 northbound / Red Lodge.

Junction 10: A14 Junction 37

- 1.42 No commentary is provided on the impacts in the AM period; however, this is a 143 vehicle increase in left turn movements onto the A14; it is likely that the same reasoning would be applied for the PM period.
- 1.43 Paragraph 6.3.33 sets out that there is a 142 vehicle increase in movements in the PM peak hour and that this equates to two vehicles per minute and so is considered to not be significant.
- 1.44 Given the workers are working a 12-hour shift, it is expected that they would arrive and leave close to the opening and closing times and so spreading the impacts by averaging them across the hour is likely to be underestimating them as they are more likely to concentrate in a 30 or even 15-minute period. It is not understood why an increase of c143 vehicles turning right onto the A142 would not be considered further.

- 1.45 It is difficult to conclude that there is not an impact at a number of locations due to the uncertainty resulting from methodology used. The proposals will result in an increase in turning movements at a number of locations and whilst these may be fewer than the movements that occur in the peak periods, assuming that relevant controls are in place for the assessed shift patterns, a concentrated impact may still occur, and the development will result in increased queueing and delay.

Trip calculation and assignment

- 1.46 One of the most critical risks to the assessment is set out a paragraph 3.4.16, which identifies that:
- “The working hours for staff will be from 07:00 to 19:00, therefore the peak hours during the construction period for staff arrival will be between 06:00 to 07:00 and staff departure between 19:00 to 20:00. Therefore, 06:00 to 07:00 forms the development traffic peak hour in the AM and 19:00 to 20:00 forms the development traffic peak hour in the PM.”
- 1.47 These are very long shifts and the Councils are yet to identify any control within the DCO that secures these shift patterns (although the Applicant has informally suggested these are controlled through the FCTMP&TP). Any control that was in place would require relevant monitoring, enforcement and reporting. Paragraph 4.5.7 sets out that the shift patterns are an ‘important mitigation’ and as such they should be appropriately controlled through the DCO, and paragraph 4.5.15 sets out that they will be secured as part of the DCO application. If the shift patterns are not achieved then impacts would occur in unassessed time periods and likely result in a more significant impact, particularly on highway capacity (and potentially road safety as a result) that has not been assessed.
- 1.48 Evidence from similar schemes to show that such shift patterns are realised throughout the year would be a welcomed as evidence to allay our concerns regarding the practicality of such long working days.
- 1.49 The Applicant should review Tables 3-3, 3-5, 3-9 and 3-17 for the traffic flows at B1104/B1102 junction as there appears to be an error on the flows being presented. The Applicant should review these flows and amend as appropriate to ensure that the correct data is being presented throughout the report.
- 1.50 It would be beneficial if the Applicant could set out the method used for calculating the flows at Table 3-12, as the Councils have not been able to recreate the results presented, and clarification of this would be appreciated.

- 1.51 It would be beneficial if the Applicant could set out the method used for calculating the flows at Table 3-17 for the PM peak hour for the A142 / Snailwell Road / Landwade Road roundabout and for the A14 J37 and Dane Hill / Turnpike Roundabouts, as the Councils have not been able to recreate the results presented, and clarification of this would be appreciated.
- 1.52 Aside from those junctions specifically mentioned, the Councils have been able to broadly match the resultant flows to the method that has been described.
- 1.53 The Figures in Annex F appear to show the main car park for Sunnica East to be to the west of Elms Road whereas it is understood that the main entrance to the car park is Access C to the east. The Applicant is requested to clarify this matter.

HGV calculation

- 1.54 The term 'HGV' is not defined in the Application. Common practice would imply that that term relates to vehicles greater than 7.5tonnes although a number of NSIPs have defined the term to include vehicles heavier than 3.5 tonnes. The Applicant is asked to confirm the definition of the term' albeit through discussions the Councils understand it is vehicles greater than 7.5 tonnes.
- 1.55 Paragraph 4.5.2 states that the measures for reducing the potential impacts of HGVs are set out in [APP-118] 6.2 Environmental Statement - Appendix 13C - Framework Construction Traffic Management Plan and Travel Plan, which are commented on below:
- 1.56 Paragraph 5.4.7 and 5.4.12 set out the peak HGV movements for the West Sites A and B and East A and B respectively. The figures do not include the substations. The figures are based on predictions of required materials as set out at Appendix E and are very difficult to corroborate. Tthere are concerns that movements to supply and remove aggregate for haul roads and peaks associated with concrete pours may not have been considered. In order to ensure that the development does not exceed its assessed impacts, the Councils require relevant controls, monitoring, enforcement and reporting on the peak HGV movements for the development.
- 1.57 The Councils are disappointed that following the change request to Option 3, location of two 400kV substations within Sunnica East, Applicant has chosen not to update the Transport Assessment nor the transport section of the Environmental Statement

- 1.58 The total peak movements are shown at Table 6-1 and do not assume any slippage in the site's delivery or crossover between the different development peak periods at the different site locations. This results in a peak impact of 155 HGVs (310 movements); however, this relies on these profiles occurring and the potential exists for a greater impact if the profiles are different highlighting the importance of controls.
- 1.59 Paragraph 5.4.8 and 5.4.13 set out that the assessment assumed a 10-hour typical construction window with movements spread evenly across the day. It is the Councils' experience that a flat profile of deliveries is unlikely, and that the profile of movements is more likely to be weighted towards the morning period.
- 1.60 It is noted that HGV movements are weighted towards the first eight months of the project and that on that basis the more significant impacts of development traffic are short term, albeit still result in a noticeable increase in HGV movements along rural roads.

LGV Movements

- 1.61 It is unclear how the assessment has considered LGVs, i.e. those vehicles that are not HGVs (presuming these are >7.5 tonnes) nor workers 'cars'. The term LGV would include vans and the like traveling to all areas of the site unless specifically prohibited to do so which does not appear to be the case. Volumes are included in Appendix E of the Transport Assessment, but it is unclear how these have been considered in the ES or TA.
- 1.62 It is presumed that all these movements will however travel to the central car park on Elms Road and distributed by mini bus. The applicant is asked to confirm this is the case and that no LGV movements occur elsewhere on the network. The LHA is concerned that if this assumption is not correct these may represent a considerable volume of traffic that has not been assessed.

Workforce calculation

- 1.63 To generate the number of staff vehicle movements from the total workforce movements a car share factor of 1.5 has been applied.
- 1.64 The Council do not agree with this method for the following reasons:
- Sizewell C and Hinkley Point are much larger developments with a larger workforce potentially making car sharing more likely.

- The transitory nature of the workforce i.e., staying in shared accommodation whilst working on the Sizewell C project may make them more likely to car share.
- 1.65 Whilst it is noted the Applicant has undertaken additional work on this issue, REP2-046 of the Sizewell C Transport Assessment ([EN010012-004849-D2 - Sizewell C Project - Other- Consolidated Transport Assessment Appendices Part 1 of 6.pdf \(planninginspectorate.gov.uk\)](#)) sets out the methodology used and Table 4 of Appendix 7B provides the surveyed car share figures from Hinkley Point, importantly the car share factors being experienced at that time were approximately 1.3 workers per car. The use of 1.54 workers per car was for non-home based workers only with home based workers remaining at 1.1 workers per car. Further information is needed on the workforce to determine which of the figures above would be most appropriate for the development's workforce. It is not considered reasonable to quote agreed car share factors from other DCOs without specific consideration for each development.
- 1.66 The measures for achieving car share factors will reflect a number of factors, including:
- The size of the workforce.
 - The location of the workforce.
 - The travel plan measures in place at that DCO
- 1.67 Hinkley Point, Sizewell C, and other DCOs, are very different from the application for these reasons. That being said, assuming that viable controls, monitoring and enforcement were placed on the construction workforce movements to reflect the assessed car share profiles then the car share factor used may be considered to be reasonable.
- 1.68 Paragraph 4.5.12 and 4.5.13 refer to an on-site minibus that will use the local highway network to move staff around the site; whilst the number of movements associated with this minibus are likely to be low they may occur at the same time as the peak workers movements or the network peak; the figures should be included in the assessment of impacts, including the assessment of daily traffic flow changes within the ES. The limited impact on the peak hour set out at paragraph 4.5.13 relies on the staff shift patterns being achieved.

- 1.69 The Applicant should commit to the staff minibus (paragraph 4.5.14) for ensuring sustainable travel patterns for commuter journeys. The Councils do not expect a minibus to run at very low occupancy, and relevant management measures could be put in place to ensure this is not the case, but given the Applicant's assessment method (e.g. that the workforce will be drawn from the 30km immediate area), it is reasonable to assume that staff will be located in such a way to make a minibus viable. Any employee who is on a minibus route should not be provided with a car parking permit. Again paragraph 4.5.15 sets out that this measure will be secured as part of the DCO application, but the measure is to investigate a minibus service, not to deliver one, so no weight should be placed on this as a mitigation measure.
- 1.70 Paragraph 5.4.32 sets out the peak numbers of staff required at the site. The figures are based on predictions of required materials as set out at Appendix E and are very difficult to corroborate. In order to ensure that the development does not exceed its assessed impacts, the Councils require relevant controls, monitoring, enforcement and reporting.
- 1.71 The total peak movements do not assume any slippage in the site's delivery or crossover between the different development peak periods at the different site locations. This means that the assessment is based on 931 vehicle movements rather than 1,020 if the peak at both sites were to coincide.
- 1.72 Annex E indicates a peak impact of 556 staff vehicles movements at Sunnica East and 518 at Sunnica West, which is contrary to Paragraph 7.1.17; this should be reviewed, and confirmation provided on the peak impact. Alongside this, the traffic flow diagrams at Annex F indicate that the assessed scenario has 494 vehicle movements at Sunnica East and 443 at Sunnica West. Confirmation is sought from the Applicant on the scenario that is being tested.

Traffic Modelling

- 1.73 No traffic modelling is undertaken within the Transport Assessment, therefore those impacts that have been dismissed based on relative junction performance should be treated with caution.

Comments on 6.2 Environmental Statement – Appendix 13C – Framework Construction Traffic and Travel Plan (FCTMP&TP) [APP-118]

1.74 In paragraph 6.1.2 of the FCTMP&TP it is anticipated that a final Plan would be submitted for the approval of the relevant planning authority. The Councils consider that the County Councils as the LHAs are best placed to be the authorisation body for construction traffic management plans and travel plans, where these relate to public highways under our control and have relevant technical knowledge. As set out in SCC's RR [RR-1340], the Applicant should include such a mechanism within the Draft DCO.

1.75 The Applicant sets out a number of measures and controls:

- Delivery Management System
- HGV Routes
- HGV Timing Restrictions
- HGV Emission Standards
- Communications Strategy
- Site Accesses
- Cranes and AIL Management Measures

Delivery Management System

1.76 FCTMP&TP paragraph 7.2.3 sets out that a (Traffic Management and Monitoring System) TMMS will be developed, which will monitor compliance with HGV routes, numbers and timing restrictions. The FCTMP&TP should include reference to the controls on HGV Routes and numbers in tabular format so that it is clear the limits that are being controlled.

1.77 Paragraph 7.2.4 sets out that the Delivery Management System (DMS) 'could' include a three-strike system. As set out in SCC's RR [RR-1340], it is unclear what mechanism is in place to ensure that the contractor would be subject to the agreed controls and what enforcement measures would be required that would ensure compliance. The Councils are concerned about:

- the lack of detail particularly what further actions would be undertaken in event of a breach. Can the Applicant provide examples of approved CTMPs and their effectiveness?
- the lack of visibility of this process, data only being made available to local authorities on request,

- that the data is not made publicly available in a similar manner to Hinkley Point C and other projects.

HGV Delivery Routes

- 1.78 In this section it is pertinent to note the Councils' concerns regarding the suitability of some of the local roads used for access, discrepancies between the Applicant's Plans for example whether the route to Sunnica East is via the B1102 Freckenham Road or Isleham Road.

HGV Timing Restrictions

- 1.79 Paragraph 7.2.6 includes a statement that arrival and departure profiles will be managed to minimise the number of HGVs travelling to the site during the highway peak hours. Given the travel distances that may be involved it is assumed that this refers to the local highway network based on paragraph 7.2.8, although this should be confirmed. The timing restrictions should include no arrivals or departures outside of the agreed shift patterns to reduce impacts as a result of HGV traffic during unsociable hours and to reduce inappropriate waiting on the highway network or antisocial behaviour. Consideration should be given to appropriate waiting places for HGVs on the local and strategic network if required as a method of managing the timing of deliveries.
- 1.80 The Councils welcome the proposed monitoring mechanism included at paragraph 7.23.10; however, a commitment is needed to include identification of relevant measures and reporting to the local authorities.

HGV Emission Standards

- 1.81 HGVs for this project should be compliant with EURO VI to keep vehicle emissions to appropriate levels (Paragraph 7.2.11). Compliance should be monitored and reported within the TMMS.

Communications Strategy

- 1.82 The communications strategy is internal and does not include any measures to inform local authorities or the public of what is contained within the information pack and any subsequent changes to these. This is key to develop confidence that these measures are appropriate.

Workers (Staff) Movements and Controls

- 1.83 The Applicant sets out a number of measures and controls in Paragraph 7.2.20, specifically:
- Lift Sharing
 - Staff Routing

- Staff Arrival and Departure Times
 - Car Parking Strategy and Permit Scheme
 - Mini-bus
- 1.84 As noted elsewhere clarity is required regarding the definition of a LGV. The presumption is that it includes all vehicles <7.5 tonnes and that all such vehicles are routed to and from the main site car park as no LGVs have been assessed on the remainder of the network.

Lift Sharing (Car Occupancy)

- 1.85 FCTMP&TP paragraph 7.2.22 states that the average vehicle occupancy of 1.5 persons per vehicle will be required to be achieved throughout the project. However, limited information is provided on how this will be monitored, reported and enforced to ensure compliance. The Applicant should commit to ATCs at the development to monitor and ensure the total vehicle movements do not exceed those assessed and a travel survey after the first month of the project and then every three months thereafter to monitor specific compliance with the car share proportions.

Staff Arrival and Departure Times

- 1.86 Paragraph 7.2.26 sets out the staff shift patterns; this is the most critical part of the management plan as the whole assessment predicates that no workers will travel in network peak times. The Councils are awaiting confirmation as to how these shift patterns are embedded within the DCO. If robust controls on shift times do not work journeys may occur outside the times considered in the ES and TA with the potential of the impacts exceeding those assessed. The definition of workers requires consideration to ensure that it includes office staff and visitors who may not work the same shift patterns.
- 1.87 As above, the ATCs would monitor the arrival and departure profile of staff to ensure compliance with the assessed impacts. It is unclear what enforcement measures will be provided in the event of noncompliance with the proposed shift patterns.

Staff Routing

- 1.88 The Applicant states in paragraph 7.2.25 (APP-118) that staff will be directed to avoid travelling through local villages use the same routes identified for HGVs i.e. the A11, A14 and A142. The trip data provided contradicts this as it shows

significant staff trips through Red Lodge for example as shown in Figure C4 of the Transport Assessment.

Car Parking

- 1.89 The proposed strategy for car parking causes some concern to the Councils regarding practicality. Whilst the proposed shift patterns imply that workers will arrive and depart in 60 minutes, in practice it is likely that these movements will be more concentrated leading to congestion at the single points of entry.
- 1.90 No details have been provided on how the issue and enforcement of a parking permit scheme would operate. Presumably checking permits on entry would, unless done automatically, be impractical due to the time required to check each vehicle.
- 1.91 Questions remain whether staff movements include LGVs that may be required for specific activities, whether these will also be required to use the car parks and that if not such trips have been adequately assessed.

Mini-bus

- 1.92 The FCTMP&TP Paragraph 7.2.13 sets out that *'once staff origin locations are known, investigation will be made into providing a mini-bus service'*. There is little detail on how this process would work and there is no material requirement to deliver this service; without it, the project would fail to deliver any form of sustainable travel patterns, which is contrary to the NPPF 104 and 110. The process for identifying and reviewing the need for a mini-bus should be set out and embedded within the project including when a survey will be undertaken, how it is determined whether a mini-bus is required, how it is ensured that staff use the mini-bus and how use is monitored and reported.

Travel Coordinator

- 1.93 The Applicant should clarify how the appointment of a Travel Co-ordinator is embedded within the project, including when they will be appointed and how any changes will be communicated to stakeholders.
- 1.94 FCTMP&TP paragraph 7.4.2 sets out that the Transport Co-ordinator will monitor data relating to HGVs. This data should be reported to the authorities.
- 1.95 Details of how the Transport Co-ordinator will monitor staff movements are given in Paragraph 7.4.3 and 7.4.4; this is limited to understanding home locations and allocating a relevant car park, and monitoring of arrival and departure of staff. No details are provided on how arrival and departure profiles

will be monitored, but it is implied that directional travel at the accesses will be monitored. Further details should be included on how this will be undertaken, as it is assumed it would require a turning count survey, to ensure good practice from the beginning of the project. The results of this monitoring should be reported to the authorities. details are required on what is considered a breach and what would occur in the result of a breach of the assessed impacts.

Reporting

- 1.96 As indicated in SCC's RR [RR-1340] it is unclear how reporting will work, Paragraph 8.2.2 indicates that there are no requirements to report to the authorities, except in the circumstances of a breach, which would be identified by the Transport Co-ordinator. Regular reporting should be embedded within the CTMP&TP.
- 1.97 As discussed in SCC's RR-1340, the Applicant does not consider how complaints from the public will be collected, assessed and where necessary result in action being undertaken to resolve any issues that arise.

Annex E: Transport – Site Accesses Review

Information Requirements

E.1 The Councils would consider that the following should be provided at examination stage:

- Road name (as street gazetteer)
- Title (eg access ref)
- Access location plan (to aid orientation in an area with few landmarks)
- Scaled plans including orientation showing the plan of the access, road widths at regular intervals in the absence of a topographic survey
- Full length of visibility splays supported by speed data where SSD calculations are used
- Departures from design standards and justification
- Highway boundary and order limits (later to a reasonable line thickness)
- Swept path analysis for most onerous vehicle layout
- Road safety stage 1 audits including risks to vulnerable road users and designers response
- Impacts on existing drainage and vegetation

Visibility Requirements

On many, but not all access plans the Applicant has included a 2.4m (x) by 215m (y) visibility splay based on the roads being derestricted. Some speed data has been provided in the Transport Assessment, but this does not cover all accesses. Although with the exception of access C these are temporary, they will be in use for a significant length of time and should be designed considering this parameter.

- E.2 Visibility splays can be designed based on the 85% observed speeds and this may be acceptable to SCC. However, SCC would be concerned if the visibility splays, including forward visibility for traffic signals are designed for nominal speed limits unless there is a method of ensuring good compliance by drivers for that limit.
- E.3 In selecting visibility based on speed limits the guidance in Manual for Streets is primarily for urban roads and in paragraph 7.5.8 recommends use of the DMRB for 85th percentile speed in excess of 60kph (37mph).

- E.4 DMRB gives the desirable minimum of 215m (100kph/ 62mph), 160m (85kph/53mph) and 120m (70kph/43mph)).
- E.5 Suffolk County Council has provided guidance to bridge MfS and DMRB guidance in Appendix G of the Suffolk Design Street Guide.

Road Widths

- E.6 Many of the accesses are on narrow local roads. As a result, vehicles entering or leaving the access straddle the centreline causing an obstruction to other road users. If widening of the road at the access is not an option, suitable traffic management layouts and methods must be agreed with the LHA.
- E.7 It is unclear whether the width of roads on the approach to the main site accesses, such as La Hogue Road are sufficient to accommodate the increase flow of HGV. An increase flow may exacerbate vehicle interaction, resulting in more regular overrun of the road edge and subsequent damage to and rutting of the verge. Road-side rutting can make it more difficult for smaller vehicles who inadvertently overrun the edge from returning to carriageway, resulting in oversteer and loss of control accidents. Details of the width of carriageway between principal roads and sites where significant flows of HGVs can be anticipated should be provided so that the any specific risks can be identified, and appropriate mitigation proposed.

Access Width

- E.8 Table B-9 Work No. 9 Design Principles in the Design and Access Statement (APP-264) states that primary and crane access points will be a minimum of 6.0m wide. This should be satisfactory unless turning or manoeuvring areas although is dependent on the size of the vehicle. Secondary accesses are stated to be a minimum 3.5m width which does not allow two vehicles to pass and would not be acceptable where adjoining the public highway.
- E.9 Article 36 of the dDCO (APP-014) allows for the undertaker to fell or lop trees and remove hedgerows within the public highway with the consent of the highway authority. To date the undertaker has not obtained highway boundary details from the Councils so risks undertaking such work without the relevant authority's consent. It is noted that the same article enables the undertaker to carry out

works on a tree subject to a preservation order without consent and that a number of protected trees are adjacent to the U6006.

Internal Arrangements

- E.10 Details need to be provided to demonstrate capacity for parking, unloading/loading, storage and turning within the site for vehicle associated with the construction phase and ongoing operational maintenance of each site. This is to prevent unnecessary parking or manoeuvring within the highway. This is to include details of gates at accesses.
- E.11 Provide details of internal routes within the site and include anticipated use during the construction and operational phases.

Drainage

- E.12 No information is provided on the impact of the construction of modification of accesses will have in regard to drainage. Suitable drainage must be provided to prevent water, mud or other debris flowing or being carried onto the public highway and thus pose a hazard to road users. Records of complaints indicate this has been a periodic problem on Elms Road with mud being carried out of the quarry by HGVs and on Golf Links Road due to agricultural plant movements.
- E.13 Where accesses cross existing features such as ditches this impact must be considered in the assessment of environmental impacts. Where an extension to access over ditches is needed the Applicant needs to ensure the relevant work needed will be within the DCO boundary. The Applicant's attention is drawn to the disbenefits of culverting ditches and the requirement to gain consent from the LLFA to do so.

Comments on Individual Accesses

Sunnica West

Sunnica West Site A, Access A - La Hogue Road, Chippenham – Primary Access

- E.14 It is not ideal that this access forms a crossroad with La Hogue Farm Shop. While see through from within each site is unlikely to constitute significant risk of failure to give way collisions, it is likely to make turning out manoeuvres of the farm shop access more complicated having to consider movement of the opposing flow, especially at times of peak traffic flow.

- E.15 While the highway extent is not detailed on plan, it appears likely that visibility will not be achieved fully within the public highway. While this may be achieved within the applicant's site to the south-west of La Hogue Road, the required visibility would appear to extend to land on the north-eastern side of the road on land that they do not appear to be within the defined DCO boundary. This must be clarified and addressed as necessary.
- E.16 It appears likely that significant lengths of established hedgerow will need to be removed to achieve the visibility splay shown. This should be considered from an ecological perspective.
- E.17 The Junction radii and access width shown on Fig 32 is not clearly legible on the submission although it does appear to show a tight radius to the north and larger radii to the south to facilitate turning of larger vehicles in this direction; It is however unclear whether movements by HGVs across the tighter radii can be adequately controlled. From Appendix 13B This is to be a primary site access throughout construction and operational maintenance and the northern Radii must be appropriate to accommodate the turning of traffic for the onward movement of workforce, plant, and delivery of materials to those sites not accessible via the internal road network as recognised in point 7.2.5.
- E.18 This access is proposed to serve the staff carpark and is therefore required to accommodate many private staff vehicle, HGVs, minibuses etc, and must therefore be constructed to an appropriate standard that must accommodate two-way travel by the class of vehicles that can reasonably be anticipated to encountered one another within the junction. The proposed junction layout does not appear sufficient to achieve this and is likely to result in vehicles dwelling in the highway risking collision with other road users.
- E.19 While details of a 1000T crane are provided in Fig 31, no details of the swept paths for vehicles required to access the site in daily use has been provided and it is not therefore possible to consider whether this access can be safely used during the construction or operational phases.

Sunnica West Site A, Access B - Chippenham Road, Snailwell - Secondary Access

- E.20 Table 10 of 13C identified a potential obstruction of visibility from the site but does not propose any measures to mitigate this.

- E.21 No clear indication of anticipated use of this junction has been provided and it is therefore unclear whether the 6m wide access track allowing only single vehicle movement will be sufficient to safely accommodate the anticipated use.
- E.22 A 12m radius is to be provided to the southern side of the junction to facilitate turning of larger vehicles for left turn out/right turn in, with an undisclosed radius to the north. From the information provided, it is unclear whether this is the only movement required by HGVs, given the potential desire to access the cable route(M) to the east.
- E.23 The swept path movement is not shown in the same plan as the proposed junction layout, and it is not therefore possible to consider this in context and confirm that this is appropriate.
- E.24 No details of hard surfacing or extent within the site have been provided. The existing surface evident on Fig 29 would not be suitable to prevent material deleterious to the use of the highway from being tracked from the site on to the road.

[Sunnica West Site A, Access C - Dane Hill Road, Kennet – Secondary Access](#)

- E.25 It is unclear why Access C is Referenced E in Table 11.
- E.26 While the highway extent is not detailed on plan, it appears unlikely that visibility can be achieved fully within the public highway, especially close to the junction where visibility may be obstructed by foliage and existing timber fence line. While the splay is shown approaching the roundabout to the northwest opposite the site, it is unclear whether this can be recognised, given the difference in ground level. If this should be achievable, it appears likely that significant lengths of established hedgerow will need to be removed, which should be considered from an ecological perspective.
- E.27 An undefined splay is to be provided on the eastern side of the junction with a 14m radius to the west to facilitate turning of larger vehicles. It is unclear whether movement of larger vehicles can be adequately controlled or indeed whether the eastern splay is sufficient to accommodate lighter traffic that may access the site from the east.
- E.28 The swept path movement is not shown on the same plan as the proposed junction layout, and it is not therefore possible to consider this in context and confirm that this is appropriate. The existing access appears to cross a ditch

which the access is being widened towards. Appropriate measures will be required to extend any pipe and support the proposed access construction.

- E.29 The existing gate set back would not be suitable for the anticipated use of this junction and will need to be amended to accommodate HGV traffic.

Sunnica West Site B, Access D - Fordham Road, Snailwell - Secondary access

- E.30 The proposed visibility spays at this junction appear to require use of a significant area of land opposite the junction in an area outside of the DCO boundary. While the highway extent is not detailed on a plan, it is apparent that visibility will not be fully achieved within the public highway. It is also likely to require removal of significant lengths of established hedgerow and trees to achieve the visibility splay shown. This should be considered from an ecological perspective.
- E.31 While not clearly shown on the images adjacent to Figure 38, there appear to be two gated access in the vicinity of the proposed junction. It is unclear how the proposed junction relates to these two accesses, and whether these are both to be replaced. This should be more clearly established on plan. It should be noted that it would not be acceptable for a field access to be retained within the radius of the junction, where there must instead be a degree of separation.
- E.32 A 2m radius is to be provided to the western side of the junction that would be unsuitable for vehicles entering from the west and is likely to result in late braking in the highway should vehicles attempt to do so, risking shunt type collisions. While the Applicant may propose measures to prevent vehicle undertaking this manoeuvre, it is unclear how this can be strictly prohibited for vehicles outside of their control.
- E.33 The swept path movement is not shown in the same plan as the proposed junction layout, and it is not therefore possible to consider this in context and confirm that both plans correspond correctly.

Sunnica East

Access A (U6003 Elms Road)

- E.34 Access A is a Secondary access for construction, decommissioning and for emergency access during operational phase. It is proposed to be a permanent access.

- E.35 It is noted that in APP-118 Table 1 the access will only be capable of allowing one large vehicle to enter or leave at any time. Unless the design is changed to allow two large vehicles to pass suitable traffic management processes must be in place to prevent this occurring. It is unclear if this is the access for the car park off Elms Road, which is also a factor in considering the design of the access. If this is an access for the car park it will be necessary for traffic to turn right (north) out of the access, a movement difficult with the proposed layout (figure 3).
- E.36 The plans showing the visibility splays in figure 2 although of poor quality appear to differ in location to that in figure 3 and 4. In the former the access is opposite a track and in the latter offset to the north.

Access B (U6003 Elms Road)

- E.37 Access B is a Secondary access for construction, operation and decommissioning. It is proposed to be a permanent access.
- E.38 The Applicant states in Table 2 that limited vegetation will be required. The LHA is concerned that without accurate plans supported by surveys that either visibility cannot be achieved in all dimensions or that significant vegetation clearance or earthworks are required to provide visibility within the three-dimensional envelope (i.e. 2.4m x 215m envelope within the driver's eye line of 600mm to 2000mm. The quality of the photographs in figure 5 do not, in the Councils' opinion, show that this can be achieved.
- E.39 The current entrance is gated. This will need to set back a sufficient distance to enable vehicles using the access to safely pull up in front of any closed gates without obstructing Elms Road.

Access C (U6003 Elms Road)

- E.40 Access C is a primary access for construction, operation and decommissioning. It is proposed to be a permanent access and provides an access to a car park and substation.
- E.41 The comments made for access A and B apply to access C. In particular if this is to be the primary permanent access then it should be designed for two large vehicles to pass or as an absolute minimum for a HGV and car to pass.
- E.42 It is noted in figure 9 that a large vehicle entering or leaving the site straddles the full width of Elms Road. The Council considers that, as this is the primary

permanent access to this site for all classes of vehicles, a larger access should be provided so that vehicles can pass on Elms Road.

- E.43 There is a discrepancy between figure 9 showing the vehicle track along the line of the existing track and figure 10 that shows the access track on the south side of the existing track. It is not clear which drawing is correct.
- E.44 The Councils consider that to allow two large vehicles to turn into / out of Elms Road without conflict the road either side of the junction needs to be widened to a minimum of 6.5m. Whilst widening at all junctions is preferable for safety and access reasons it is acknowledged there is a balance where this causes an environmental disbenefit. However, for the primary permanent access that we understand is also that for the temporary main car park the Councils consider widening essential.

Access D (C610 Newmarket Road)

- E.45 Access D is a secondary access for construction, operation and decommissioning. It is proposed to be a permanent access.
- E.46 Figure 11 shows a substantial amount of vegetation needs to be removed to provide the necessary visibility. It is not clear if the Applicant has considered the impacts of this in the ES or shown it on suitable site clearance plans.
- E.47 It is noted that in Table 4 the access will only be capable of allowing one large vehicle to enter or leave at any time and figure 12 that the vehicle will straddle the full width of Newmarket Road. Without suitable traffic management measures or improvements to the access this is a significant risk due to the high speed of traffic on this road.
- E.48 The access point is shown slightly further north in the figure 5-1 of the Design and Access Statement (APP-264) than the Framework Traffic management and Travel Plans figures 11 and 13.

Access E (C603 Ferry Lane formerly Freckenham Road)

- E.49 Secondary access for construction, operation and decommissioning. Permanent access.
- E.50 It is unclear whether this access or access K will be used for access to the substation during the operational phase.

- E.51 The Councils concur with the Applicant's comments in table 5 that the northern part of the triangular access would need to be closed to construction traffic as visibility south is below standard.
- E.52 Following the change request, it is not clear if this or access K will be used during the operational phase to serve the substation.
- E.53 Although of poor quality figure 15 suggests that only a single large vehicle, and potentially only a single light vehicle, can enter or exit the access at any moment. Either the access will require widening to allow two vehicles to pass or suitable and safe plans put in place to manage this, so that no conflict occurs and vehicles are forced to stop and wait on the bend.
- E.54 Figure 14 is illegible so no comment can be made regarding the proposed visibility at this access.
- E.55 Figure 16 shows a plan of 'junction work'. It is not clear what this work is.

Access F (C608 Beck Road)

- E.56 This site accesses onto the Cambridgeshire County Council highway network, close to the Suffolk County boundary.
- E.57 While the highway extent is not detailed on a plan, it appears likely that visibility will not be fully achieved within the public highway, especially to the south, although from the details provided, it is likely to be achievable across land within the Applicant's control. This must be clarified to ensure that appropriate visibility splays are provided and maintained.
- E.58 A 6m radius is to be provided to the northern side of the junction with a 14m to the south, to facilitate turning of larger vehicles. While Table 6 describes the need to accommodate this vehicle movement, it is unclear how this will be strictly controlled to prevent turning by HGVs across the tighter radius.
- E.59 The swept path movement is not shown in the same plan as the proposed junction layout, and it is not therefore possible to consider this in context or confirm that this is appropriate. Figure 18 shows that only a single large vehicle can enter or exit the access at any time and that to exit the vehicle has to use the full width of Beck Road.
- E.60 It is unclear whether the 6m wide access track, which Table 6 indicates, will be sufficient to safely accommodate the anticipated use.

- E.61 The hard standing evident on the image provided on page 25 of Annex C1 would not appear to be suitable to prevent material deleterious to the use of the highway from being tracked from the site on to the road.

Access G (C608 Beck Road)

- E.62 Access G is a secondary access for construction, operation and decommissioning. It is proposed to be a permanent access.
- E.63 No information is provided by the Applicant for this junction. Therefore, it is unclear if adequate visibility can be provided.

Access H (C610 Newmarket Road)

- E.64 Access H is a secondary access for construction and decommissioning. It is proposed to be a temporary access.
- E.65 Access H is shown in APP-264 Figure 5-1 as being opposite access D and north of an access track. Figure 20 shows it directly opposite the track and access A as shown in the figures in the Framework Construction Traffic Management Plan and Travel Plan.
- E.66 No visibility splays are provided nor are they shown in the figures for access. Due to the sinuous nature of Newmarket Road at this point there is a strong likelihood that significant vegetation clearance will be required to provide visibility at this location. Nor are any swept paths provided.
- E.67 The comments in table 7 'Site visit photos of the existing access to be used during the operational phase are shown below which is accessed from Golf Links Road 'appear to relate to access J.

Access I (C576 Newmarket Road)

- E.68 Access I is a secondary access for construction, operation and decommissioning. It is proposed to be a permanent access.
- E.69 The RSA 1 for this location raises a single issue, namely the risks associated with construction traffic turning out of the access. The recommendation was for a warning sign strategy to be developed during detailed design. The report also notes the departure from standards in terms of visibility stating that only 100m can be provided to the south of the access (i.e. towards traffic leaving the A11 northbound). This barely exceeds the distance required by guidance (DMRB) for a 30mph design speed.

- E.70 Unusually the full names of the auditors and their relevant experience are not provided. Nor is the relationship of the audit team to the design team clear.
- E.71 The plans in the Framework Construction Traffic Management Plan and Travel Plan (APP-118) Access I is described (table 8) and shown (figure 23). This appears to be a different location (on Golf Links Road) to that shown in Figure 5-1 of the Design and Access Statement (APP-264) for Access I (i.e. off Newmarket Road). The Applicant is requested to confirm where the location is reflecting the comments that have been made regarding the unsuitability of Golf Links Road for construction traffic.
- E.72 Figure 22 appears to show visibility for an access north of Golf Links Road, which does not appear in any other documents, although without the plan showing an orientation this cannot be confirmed.
- E.73 Figure 23 indicates that only one large vehicle can enter or leave the access on Golf Links Road (and that to the west away from the A11) although again without scale or orientation this is difficult to confirm. It also refers to the road safety audit which is clearly for the access off Newmarket Road. It is not clear if this figure refers to access J or an alternative location for access I, but from the photos appears to be the latter (no gate).
- E.74 The Councils consider that Access I is unacceptable due to the poor visibility to the south and the high speed of traffic on Newmarket Road likely to result in significantly increased risks for road users when construction traffic is turning in or out of this access.

Access J (C613 Golf Links Road)

- E.75 Access J is a secondary access for operation only. IT is proposed to be a permanent access.
- E.76 It is unclear at what stage this will be constructed. Presumably towards the end of the construction phase. As Golf Links Road has been accepted by the Applicant as being unsuitable for HGVs the Councils are concerned that this access may be used by significant numbers of HGVs during the operational phase if major replacement of solar panels, batteries or other infrastructure is required during the design life of the project.
- E.77 No information is provided regarding plan or visibility splays for a junction that will be in use for the duration of the operational phase.

Access K (C608 Beck Road)

- E.78 Access K is a crane access during construction and decommissioning and an emergency access during operational phase. It is proposed to be a permanent access.
- E.79 It is unclear in the application whether this access will be used for access to the substation during the operational phase.
- E.80 AS-3 (Access K) differs from other layouts by only enclosing part of the street (northern verge) implying that alterations are only required on the north side of Beck Road. As scaled plans for the access layout are not provided it cannot be confirmed if the improvements necessary to allow cranes and AIL movements fits within the area shown.

Grid Connection Route and Grid Connection Route B

Grid Connection site A – Burwell National Grid Substation Extension – Option 1 – Wier Drove

- E.81 No longer considered feasible and withdrawn from scheme proposals.

Grid Connection site B – Burwell National Grid Substation Extension – Option 2 – Newnham Drove (East)

- E.82 Newnham Drove does not benefit from a modern form of construction. Trafficking by large vehicles or even frequent use is likely to result in premature failure.
- E.83 The drove is not suitable for two-way movement with no formal passing places between Wier Drove and the proposed access. The road is regularly used by pedestrians who will be displaced on to irregular verges to avoid motor vehicles risking slips, trips and falls. Regular passing places should be provided as part of the FCTMP&TP.
- E.84 The vehicular swept path shown in point 5.9.13 shows the wheel track extending over an adjacent ditch. This does not appear to be public highway and it is unclear whether it is within the DCO boundary to enable the necessary junction works.
- E.85 Any works to divert or pipe the existing ditch to facilitate construction of junction widening should have the prior approval of the LLFA.
- E.86 While it is proposed to widen the drove to 3.5m, it is not clear from the swept path detailed in Figures 41 and 43 whether this will be sufficient to accommodate the wheel track. This may result in vehicle overhang and damage to the edge/haunch of the road.

- E.87 On Figure 2, the vehicle swept path appears to utilise a localised widening of the road which is less apparent on site or aerial photograph than on the base plan used for this assessment. It is recommended that an accurate survey is undertaken to inform the design of any road widening.
- E.88 A visibility splay of 2.4 by 215m is indicated on Table 2, but it is not demonstrated on plan to confirm that this can be achieved within the existing highway or land within the DCO boundary.

Grid Connection site C – Anchor Lane, Burwell

- E.89 Anchor lane is narrow road serving Anchor Lane farm and several residential dwellings. Its width in places is insufficient for two vehicles to pass and is unsuitable for any further intensification of use without significant improvement. It is unclear however, whether this can be achieved within the existing public highway.
- E.90 While Table 3 indicates that the lane will be accessed by 16.5m artic, the swept path detail in Figure 5 shows only an 8m ridged vehicle. It appears unlikely that and 16.5m artic would manage the route shown.
- E.91 It is unclear whether Anchor bridge has structural capacity to accommodate the vehicle loading proposed.
- E.92 While the highway extent is not detailed on plan, it appears unlikely that visibility splay shown on Figure 4 cannot be achieved within the highway as the line shown clearly passes through existing boundary features at adjacent properties.

Grid Connection site D – Little Fen Drove (south), Burwell

- E.93 It is unclear why the road shown on Figure 9 and 10 is detailed as Factory Road rather than Little Fen Drove as per the title.
- E.94 While visibility is likely to be achieved fully within the public highway, in the absence of verified highway extents, this cannot be confirmed. Significant trimming of foliage is likely to be required to achieve the visibility detailed.
- E.95 The existing access will require significant widening to accommodate the movement shown; this will affect the adjacent ditch. Any works within this watercourse will require the permission of the LLFA with appropriate consent to pipe or obstruct the ditch.
- E.96 No radius is detailed on the western side of the junction, and it is unclear whether turning in this direction can be entirely dismissed

- E.97 There is a pole mounted transformer and secondary pole located on the northern side of the crossing. The proposed access road must be sufficiently offset to prevent risk of vehicular collision or otherwise, the apparatus should be relocated clear of the access. Special care must be taken during the operation of this access to prevent cable strike.

Grid Connection site E – Little Fen Drove (North), Burwell

- E.98 It is unclear why the road shown on Figure 9 and 10 is detailed Factory Road rather than Little Fen Drove as per the title.
- E.99 While visibility is likely to be achieved fully within the public highway, in the absence of verified highway extents, this cannot be confirmed. Significant trimming of foliage is likely to be required to achieve the visibility splay detailed on the plan.
- E.100 The existing access will require significant widening to accommodate the movement shown; this will affect the adjacent ditch. Any works within this watercourse will require the permission of the LLFA with appropriate consent to pipe or obstruct the ditch.
- E.101 No radius is detailed on the western side of the junction, and it is unclear whether turning in this direction can be entirely dismissed. Given the likelihood of ahead movements between accesses D and E, it is extremely likely that this will occur irrespective of any site rules which are likely to be difficult to police, especially during the operational phase.

Grid Connection site F – First Drove (off Broads Rd), Burwell

- E.102 There does not appear to be any indicative layout or swept path analysis for vehicles using this access and it is not therefore possible to consider this site in context, including whether the junction at Broads Road would be suitable for vehicles joining First Drove.
- E.103 First Drove is insufficiently wide to enable two vehicles to pass without overrun of adjacent surfaces. The road is unlikely to benefit from modern standards of road construction and is likely to be vulnerable to premature failure from any unusual use by large vehicles.
- E.104 It is unclear whether bridge 592688 which the road crosses is suitable for the proposed vehicle loading.

- E.105 Any widening of the drive that effects the adjacent watercourse will require permission from the LLFA.
- E.106 The interaction of this proposed route/access with pedestrians using Footpath 35/10 and 35/11 must be considered in determining the feasibility of the proposed site.

Grid Connection site G – Broads Road, Burwell

- E.107 While the highway extent is not detailed on plan, it appears that the visibility splay shown on Figure 12 cannot be achieved fully within the public highway or within land shown within the DCO boundary.

Grid Connection site H – Ness Road, Burwell (B1102) (South)

- E.108 No additional comments.

Grid Connection site I – Ness Road, Burwell (B1102) (North)

- E.109 While the highway extent is not detailed on plan, it appears likely that the visibility splay to the south can be achieved within the highway. It is however less certain that visibility to the north can be similarly achieved due to the proximity of adjacent property boundary. This will need to be reviewed and clarified.

Grid Connection site J – A142 - Fordham By-pass, Fordham

- E.110 While the swept path detail shows that a 16.5t artic can physically manage the turn into the site, it is less clear that this can be undertaken at a speed appropriate to Fordham bypass. While this is an existing access it appears to be designed to provide access across the A142 rather than for a vehicle turning in from it.
- E.111 There is a risk that drivers following a vehicle turning in to this access may misinterpret the vehicles turning indicator to relate to manoeuvring at the roundabout ahead rather than at this access. Failure to anticipate early braking may result in shunt type accidents, which would be exacerbated if the access radius provided is not appropriate to the speed of the road.
- E.112 While visibility should be satisfactory given the existing use, this should be reviewed with special consideration to the change in level across the verge.

Grid Connection site K- C145 - Newmarket Road, Fordham

- E.113 The junction does not appear to take account for the existing footway or likely pedestrian use. The junction design must include for continuity of existing footways and appropriate crossing of the proposed junction with appropriate

visibility. Where a wide access is necessary and subject to anticipated flows, a central island between entry and exit lanes may be required to facilitate crossing.

Grid Connection site L - C145 - Newmarket Road, Fordham

- E.114 No additional comments.

Grid Connection site M- C145 - Chippenham Road, Snailwell

- E.115 It is unclear why the details of this access were included in section C1 rather than C2.
- E.116 The position of the access shown on figure 32 appears different to that shown on plan CTMP-11 Rev 0, and no longer appears to be opposite Access N. The DCO boundary should be reviewed to ensure that this can still be constructed in the DCO extent.

Grid Connection site N- Chippenham Road, Snailwell

- E.117 It is unclear whether visibility to the east can be achieved due to the presence of an existing field boundary.
- E.118 Visibility to the west may be compromised by the canopy of trees planted in the adjacent verge.
- E.119 At this stage, it is not possible to determine whether it would be appropriate to construct the access with no radius to the east. Should a radius be necessary, it is likely to conflict with the operation of the adjacent field access, which should not enter within the radius to the access. This may require the proposed access to be relocated further from the existing access.

Grid Connection site O- C145 – La Hogue Road, Chippenham

- E.120 No junction radii or access width is apparent on Figure 31 or 32 making this difficult to consider.
- E.121 No Highway extents are detailed on plan, and it is unclear whether visibility shown can be achieved within the Highway or DCO boundary. If this can be achieved, it is likely to require removal or significant trimming of established hedges on either side of La Hogue Road.

Grid Connection site P – B1085 (North)

- E.122 No Highway extents are detailed on plan, and it is unclear whether visibility shown can be achieved within the Highway or DCO boundary. If this can be achieved, it is likely to require removal or significant trimming of established hedges and trees.

Grid Connection site Q – B1085 (South)

- E.123 No Highway extents are detailed on plan, and it is unclear whether visibility shown can be achieved within the Highway or DCO boundary. If this can be achieved, it is likely to require removal or significant trimming of established hedges and trees.

Cable route site access R and S (B1102 Freckenham Road)

- E.124 Within the FCTMP&TP (APP-114) figure 36 shows the visibility spays for Access R and S.
- E.125 The drawing is of poor quality and not to scale. It is not possible to assess whether or not the visibility plays are within the order limits or the highway boundary. It is possible this access may also be used for internal traffic to cross the B1102, but other than an aspiration by the client to internalise at least mini-bus movements (FCTMP&TP (APP-114) 7.2.30) no details are in the application documents.

Cable route site access T (C608 Isleham Road)

- E.126 Within the FCTMP&TP (APP-114) figure 36 shows the visibility spays for Access T. As with Accesses R and S the plans are poor and not to scale making any assessment impossible. However, it is noted that the visibility splay to the east lies across land that is clearly not public highway nor within the order limits and hence, not deliverable.

Annex F: Transport – Comments on the draft DCO and Supporting Documents

dDCO (APP-019) Schedule 4 Permanent (Part 1) and Temporary (Part 2) Alteration of Streets and Access and Rights of Way Plans (APP-008)

- F.1 The areas shown on the Access and Rights of Way Plans are based on a presumed highway boundary that has not been verified by the Councils. Without such details it is not possible to confirm that the proposed access designs are feasible or deliverable, for example in terms of vegetation clearance, drainage or placement warning signs.
- F.2 The Councils consider that the powers in the dDCO allows the Applicant to undertake alterations to the public highway within the areas shown in the Access and Right of Way Plans and listed in Schedule 5 without the LHA consent or approval. Due to the poor quality of the plans included in the application the LHA is greatly concerned that temporary and permanent works may be undertaken by the applicant which do not comply with relevant design and safety standards. The LHA may have to inherit such works and be required to make alterations at public expense. REF article ..

Access and Rights of Way Plans (APP-008)

- F.3 AS-3 (Access K) differs from other layouts by only enclosing part of the street (northern verge) implying that alterations are only required on the north side of Beck Road. As scaled plans for the access layout are not provided it cannot be conformed if the improvements necessary to allow cranes and AIL movements fits within the area shown.
- F.4 AS-4 (Access E) is not on Ferry Lane. This road is actually the C603 Freckenham Road as can be confirmed by checking the street gazetteer <https://www.findmystreet.co.uk/>.
- F.5 AS-5 (Temporary Works) is at the junction of Beck Road and Freckenham Road (not Ferry Lane).
- F.6 AS-6 (Cable Route Access T). No plans of alterations have been provided by the Applicant so the LHA cannot confirm that the alterations can be delivered within the area shown on the plan.
- F.7 AS-7 (Cable Route Access R and S). No plans of alterations have been provided by the Applicant so the LHA cannot confirm that the alterations are within the area shown on the plan.

- F.8 AS-11 (Access I). The discrepancies between the location of Access I on the Access and Rights of Way Plans and the Design and Access Statement (APP-264) and the plan provided in the Framework Construction Traffic Management Plan have been highlighted elsewhere in this report.
- F.9 Access E. It is noted that there is no reference to permanent or temporary alterations at Access J on Golf Links Road in Schedule 5 or the Access and Rights of Way Plans although it is included in Schedule 7 Access to Works as a permanent means of access.
- F.10 AS-15 (Elms Road). No details have been supplied regarding to any works at this location, so it is not possible to provide comments.

Schedule 14 Part 1 Permanent and Part 2 Temporary Speed Limits

- F.11 FCTMP&TP Rev 1 Section 6.1.4 state that there will be no more than on temporary road closure or PRoW at any time. The FCTMP&TP will need to be a certified document to ensure this commitment is secured.
- F.12 It is noted that a number of temporary speed restrictions are proposed at access points. Without additional engineering measures and / or enforcement the provision of reduced speed limits should not be assumed to limit driver behaviour and thus the LHA would not accept departures from key design criteria based on such speed restrictions.
- F.13 Where permanent access is being created or use of existing access intensified, they should be designed to the existing speed limit unless otherwise agreed with the Councils. If permanent speed limits are proposed, they should comply with the relevant authority's guidance on speed limits.

Schedule 14 Part 3 Temporary Road closures

- F.14 The dDCO (APP-019) article 44 (1) refers to temporary road closures detailed in schedule 14 column 3. The article allows the undertaker powers:
- 44 (3) (d) permitting, prohibiting or restricting the use by vehicular traffic or non-vehicular traffic of any road
 - 44 (3) (e) suspending or amending in whole or in part any order made, or having effect as if made, under the 1984 Act – would not give consent as required by (5) (b) object if this requires removal of traffic order implemented for reasons of road safety.
- F.15 The Applicant further states in Schedule 14 Traffic Regulation Measures Part 3 Temporary Road Closures (APP-019) that the roads shall be '*closed to all traffic*

save traffic under the direction of the undertaker'. The Councils are concerned that these orders will prevent through access for pedestrians and cyclists and for motorised / emergency access to properties within the road closure contrary to local and national guidance

- F.16 Advice in the SCC road closure application form clearly states in Annex A Operational *'pedestrian / cycle and access to properties must be maintained at all times unless otherwise agreed'*
- F.17 also states that 'wherever possible, access should be maintained for cyclists in both directions throughout the period of road works, avoiding more hazardous diversions. Cyclists are unlikely to accept lengthy detours or long delays. In such conditions some cyclists will be tempted to ride contra-flow or use the footway'.
- F.18 The Code of Practice for Streetworks states that *'in certain cases the location or nature of the works being undertaken will make it impossible to achieve a safe working area and maintain traffic or pedestrian flows around the works. In these cases a carriageway, footway or footpath closure will be required. This option can only be considered if there is a suitable diversion route for the affected traffic or pedestrians, and under no circumstances should pedestrian access be denied to any property or premises. A risk assessment must be carried out on any diversion route to ensure it is suitable and safe for the diverted traffic or pedestrians'*.
- F.19 The code of practice also warns that 'a risk assessment must be carried out on the diversion route to ensure it is suitable and safe for the diverted traffic'. No diversion routes or risk assessments have been provided to the Councils.
- F.20 The Traffic Signs Manual Chapter 8 (Part 1) road works and temporary situations – design also includes guidance of access for pedestrians and cyclists within road closures and road works, which includes the following:
- D3.15.6 When designing diversion routes at work sites, the designer should consider the needs of cyclists, who are unlikely to accept lengthy detours or long delays and are likely to ignore the diversion signs and/or use the footway. Guidance on catering for the needs of cyclists and other non motorised users at work sites is given in Section D3.32.
- D3.32.1 Where pedestrians, cyclists, equestrians and other vulnerable road users are affected by road works, the designer should give detailed consideration to minimising the impact on them and ensuring suitable alternatives exist. This consideration should include the following:
- review length and advance signing of diversion routes;

- safety implications of temporary surfaces, obstructions, ramps, diversions etc.;
- impact on frontagers;
- standard of surface/gradients/lighting;
- adequacy of lane widths for cyclists past the works and/or on the diversion route (see Traffic Advisory Leaflet 15/99);
- adequacy of crossing facilities for pedestrians;
- the needs of children, particularly if schools or play areas etc. are nearby;
- the impact on bus stop locations and access to bus stops;
- closing off of unsafe access across works; and
- arrangements for those with restricted mobility and other special needs.

D5.18.1 Access for emergency vehicles through the site must be maintained at all times whenever practicable. Proposals for emergency access need to be discussed with the emergency services early in the design; see Section D2.6. The designer should make adequate provision for such access and the risk assessment must consider how to make allowances for this without compromising any safety zone requirements. If convenient roads are available, temporary diversions may need to be arranged and signed; see Section D3.15.

- F.21 The description of the location of Beck Road (RC10A to RC10B) in sheet 21 of the Traffic Regulation Measures Plans – Road Closures (APP-011) and the dDCO (APP-019) Schedule 14 incorrectly refers to the junction with Ferry Lane. This should be Freckenham Road to be consistent with the street gazetteer.
- F.22 No diversion route has been proposed for closure of the any roads. The Councils note that any diversion will involve considerable extra distance to be travelled by road users and would strongly recommend construction techniques (such as HDD) or less disrupted traffic control measures are used to avoid closure.

Schedule 14 Part 4 Temporary Traffic Signals

- F.23 Temporary traffic signals shall comply with guidance on the use of portable traffic signals can be found in An Introduction to the Use of Portable Vehicular Signals, commonly known as the ‘Pink Book’, and in Traffic Advisory Leaflet 2/11: Portable traffic signals for the control of vehicular traffic. The details of any 3 and 4 way temporary traffic signals should be agreed with the Councils.

- F.24 No details are provided in the Traffic Regulation Measures (Temporary Measures APP-013 or the FCTMP&TP APP-118) on what form of traffic signals will control access, egress or crossing of the public highway. In a number of locations (Elms Road, B1102 Freckenham Road and C610 Newmarket Road, Worlington) it appears that 4-way temporary signals will be required. The LHA would specify that preference should be given to phasing of these lights to priorities movements on the public highway rather than in or out of the development to avoid unnecessary delay to road users. It is unclear if the extent of the traffic signals shown on the plans has been checked to ensure that the visibility is sufficient, noting the Councils' comments elsewhere on driver compliance with temporary speed limits.
- F.25 The Councils consider that approval will be required for the design of such temporary traffic management within the technical approval process and that liability for any damage or loss resultant from the implementation and maintenance of the measure lies with the Applicant not the relevant LHA.
- F.26 The duration of these measures shown in the table below indicates they will operate for a number of months often at the same time. This is a matter that may affect driver delay that has not been considered within the ES driver delay assessment. It is also unclear what the process will be for installing the same traffic management for accesses used in the operational phase, particularly if the permanent design does not provide for sufficient road safety (e.g., visibility) commensurate with the 'normal' road conditions.
- F.27 The Applicant is requested to explain how the two sets of temporary traffic signals on Elms Road will operate as they are near each other and will operate at the same time (months 13 to 24).