OXFORDSHIRE
STRATEGIC RAIL FREIGHT INTERCHANGE

DCO Submission

Environmental Statement

Non-Technical Summary (NTS)

On behalf of
Oxfordshire Railfreight Limited

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Revision A

Prepared by Oxalis Planning Ltd
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CONTENTS

1.1 INTRODUCTION TO EIA/ENVIRONMENTAL STATEMENTS

1.2 PURPOSE AND STRUCTURE OF THE NON-TECHNICAL SUMMARY

1.3 GLOSSARY OF TERMS

1.4 SITE LOCATION AND SURROUNDINGS

1.5 DESCRIPTION OF PROPOSED DEVELOPMENT

1.6 SUMMARY OF ASSESSMENT OF LIKELY ENVIRONMENTAL EFFECTS (BY ES TOPIC)

1.7 CONCLUSIONS

APPENDICES

Appendix 1 – Parameters Plan

Appendix 2 – Components of Development Plan

1.1 INTRODUCTION

1.1.1 This Non-Technical Summary (NTS) forms part of the submitted DCO application for the Oxfordshire Strategic Rail Freight Interchange project (known as 'OxSRFI'). The role of an NTS is to provide an accessible, non-technical summary of the Environmental Statement (ES).

1.1.2 An ES is a series of studies which have been commissioned to address the environmental issues which are considered pertinent to the construction and operational phases of the Proposed Development. An ES is the product of the Environmental Impact Assessment (EIA) process which is an interdisciplinary and multistep procedure to ensure that environmental considerations and an understanding of any likely significant effects are available to decision-makers regarding projects that may impact the environment.

1.1.3 The submitted ES follows a formal 'Scoping' process undertaken in 2021. Although not a statutory requirement, the scoping process provides an opportunity to agree with the decision-maker (in this case scoping was undertaken with the Planning Inspectorate (PINS) on behalf of the Secretary of State) which environmental topics should be included in the ES because impacts of the Proposed Development upon those aspects of the environment could potentially result in "*likely significant effects*". A formal 'Scoping Opinion' was provided to the Applicant by PINS in July 2021.

1.1.4 The Scoping process resulted in the ES for the OxSRFI scheme consisting of the following 'technical' chapter topics:

Table 1.1: Environmental Statement Chapters Guide

Chapter number	Author	Environmental Statement Topic/Heading
1	Oxalis Planning	Introduction
2	Oxalis Planning	Description of Development and Alternatives
3	ADC Infrastructure	Transport
4	Phlorum	Air Quality and Odour
5	Vanguardia	Noise and Vibration
6	FPCR	Ecology including Arboriculture

Chapter number	Author	Environmental Statement Topic/Heading
7	FPCR	Landscape and Visual effects
8	Design For Lighting	Lighting
9	BWB	Water Environment (including Flood-Risk, Drainage and Water Quality)
10	RPS and Marrons	Heritage (Built and Archaeology)
11	BWB	Ground Conditions
12	GC Insight	Socio-economic (including Human Health)
13	WSP	Materials and Waste
14	Land Research Associates	Soil Resources and Agricultural land
15	RPS	Climate Change
16	Oxalis Planning	Cumulative Impacts

1.1.5 Table 1.1 also shows the authors for each chapter. The ES chapters have been progress since the drafts issued as part of the stage 2 (statutory) consultation held in Autumn 2025.

1.1.6 The ES is based on an assessment of the Proposed Development as defined and presented on the Parameters Plan (**Appendix 1** of this NTS), and described in ES Chapter 2. The ES assesses the likely impact of the Proposed Development on the environmental topics and reaches a conclusion on the level of significance of the likely impacts with regard to:

i. The construction phase of the Proposed Development;
ii. The operational phase i.e., all the Proposed Development completed in place and operational;
iii. The residual effects remaining once proposed mitigation measures have been applied.

1.1.7 The assessment methodology for each topic area broadly involves the following stages, albeit where appropriate with regard to best practice or other

forms of guidance, some topics may include methodologies specific to that topic:

- Description of existing baseline environmental conditions formulated by site visits, surveys, and collected information.
- Introduction and adoption of appropriate criteria and conjecturing methods to enable the significance of change to the environment to be assessed.
- Reasoned prediction of the nature and significance of changes to the environment as a consequence of the construction and operational activities of the Proposed Development. This includes any 'embedded' mitigation measures included within the proposals.
- Identification of any 'additional' mitigation measures, if and where appropriate, which would eliminate or minimise likely significant effects.
- Reference to any residual effects that may occur after mitigation has been implemented.
- Cumulation with other planned (committed) developments.

1.1.8 Each ES chapter explains the detailed approach to the assessment but in general terms, these include consideration of whether likely effects are:

i. Direct or indirect; temporary, or permanent;
ii. Over the short term (0-5 years), medium term (6-14 years), or long term (15 years plus); and
iii. Whether the effects are judged to be positive (beneficial) or negative (adverse).

Cumulative Effects

1.1.9 Each ES chapter considers potential or likely cumulative effects. These can be broadly defined as the effects of the Proposed Development when assessed cumulatively in the context of other planned (committed) projects. In addition, consideration is given throughout the ES to the potential for cumulative (i.e. more than one) type of impact or effect on any individual receptor or types of receptor. These are referred to in the assessment as 'impact interactions' and are discussed and assessed in ES Chapter 16 which considers both impact interactions and other potential cumulative effects.

1.1.10 The Transport Assessment (TA, Appendix 3.1 to the ES) considers an extensive range of sites and proposals, considerably more so than most other topics which form part of the ES. The TA includes assessment of scenarios

based around the emerging new Local Plan for Cherwell District which assumes development across many sites over the coming years. This ensures a robust 'worst-case' assessment of potential cumulative effects. The TA is therefore inherently cumulative, and takes account of traffic expected from other planned and committed sites as well as from the Proposed Development. Traffic data produced from the TA modelling also directly informs the final assessment of Air Quality and Noise (so these too take account of cumulative issues).

1.1.11 Beyond Transport, the list of planned (committed and some other) projects which are considered within each of the other topics as part of the cumulative assessment comprises those set out in Table 1.2 in ES Chapter 1. This list was informed by the ES Scoping process, and in dialogue with consultees.

1.2 PURPOSE AND STRUCTURE OF THE NON-TECHNICAL SUMMARY (NTS)

1.2.1 An NTS is intended to summarise the findings of the ES which identifies any likely significant environmental effects as a result of the Proposed Development. It is provided to enable wider public dissemination of the environmental effects of the project (beneficial or adverse), and is intended to provide a relatively accessible (non-technical) overview of the content of the ES.

1.2.2 Therefore, the NTS is structured using the ES chapter headings as set out in Table 1 above, and summarises the key findings from the each Chapter in a relatively brief and simple form.

1.3 GLOSSARY OF TERMS

1.3.1 A Glossary of Terms describing the physical components of the OxSRFI scheme are set out in Table 1.2 below and corresponds with the Components Plan (**Appendix 2**) which accompanies this NTS.

Table 1.2: Glossary of Terms for Physical Components of the OxSRFI Scheme

Development Element	Description
Application Site	the land encompassed within a red line boundary being all the land affected by the proposals to be described as the "Order Limits". This is the maximum extent of the land likely to be affected by the Proposed Development and will be reviewed as the scheme proceeds through consultation and engagement with stakeholders.
Ardley Bypass	a bypass to the east of the village of Ardley, including realignment of Ardley Road and associated works to footpaths and bridleways.
Ardley Tunnel Works	works to ensure W8 gauge through the tunnel
Ashgrove Cottages	the retention of the existing cottages and their re-use for rail and estate management and other facilities
Central Hub	the development within the central part of the Main Site, centered around the listed building, which is to be used for a potential range of estate management and other facilities for workers and visitors on the Main Site
Foul Drainage Outfall	the provision of foul drainage outfalls to Bicester and Ardley
Heyford Park Link Road (HPLR)	the length of new road between the B430 and Heyford Park including the Secondary Access.
Highway Works	the J9 Highway Improvements, J10 Highway Improvements, Ardley Bypass, Principal Access, Middleton Stoney Relief Road, Heyford Park Link Road, Secondary Access, A4095 / B4030 roundabout works[1], other Local Highway Works and Active Travel Works.
J9 Highway Improvements	the highway works to be carried out in connection with the improvement of J9 of the M40 motorway.
J10 Highway Improvements	the highway works to be carried out in connection with the improvement of J10 of the M40 motorway, including works to the A43 Baynard's Green roundabout and associated works to the local road network.
Landfill	the area adjacent to the Chiltern Main Line Railway which will include highways works, an opening to allow a rail connection into the Main Site and the relocation (reprofiling) of landfill material.

[1] The improvement works at the A4095/B4030 roundabout will be delivered by the Applicant unless Oxfordshire County Council request a Section 106 Agreement contribution to be used to deliver improvements as part of a wider package of improvements in that area.

Main Site	the area to be occupied principally by the Rail Terminal, the rail served warehousing and the Central Hub, incorporating rail connections from the Chiltern Main Line.
Middleton Stoney Relief Road (MSRR)	a relief road to the north east of the village of Middleton Stoney linking the B4030 to the B430.
Order Limits	this is the maximum extent of the land likely to be affected by the Proposed Development and will be reviewed as the scheme proceeds through consultation and engagement with stakeholders
Other Local Highway Works	the highway works to be carried out at the junction of Camp Road and Chilgrove Drive, Middleton Road, the B430 west of the Main Site, Quarry Cottages, Middleton Stoney Crossroads, Aves Ditch, and potential works to the A4095/B4030 in Bicester (see footnote 1 above).
Principal Access	the principal access to the Main Site from the B430.
Proposed Development	the entirety of the development for which approval is sought.
Rail Terminal	the terminal which deals with the transfer of containers from rail to HGV and vice versa.
Secondary Access	the secondary access to the Main Site for buses, emergency vehicles and pedestrians/cyclists only from the Heyford Park Link Road.
SRFI	the Strategic Rail Freight Interchange terminal

1.4 SITE LOCATION AND SURROUNDINGS

1.4.1 The proposed '**Main Site'** is located between the B430 and the former Upper Heyford Airfield, which is located to the west of the Main Site. It is immediately south of the Chiltern Main Line. It predominantly consists of agricultural land used for mixed arable and grazing purposes and includes the Ashgrove farmstead ("Ashgrove Farm") which comprises a number of farm buildings and residences. The farmstead includes a listed building.

1.4.2 The Main Site includes several existing Bridleways (Right of Way) routes 109/28, 109/29 and 109/30, with a number of new routes or extensions to existing routes nearby proposed or committed in the vicinity of the Main Site. Some of these new routes are mitigation approved as part of the approved Heyford Park development scheme to the west.

1.4.3 Also within the Main Site is the Biffa operated 'In-Vessel Composting' (IVC) Facility which is an operational commercial food and garden waste composting facility. The IVC facility comprises a weighbridge, reception building, composting tunnels, office and welfare facility, bio filter and maturation pad. The site receives waste from refuse collection which is turned into bagged compost product. The IVC Facility lease finishes in 2030 and the operator will vacate the site at that time if the OxSRFI scheme has been approved. The operations would cease on-site and buildings and structures would be demolished as part of delivering OxSRFI. The current facility supports relatively low employment levels (assumed to be 10 Full Time Employees (FTE)).

1.4.4 There is an underground reservoir in the south east part of the Main Site to the north of the proposed Heyford Park Link Road which will remain. In connection with the reservoir there are some substantial water mains. It is likely that some of the water mains will be diverted in agreement with Thames Water.

1.4.5 To the east of the Main Site and east of the B430 is the Viridor Ardley Energy Recovery Facility ("Viridor ERF"), as well as the Ardley Fields Household Waste and Recycling facility and Ardley Landfill Site – part of the landfill south of the Chiltern Main Line is within the Order Limits, associated with the proposed rail connections to serve the proposed Rail Terminal. Further south of the waste facilities is the active 'Dewars Farm' minerals quarry (limestone and clay).

1.4.6 The village of Ardley is located to the north of the Main Site and north of the Chiltern Main Line, and separated from the Main Site by intervening agricultural land and established woodland.

1.4.7 The village of Middleton Stoney is located approximately 1.5km to the south of the Main Site, separated by intervening agricultural land and associated landscape and field boundary features. Within the intervening land lies the farmstead of Manor Farm.

1.4.8 The M40 motorway runs nearby, to the east of the Main Site, as well as to the east of both Ardley and Middleton Stoney, with the town of Bicester beyond the M40 in a south-easterly direction from the Main Site.

1.4.9 The Highways Works include land on both the eastern and western sides of M40 Junction 10 which is largely in agricultural use already directly influenced by highways infrastructure. The proposed, less substantial works at M40

Junction 9/A43 are similarly closely related to the existing highways infrastructure and have a more limited impact on currently undeveloped land.

1.4.10 The site of some proposed works includes the Padbury Brook watercourse. The proposed Ardley Bypass is on land to the east of Ardley, and crosses a number of existing field hedgerow boundaries, as well as the Chiltern Main Line.

1.4.11 Similarly, the Middleton Stoney Relief Road includes agricultural land to the north and east of the village and includes sections of woodland as well as the Gagle Brook corridor.

1.4.12 The Transport Assessment, and dialogue with the Transport Working Group (TWG) of relevant consultee bodies, including Oxfordshire County Council, has informed decisions regarding the need for local improvements at the A4095/B4030 roundabout at the eastern end of the B4030 corridor on the western edge of Bicester.

1.5 DESCRIPTION OF DEVELOPMENT

1.5.1 ES Chapter 2 describes the Proposed Development in some detail. The proposals consist of several related components (as made clear in the glossary list above), and these are shown on the Components Plan appended to this NTS (**Appendix 2**).

1.5.2 However, in summary, the Proposed Development consists of the following:

- An **intermodal rail freight terminal**, including rail connections and improvements to the Chiltern Main Line including works to Ardley Tunnel, rail sidings, container storage, HGV parking and associated buildings;
- **Up to 603,850 sqm (approx. 6.5 million square feet) of warehousing** and ancillary buildings, plus up to 201,283 sqm of additional floorspace in the form of mezzanines;
- The retention, rejuvenation and **re-use of Ashgrove Farm and associated buildings**, including Ashgrove Cottages as part of a 'Central Hub' to provide estate management, training and communal facilities to serve the site;
- A secure, dedicated **HGV Parking area** including driver welfare facilities;

- **New road infrastructure and works** to the existing road network, including improvements to M40 J10 and junctions on the A43 provision of the principal site access and associated works on the B430, a bypass to the village of Ardley linking the site directly with M40 J10, a relief road around the north eastern side of the village of Middleton Stoney, a link road connecting the B430 to Camp Road, improvements to M40 J9 and other highway improvements at junctions on the local highway network and related traffic management measures;
- **New and improved pedestrian and cycle infrastructure** both on the Main Site and in the surrounding area connecting the Main Site to local communities;
- **Demolition** of existing structures within the Application Site – the IVC Facility will be demolished after the lease ends in 2030;
- **Earthworks** to create development areas, construct the rail freight terminal and connections to the Mainline and form landscape screen mounding;
- The retention of key **landscape features** together with new strategic landscaping, general planting and biodiversity enhancements.
- On and off site works associated with **utilities** including for foul drainage connections.

1.5.3 The development is described in further detail in Chapter 2 of the ES. The components of the Proposed Development on the Main Site have defined parameters which are set out on the **Parameters Plan** (**Document 2.5** and in the detailed description of development in Chapter 2.

Construction and Phasing

1.5.4 It is anticipated that the general construction programme will broadly be broken down into four key components, as listed below:

- Highways improvements:
  - J10 Highway Improvement Works;
  - A43 Trunk Road works;
  - Ardley Bypass link from J10 to and including the Principal Access;
  - Middleton Stoney Relief Road;
  - Heyford Park Link Road;
  - Other off-site works including
    - A43 Baynard's Green Roundabout
    - Middleton Road
    - Works to the B430 east of the Main Site;

- Quarry Cottages;
- Works at the junction of Camp Road and Chilgrove Drive;
- Middleton Stoney crossroads
- Aves Ditch;
- Minor works to M40 J9; and
- Improvements to the A4095/B4030 roundabout.

- On-site works (not including rail and buildings):
  - Site preparation;
  - Earthworks;
  - Landscaping;
  - Biodiversity enhancement works;
  - Main Estate Road.
- Rail Freight Terminal;
- Warehouses and Central Hub;

1.5.5 The above works are expected to be phased over a 7-year period, and this forms the basis of the assumptions in the ES. Assuming the Development Consent Order is made (i.e., assuming an approval), construction works are assumed to begin in 2028. An indicative Master programme, appended to the Construction Environmental Management Plan (CEMP) (**ES Appendix 2.3**), sets out the anticipated programme for the construction of the Proposed Development.

1.5.6 The proposed approach to the phasing of works would see a process of technical approvals alongside initial site preparation works. The development will commence with Main Site earthworks closely followed by highways works which comprise the Principal Access junction, Ardley Bypass (linking the Principal Access to M40 J10), Junction 10 Highway Improvements, the A43 Baynard's Green Roundabout and Heyford Park Link Road.

1.5.7 A temporary construction access for the Main Site from the existing Ashgrove Farm access off the B430 will be in place until the main construction access is delivered, and will be at a similar point as the Principal Site Access off the B430.

1.5.8 The proposals involve a commitment to the construction of significant infrastructure early in the development process, including the rail terminal and rail connections to the main line, highway works, earthworks and landscaping.

1.5.9 The CEMP (**ES Appendix 2.3**) has been prepared which sets out the overarching system and controls that will be adopted during the construction of the Proposed Development to minimise any adverse environmental effects.

In particular, the mitigation proposed during the construction of the Proposed Development, in many cases, relies on the construction management regime that will be enforced through the CEMP and subsequent phase specific CEMPs (P-CEMPS).

1.6 SUMMARY BY ENVIRONMENTAL STATEMENT TOPIC

Transport (ES Chapter 3)

1.6.1 The ES Transport chapter focuses on the transport-related impacts of the Proposed Development, including how it will affect roads, public transport, walking and cycling routes, rights and way (RoW), and the environment. It outlines the measures proposed to reduce any significant adverse effects and improve transport infrastructure in the area. The ES Chapter reflects modelling and analysis work which informed the assessment and conclusions.

1.6.2 A Transport Working Group (TWG) was formed in 2020, comprising representatives from Oxfordshire County Council (OCC), National Highways, and Cherwell District Council (CDC). The TWG has met regularly to guide the transport strategy. Feedback from the TWG and from the public consultation stages (Stage 1 non-statutory) and Stage 2 Statutory) has shaped the design of the Proposed Development and mitigation measures.

1.6.3 The transport assessment work is based on a three-stage modelling process:

- **Stage 1** – Designing the necessary highway improvements (part of the embedded mitigation).
- **Stage 2** – Strategic modelling using OCC's Bicester Transport Model (BTM), which simulates traffic flows and future conditions.
- **Stage 3** – Detailed modelling of study area junctions to confirm outcomes and identify and additional mitigation.

1.6.4 A key part of the assessment work for the OxSRFI scheme is understanding how the Proposed Development interacts with other planned and committed projects in the area. This is known as the cumulative effects assessment, and it ensures that the combined impact of multiple developments is properly considered. The BTM simulates traffic flows across the region and includes not only the OxSRFI development, but also other committed and planned development and infrastructure schemes expected to be in place by the key assessment years: 2031 (Opening Year), 2034 (Completion Year), and 2042

(Local Plan Future Year). By modelling these scenarios together, the transport strategy can be designed to accommodate future growth and avoid adverse impacts.

1.6.5 In terms of future year assessments, without the OxSRFI scheme traffic will still increase due to other planned developments in the area. M40 Junction 10 is already under pressure and is expected to become more congested, and local villages like Ardley and Middleton Stoney may experience worsening traffic conditions.

1.6.6 To avoid or reduce potential adverse impacts of the Proposed Development, and provide the necessary connection to the strategic road network, a range of transport **mitigation** measures and improvements are embedded in the design of the scheme through the following measures:

Highway works:

- Ardley Bypass: a new road to serve the OxSRFI scheme and take traffic away from Ardley village.
- M40 Junction 10 and A43 Baynard's Green improvements: new free-flow movement for M40 to A43 northbound traffic, improved junctions, and better connection to the A43.
- Middleton Stoney Relief Road (MSRR): A new road to reduce traffic through Middleton Stoney village.
- Heyford Park Link Road (HPLR): a new road to replace Upper Heyford Road.
- M40 Junction 9 improvement: a third lane for A34 to M40 northbound traffic to reduce congestion.

Sustainable Transport Strategy

- Walking and Cycling: new footways, cycleways and crossings to connect the site with nearby communities, including connections to Bicester and Heyford Park.
- RoW: opportunities to enhance the RoW network have been identified and new and diverted RoW are proposed.
- Public Transport: enhanced and new bus services to Bicester and Banbury, with bus stops in the site and nearby villages.
- Travel Plan: Targets a 26% reduction in single-occupancy car trips by encouraging car sharing, active travel, and public transport use.

HGV Routing Strategy

- All HGVs will be required to use the Ardley Bypass and M40 Junction 10, avoiding local villages.
- Enforcement will include physical barriers and automatic number plate recognition cameras.
- New environmental weight restrictions on local roads to the north and east of the site are also proposed.

1.6.7 **Construction** traffic will be managed to minimise disruption. Working hours will be restricted to daytime hours and all heavy vehicles will be required to travel to and from the north of the site via M40 Junction 10. The Ardley Bypass will be built early to minimise the need for heavy vehicles to travel on the B430 through Ardley, and construction vehicles will use the new bypass once it is built. Changes to PRoW will be implemented as soon as practicable, with temporary routes provided where necessary. The environmental impact during construction is expected to be minor and temporary.

1.6.8 Once **operational**, OxSRFI is forecast to generate:

- Approximately 22,000 two-way person trips - combined total movements in and out of the site - per day.
- Of this number, 1418 are expected in the morning 'peak' hour, and 1752 in the evening 'peak' hour.
- 4,920 two-way HGVs trips per day.

1.6.9 The proposed OxSRFI scheme could remove over 53 million HGV miles per year, saving an estimated £61 million annually in environmental costs. The 'modal shift' of freight from road to rail has a beneficial impact on the Strategic Road Network (SRN) as it reduces HGV milage, including congestion and emissions. The reduction in overall HGV mileage on the road network demonstrates how the Proposed Development would comply with Government objectives, as set out in the National Policy Statement (NPS), to achieve a modal shift from road freight to rail.

1.6.10 Traffic modelling shows that the proposed Highway Works will accommodate the increased traffic demand from the Proposed Development. The embedded Highway Works at M40 Junction 10 are shown to improve overall performance at the junction, even when traffic from other developments are included.

1.6.11 The BTM transport modelling forecasts that traffic reassignment will occur, as drivers choose more efficient routes created by the new infrastructure and

existing traffic is drawn back to the strategic and principal road network. This helps reduce congestion in sensitive areas like Middleton Stoney. Similarly, the Ardley Bypass helps to reduce through traffic in the village of Ardley.

1.6.12 The ES Chapter assess the following:

- Severance: Whether communities are divided by new roads or traffic.
- Delay: For drivers and non-motorised users (pedestrians, cyclists, and horse riders).
- Amenity: The pleasantness of walking and cycling routes.
- Fear and Intimidation: Caused by traffic volume, speed, and HGVs.
- Safety: Based on accident data and road design.
- Hazardous Loads: Expected to be non-hazardous; any hazardous materials will be regulated separately.

1.6.13 Conclusions from the TA include reference to construction phase mitigation to be secured through a proposed Construction Environmental Management Plan (CEMP) (**ES Appendix 2.3**). With the CEMP in place, it is considered that the impacts of the construction phase of development will be neutral or slight adverse effects, which either have no effect or are not significant in EIA terms.

1.6.14 Operational effects are presented with reference to key parts of the road network. They set out for the Completion Year 2034, the 2031 Opening Year, and 2042 Sensitivity Test (and **ES Appendices 3.8 to 3.10** contain further details).

1.6.15 Key conclusions are that the proposals would result in a mixture of neutral or permanent slight adverse and beneficial effects, which either have no effect or are not significant in EIA terms. Conclusions include the following residual effects:

- M40 Junction 10 and A43 Trunk Road Improvement – driver delay – as part of the embedded mitigation, there will be a very large permanent beneficial (significant) residual effect.
- Ardley Station Bridge on B430 (replacement of with new bridge) – road user safety – a moderate permanent beneficial (significant) residual effect.
- Link 24 B430 - Station Road (south of Somerton Road) – Severance / NMU Amenity / Fear and Intimidation – a moderate permanent beneficial (significant) residual effect.

- Link 25 B430 - Station Road (south of Ardley Road) – NMU Amenity / Fear and Intimidation – a moderate permanent beneficial (significant) residual effect.
- Link 26 B430 - Station Road (between Ardley Road) – Severance / NMU Amenity / Fear and Intimidation – a moderate permanent beneficial (significant) residual effect.
- Link 38 – Middleton Stoney Relief Road – NMU Amenity / Driver Delay – a moderate permanent beneficial (significant) residual effect.
- Link 40 - B430/B4030 Middleton Stoney crossroads – Severance / NMU Delay / NMU Amenity – a moderate permanent beneficial (significant) residual effect without additional mitigation. In terms of Driver Delay, the OxSRFI scheme will have a large permanent beneficial (significant) residual effect.

1.6.16 With embedded mitigation measures the transport impacts of OxSRFI are expected to be manageable and beneficial overall, supporting both local and national transport objectives.

1.6.17 In terms of access to open space, the OxSRFI scheme will provide increased opportunities for walking/cycling/horse-riders. These are positive effects with regarding to human health outcomes, providing permanent beneficial health impacts.

1.6.18 Through good and sustainable design, the Proposed Development will significantly improve public transport, pedestrian, and cyclist provisions, providing travel opportunities for non-car-based modes of transport. The Proposed Development will also provide improved road access to the Main Site. These embedded mitigation measures provide the required access and connection to the SRN, and prevent, or reduce to acceptable levels, the otherwise likely significant transport effects of the Proposed Development.

1.6.19 As above, construction phase effects will be neutral or slight adverse overall, and not significant in EIA terms.

1.6.20 During the **operational** phase, the Proposed Development with the embedded and additional mitigation would not give rise to significant adverse residual effects in EIA terms. The Proposed Development, with the proposed embedded and additional mitigation, would however give rise to a mixture of moderate, large and very large permanent beneficial effects with regards to Severance, NMU Amenity, NMU Delay, Fear and Intimidation, Driver Delay, and Road User Safety. These are **significant benefits** in EIA terms.

Air Quality (ES Chapter 4)

1.6.21 Air Quality and Odour Assessments consider the effects of the Proposed Development during its construction and operation. The ES Chapter presents relevant methodologies prescribed for the assessment of air quality and odour. Levels of existing air quality and odour (i.e. the baseline) have been established and the parameters against which any significant effects are to be assessed have been set. The assessment shows that in general terms baseline air quality across the study area is good.

1.6.22 The assessment of air quality effects from **construction**-phase vehicle movements includes use of data from the Transport Assessment. During construction, the development has the potential to temporarily (adversely) affect air quality via increased heavy-duty vehicle (HDV) movements on local roads, and dust emissions during demolition, earthworks and construction activities. Indeed, dust is one of the main construction related air quality issues to be considered and assessed.

1.6.23 Construction phase mitigation is proposed as part of the CEMP (referred to above – **ES Appendix 2.3**). This includes measures to directly reduce risks from dust, including suppression with water, and limiting certain activities during very dry weather. With the implementation of the embedded mitigation measures, dust emissions from construction activities will be reduced, and the residual impact is expected to be negligible, which is not significant.

1.6.24 Road traffic emissions during the construction phase are anticipated to have a Negligible effect on local air quality at human receptors. With the inclusion of mitigation measures listed in the CEMP (**ES Appendix 2.3**), the residual effects will remain **negligible, which is not significant**.

1.6.25 The Chapter also considers odour issues due to the need for works to part of the Ardley Landfill site. With the implementation of the proposed mitigation measures including the additional mitigation secured via an Odour Management Plan (OMP), it is anticipated that the residual effect of odours from the landfill reprofiling, which is temporary in nature, should be 'not significant'. It is anticipated that there will be no residual or ongoing odour impacts following the completion of the landfill reprofiling process.

1.6.26 During its **operation**, the development has the potential to affect local air quality through the generation of new / additional vehicle movements, amendments to road infrastructure and the redistribution of existing traffic, on the local road network. More widely, the development will help reduce the reliance on road freight / HDV trips, therefore benefiting overall emission releases related to road freight. However, detailed pollutant dispersion modelling has been undertaken to determine the development's impacts on nitrogen dioxide and particulate matter concentrations.

1.6.27 An assessment of the potential effects of rail emissions was undertaken in accordance with DEFRA guidance. It was determined that the Proposed Development would not exceed any of the screening criteria detailed for rail locomotives and therefore the impacts on local air quality from rail emissions as a result of the operational development are considered to be 'negligible' and 'not significant'.

1.6.28 The assessment has assessed road traffic emissions during the operational phase, and shows there is likely to be a negligible to moderately beneficial effect on NO2 and PM10 concentrations at human receptors. Impacts on PM2.5 are anticipated to be Negligible until the implementation of the more stringent 10 µg.m-3 AQS, after which they become more adverse. These impacts are anticipated to be no worse than minor adverse overall, which is not significant.

1.6.29 The Proposed Development is not expected to result in the exposure of new, sensitive receptors to poor air quality. Therefore, air quality impacts on proposed receptors within the Main Site are considered to be **'negligible' and 'not significant'**.

Noise & Vibration (ES Chapter 5)

1.6.30 A comprehensive set of noise and vibration surveys have been undertaken around the Proposed Development site to establish the existing (baseline) conditions, and to form the basis of an assessment of the potential impacts and effects that may arise from the construction and operation of the Proposed Development

1.6.31 The results of the **baseline** surveys showed that a range of noise conditions currently exist in the areas around the Proposed Development. The existing noise environment at most locations is typically dominated by constant road

traffic noise from the M40 motorway. Other noise sources in the area include local road traffic noise from the B430 and the B4030 as well as railway noise from the Chiltern Main Line to the south of the Village of Ardley. Any existing vibration effects are primarily associated with trains passing sensitive receptors that are close to the Chiltern railway lines.

1.6.32 The Proposed Development would change the noise environment to some extent through the expected increase of road and railway traffic, as well as introducing new sources of noise associated with the operation of the SRFI. There would also be a change in vibration from the additional trains serving the operational SRFI in the areas close to the railway lines, as well as temporary sources of noise and vibration during the construction process.

1.6.33 Using relevant methodologies for each type of source, the expected levels of noise and vibration have been predicted at sensitive receptors around the Proposed Main Development Site and associated highways works, and adjacent to the relevant roads and sections of railway line due to changes in traffic. Using the results, the associated potential impacts and effects have been assessed.

1.6.34 The assessment of **construction noise** has shown that, in general, there would be no significant adverse effects due to noise from the works associated with the Proposed Development at nearby receptors. with the implementation of best practicable measures (BPM) through the and measures in the CEMP (**ES Appendix 2.3**) and future phase specific P-CEMPs. Overall, it is considered possible that although **some temporary adverse effects would remain**, though they will have been mitigated and minimised.

1.6.35 The calculations have also accounted for the potential cross over of construction activities within the construction phases. For a small number of locations, temporary adverse effects have been predicted, mainly at properties closest to the site during the earthwork's construction activity. These impacts will be mitigated and minimised through measures identified in the CEMP (**ES Appendix 2.3**).

1.6.36 The change in the number of freight trains expected to use the Chiltern Main Line from operation of the Proposed Rail Terminal has been found to be unlikely to result in any significant adverse noise impacts. A small number of properties closest to the railway line might experience an adverse noise impact at night. With regards to the potential rail vibration impacts from the additional freight trains, there is predicted to be a negligible increase in ground borne vibration and no significant or adverse effects are likely.

1.6.37 No significant adverse effects from noise or vibration associated with the operation of the Proposed Development have been predicted with respect to:

- Railway noise or vibration from additional trains travelling on the Chiltern Main Line.
- Operational noise from the Main Site at all residential properties
- receptors Cottages) is converted back to a residential receptor.
- Daytime road traffic noise (all receptors).
- Night-time road traffic noise at all receptors except T10 (Isis Avene, Bicester).

1.6.38 Where potentially adverse operational noise effects are predicted, mitigation options have been considered where practicable to mitigate and minimise potential effects as per policy and guidance.

1.6.39 The design of the Proposed Development includes landscape bunds to the north of the site (adjacent to the terminal) with an acoustic barrier extending the height, and mounding along the rest of the boundary of the Site to help mitigate and minimise the impacts by screening the associated operational sources of potential noise.

1.6.40 The Highway Works associated with the Proposed Development have been designed to mitigate and minimise any adverse effects and have contributed to beneficial effects for several receptors particularly in Ardley and Middleton Stoney.

1.6.41 The only significant adverse effect identified, is with respect to night-time road traffic noise at receptor T10 – this is a result of anticipated changes in traffic patterns on the improved road network following the OxSRFI mitigation (re-assigned traffic effects). The Applicant has proposed a mitigation solution to this based on a scheme of noise insulation, in agreement with the local authority.

Ecology including Arboriculture (ES Chapter 6)

1.6.42 An arboricultural (tree) assessment and a full suite of ecological surveys was completed across the 2025 field season, with bird surveys also undertaken in 2026, and also informed by a desk study and previous surveys undertaken 2018-2021. The survey data characterised a detailed baseline that informed the assessment of the likely ecological and arboricultural effects of the Proposed Development, the mitigation strategy to minimise or reverse such

effects, and provision of ecological enhancements where appropriate throughout the Application Site.

1.6.43 The majority of the site comprises arable land that supports very limited botanical diversity and improved and species-poor semi-improved grassland field compartments bound by field perimeter hedgerows and trees. These habitats are common locally and the case of the dominant arable habitat supports very little biodiversity. Habitats of greater interest include woodland stands, brook corridors, native grassland and hedgerows that cumulatively support a number of notable species including bats, amphibians, reptiles, badger, hedgehog, and bird species including several declining farmland specialists.

1.6.44 The Application Site has some direct interactions with **designated ecological sites**. The site includes a small part of the adjoining Ardley Cutting and Quarry SSSI, a site of national importance designated for its geological interest and for supporting calcareous grassland and woodland habitats, great crested newt and a notable invertebrate assemblage. A detailed botanical survey has been completed of those parts of the SSSI that lie within and adjacent to the Application Site.

1.6.45 Ardley Road Verge Nature Reserve DWS lies partially within the Application Site adjacent to the B430. This site of County level importance supports rank grassland, rough calcareous grassland, scrub and hedgerow in addition to a small number of Meadow clary plants, located outside of the Order Limits. The Application Site also largely overlaps the Ardley & Heyford Conservation Target Area which identifies the site as somewhere where targeted conservation action will have notable benefit. Other sites of ecological value present within the local and wider area comprise a mix of Local and District Wildlife Sites and ancient woodland stands.

1.6.46 In terms of **watercourses** (also discussed in Chapter 9), Padbury Brook flows eastwards through the J10 Highway Improvement Works where it is culverted beneath the A43 and M40. The section of the channel between the culverts is heavily reinforced whereas the channel section to the west of the M40 is more naturalised. The Application Site additionally incorporates part of a tributary to Padbury Brook that flows through the north-western field compartment of the Main Site. The channel of this section is narrow, largely less than 1m wide, and shallow with a slow flow and silty substrate.

1.6.47 Ashgrove Brook bisects the Main Site from north to south, and two ditches located towards the Heyford Park former airfield feed into this brook which is

approximately 1m wide and shallow. Ashgrove Brook is a tributary of Gagle Brook, the main channel of which flows south through the corridor of the proposed Middleton Stoney Relief Road. The Proposed Development would retain much of this corridor and the associated trees and other habitats.

1.6.48 The Gagle Brook is considered have of County level importance to nature conservation, and the remaining on-site watercourse sections local level importance.

1.6.49 A total of 266 individual **trees**, 139 groups of trees and five woodlands were surveyed as part of the Application. The majority of trees are associated with hedgerows and are in variable condition as is typical of trees associated with farmland. Four veteran trees were identified, with three to be retained within the site, and one lost as a result of the Proposed Development.

1.6.50 The Application Site encompasses a total of c.80 **hedgerows** or sections thereof. The majority are entirely comprised of native species with most dominated by hawthorn, with other species such as field maple, beech, blackthorn and elder also regularly occurring. Approximately one-quarter of these hedgerows are considered species rich. Overall the hedgerow resource on-site is considered to have local to county level ecological importance.

1.6.51 In addition to retaining existing trees and hedgerows where possible within the Application Site, the Proposed Development would see significant new habitat creation which follows the strategy of delivering in excess of a 10% net gain in biodiversity compared to the existing ecological baseline, as determined using the Defra Statutory BNG metric.

1.6.52 The **new habitat creation** would include:

- 60ha of new broadleaved woodland is proposed, significantly in excess of the existing trees/ woodland to be lost.
- In excess of 14.1km of new native and species rich hedgerows – equates to over 50,000 new native plants.
- Over 100 ha of native species grassland, comprising a mix of calcareous grassland, lowland meadow, and neutral grassland – significantly in excess of the area to be lost.
- Over 7ha of wetland and waterside habitats including sustainable drainage basins and swales designed and managed for biodiversity benefit.

- Extensive new off-road footways/ cycleways/ bridleways – connecting up and extending existing surrounding routes – including circuitous trails.

1.6.53 The new and retained habitats will be incorporated into the significant on-site green infrastructure and landscaping within the scheme, much of which also forms part of the visual screening of the proposed buildings and infrastructure. The new and retained habitats will benefit a wide range of local wildlife including protected species such as bats, great crested newts, reptiles and a wide range of local bird species, and will also help ensure a high-quality environment for employees and visitors to the site, and the extensive 'green infrastructure' provided will include walking and cycling routes for employees and other visitors to the site.

1.6.54 **Mitigation** to be provided in addition to the soft landscaping will comprise a combination of precautionary working procedures (including as specified within Natural England licences and also best practice working methods as detailed within the CEMP), the use of appropriate fencing to protect retained habitats, translocating priority habitats and associated soils to permanent receptor sites within the green infrastructure (calcareous grassland, important hedgerows, and individual notable plants if present), and provisions for target notable fauna including bird boxes, bat boxes, artificial badger setts, installation of culverts under roads to provide safe passage, the long-term management of an area of seed-bearing crop and implementation of a farmland bird strategy to provide alternative winter foraging opportunities for corn bunting and other farmland specialist bird species.

1.6.55 As is typical for a development of this kind, it is anticipated that there would be some permanent loss of habitats utilised by priority fauna such as arable and open grassland that support farmland bird assemblages, resulting in some temporary adverse effects as a result of this change. However, it is notable that the Proposed Development will provide permanent and wide-ranging residual benefits for most resident bird assemblages and also for other notable species confirmed present locally or are potentially present within the local area. Some likely residual effects are likely, as are numerous beneficial effects including in excess of a 10% biodoiversity net gain.

1.6.56 Overall, the design will maintain and improve upon the conservation status of notable habitats, and will maintain, and where possible provide local level enhancement for priority faunal species and assemblages in accordance with the requirements of national and local planning policy.

Landscape & Visual Effects (ES Chapter 7)

1.6.57 The landscape character of the Application Site and its context is varied and comprises a mix of uses and features, including existing gently rolling farmland, settlements and development (including Heyford Park and the Viridor EFW facility), major roads and junctions, and mature woodland, trees and hedgerows. The Application Site encompasses land within a number of different landscape types or character areas, as defined within the relevant published landscape studies including the 2024 district scale landscape character assessment study. This study notes the urbanising influence of the existing and ongoing developments and major transport corridors on these LCAs. The more rural parts of these broad Landscape Character Areas generally lie further to the north east and south west of the Application Site.

1.6.58 The Application Site and its immediate context includes no designated landscapes or features and no landscapes recognised of being of any particularly higher value or sensitivity.

1.6.59 The landscape of the Application Site and its immediate context is varied in terms of the mix of uses, characteristics and features. It includes a number of large-scale transport corridors and developments set alongside and within gently rolling farmland areas, with a reasonable proportion of woodlands and network of hedgerows. The Upper Heyford Former Airfield and the emerging Heyford Park development already form a notable component of this local landscape character. The Viridor ERF forms a notable visual feature and reference to the east of the Main Site, with the M40 motorway and Junction 10 also forming major features within the local landscape.

1.6.60 The LVIA has assessed the landscape value and sensitivity of the Application Site and its immediate context in accordance with recognised guidelines (Guidelines for Landscape and Visual Impact Assessment; 3rd Edition) and concludes that it is Medium in both of these terms.

1.6.61 Visually, the receptors and locations most likely to be affected by the Proposed Development have been identified and include; residents from some settlements (including some at Ardley, Middleton Stoney and Heyford Park) and other more scattered farming and other properties; users of Public Rights of Way (PROW), principally within the landscape within and surrounding the Application Site; and users of various stretches of major and other more minor roads, including the B430, B4030 and M40 motorway.

1.6.62 The assessment reflects the landscape and Green Infrastructure (GI) proposals and embedded mitigation which form part of the OxSRFI scheme. The key objectives of the Landscape and Green Infrastructure proposals for the Proposed Development are to:

- Assist in assimilating the built development and infrastructure proposals and in establishing an appropriately robust and cohesive landscape setting within which the new built development and infrastructure proposals will be sited;
- Mitigate and minimise as far as practicable the potential landscape and visual effects arising from the Proposed Development;
- Secure and maximise biodiversity interest, through conservation, enhancement and creation of habitats and green spaces;
- Contribute positively towards the landscape and GI strategy objectives of the planning policies, published landscape character and GI studies and towards more localised GI opportunities at a site wide scale; and
- Achieve an overall development and landscape solution that recognises the character and features of both the local and wider landscape and draws upon these in the outline and subsequent detailed proposals.

1.6.63 Overall, approximately 60% of the total Application Site will be dedicated to these landscape, GI and biodiversity based objectives. The landscape and GI proposals, including the embedded mitigation measures have been carefully considered throughout the design and assessment process and in the context of the published studies and site-specific assessments. These 'green' proposals will include the dedication of substantial areas of land to landscape, GI and associated biodiversity measures. This extensive landscape framework will include conserved existing woodland, trees and other habitats and major new areas or woodland, scrub and other habitats.

1.6.64 The embedded landscape mitigation measures will also include broad landscape corridors and perimeter strategic mounding (or 'bunding') to all sides of the Main Site. In conjunction with the conserved trees and planting and new woodland, scrub and other planting, this proposed mounding and planting will provide robust mitigation and visual screening to views from all directions around the Main Site.

1.6.65 New public access routes providing a variety of multi-user routes and opportunities within and around the Main Site are also proposed. These will include circuitous loops around the perimeter landscape and GI areas, and

connections to and extensions of existing routes and PROW within the immediate context of the Application Site.

1.6.66 The Proposed Development will result in **some significant landscape and visual effects**. At the **construction** stage, this will include the direct and indirect effects upon the landscape of the Application Site and its immediate context and the visual effects upon some of the most local residents, and for some other individual properties, and for users of some stretches of Public Rights of Way (PROW) and roads. These visual effects will not arise for the full duration of the construction period but will be most notable with the construction works at the height of activity within the vicinity of the respective receptors.

1.6.67 Upon **completion** of the Proposed Development, including implementation of all landscape and Green Infrastructure (GI) measures, there will initially remain some significant landscape and visual effects. This will include the direct and indirect effects upon the landscape of the Application Site and its immediate context and the visual effects upon a limited number of settlement edge and individual properties and a limited stretch of PROW.

1.6.68 Residual effects (after 15 years) are detailed in the Landscape and Visual Effects Tables at ES Appendices 7.2 and 7.3. In the longer-term the residual significant effects will be limited and localised.

1.6.69 The influence of the Proposed Development upon the surrounding landscape will reduce over time with the maturing of the planting proposals, yet it will nevertheless remain visible and a major feature and notable influence within the local landscape. The residual landscape effect of the Proposed Development after 15 years for the published landscape types and character areas will be minor adverse or minor/ moderate adverse.

1.6.70 The residual landscape effect of the Proposed Development after 15 years on the Main Site and its immediate context will be moderate adverse. At the scale of the Main Site and immediate context, for the M40 J10 Highway Improvements and Ardley Bypass, the residual landscape effect of the Proposed Development after 15 years will be minor/ moderate adverse and for the M40 J9 Highway Improvements the residual landscape effect will be minor adverse/ negligible.

1.6.71 The majority of the visual effects of the Proposed Development will reduce over time following the establishment and subsequent maturing of the

proposed planting and habitats. The maturing and management of the existing and extensive new woodland, trees and other planting will offer noticeable visual improvements and mitigation for the majority of the surrounding settlement/ properties, PROW and other visual receptors.

1.6.72 The residual visual effects of the Proposed Development after 15 years will generally range up to moderate adverse, subject to the extent of the available views. The only likely residual significant adverse visual effect is on users of stretches of Public Rights of Way (PROW) at the Main Site.

Lighting (ES Chapter 8)

1.6.73 The assessment considers the likely effects of lighting from both the construction and operational phases of the Proposed Development on identified receptors. Baseline surveys confirmed the Application Site primarily falls within Environmental Zone 'E2' (rural) as defined by national guidance, with some limited pockets of E3 (suburban). The Proposed Development will result in some increase in the visibility of lighting within the study area; however, with the embedded mitigation set out in the Lighting Strategy, this will not give rise to significant effects on human, ecological, or visual receptors.

1.6.74 Any increases in light levels or changes in sky quality will remain within the limits set out in relevant guidance for an 'E2' Environmental Zone, and the character of the wider area will not be reclassified or increased (i.e. to 'E3') as a result of the scheme. The magnitude of change for most receptors is assessed as negligible or low, with effects categorised as Minor or Moderate (Not Significant) under the adopted significance criteria.

1.6.75 During **construction**, lighting will be limited to working hours where practicable, with any necessary temporary lighting carefully directed and controlled to avoid excessive glare or spill. Construction-phase effects are therefore expected to be short-term, reversible, and not significant, with no long-term alteration of baseline conditions once works are complete.

1.6.76 For the **operational** phase, the lighting design incorporates best practice measures, including full cut-off luminaires, warm colour temperatures, and dimming or part-night controls to limit unnecessary illumination. These measures ensure compliance with relevant guidance and planning policy, maintaining dark skies and minimising ecological disturbance, particularly for light-sensitive species such as bats.

1.6.77 Overall, with the proposed mitigation in place, the residual effects of lighting associated with the Proposed Development are assessed as **not significant** in EIA terms.

Water Environment (ES Chapter 9)

1.6.78 ES Chapter 9: Water Environment considers the potential effects of the Proposed Development on the water environment and covers the following:

- Flood risk
- Surface water drainage
- Surface water quality
- Wastewater
- Water Supply

1.6.79 The majority of the Proposed Development is located within the Gagle Brook catchment. Beyond the limits of the Main Site, the area crossed by the proposed J10 Highway Improvement Works comprises the Padbury Brook catchment.

1.6.80 In terms of baseline **water quality**, currently the Langford Brook (Bicester to Ray including Gagle Brook) catchment has an overall water body quality classification of 'Poor' (2022), with an ecological status of 'Poor' and a 'Fail' chemical status. The Padbury Brook catchment has an overall water body quality classification of 'Moderate' (2022), with an ecological status of 'Moderate' and a 'Fail' chemical status. Agricultural and rural land management and pollution from the water industry are the key issues preventing improvement in status.

1.6.81 In terms of **flood-risk**, the Environment Agency Flood Map for Planning shows the majority of the Main Site lies within Flood Zone 1 (low probability of flooding). There are some areas of Flood Zone 2 and 3 (medium and high probability of flooding) associated with Ashgrove Brook downstream of Camp Road. The J10 Highways Improvement Works crosses through areas of Flood Zone 2 and 3 associated with the Padbury Brook.

1.6.82 Bespoke hydraulic modelling undertaken to support the DCO Application shows that in the upper reaches of the Ashgrove Brook, flows overtop the left bank during all modelled flood events and the Gagle Brook largely remains in channel during all modelled events.

1.6.83 The Environment Agency's Flood Risk from Surface Water Map for the Main Site shows the potential flooding which could occur when rainwater does not drain away through the normal drainage systems or soak into the ground. The mapping identifies the Main Site to be predominantly at a very low probability of flooding from surface water, with some areas of high risk associated with the Ashgrove Brook.

1.6.84 The following **mitigation** measures are inherently embedded within the design of the Proposed Development;

- Provision of Sustainable Drainage Systems (SuDS) and drainage attenuation features, informed by a Drainage Strategy and Sustainable Drainage Statement.
- Diversion of the existing sewers that feed into the Ashgrove Brook and its tributary to maintain the flow route
- Typical best practice measures included as part of the Construction and Environmental Management Plan (CEMP).

1.6.85 The embedded mitigation measures in the form of the CEMP mean that the otherwise likely potential construction risks would have a neutral or slight adverse effect, which is not significant. The key risks identified during the **construction** phase and which would be addressed by the CEMP include:

- Construction activities, such as mounding of materials, have the potential to increase flood risk within the main site and downstream.
- The use of heavy machinery during the construction phase has the potential to disrupt the rate of drainage into the ground.
- Construction activities can lead to the pollution of controlled waters, for example from sediment in runoff, particularly from rainfall during storm events, which can affect water quality, or from pollution by construction materials or fuels.
- An increase in pressure on the local foul water network and local water supply due to the temporary presence of construction workers and associated welfare facilities.

1.6.86 Once **operational**, the embedded mitigation measures in the form of the Drainage Strategy and diversion of the existing sewers mean that these operational risks would have a **negligible effect overall,** which is not significant.

1.6.87 Increased foul water flows are likely to the local foul water network because of the Proposed Development. **Additional mitigation** is proposed to counter this potentially moderate adverse effect involves a deliverable foul water

drainage scheme to an agreed point of connection that has been confirmed as achievable by Thames Water, with upgrades provided by TW within their wider network. Following this additional mitigation, the effect of the operational phase of the Proposed Development on foul water is neutral or slight adverse which is not significant.

1.6.88 The minor nature of the highways works mean they will have negligible impact on flood risk and water quality which is not significant.

1.6.89 Overall, there will be slight beneficial effects in the form of a reduced risk of flooding within the Main Site in more extreme events because of the realignment of the drainage channels and the reduced rates of discharge from the Main Site into local watercourses and as a result of the proposed drainage strategy. The two stage channel on the Padbury Brook Tributary will also provide slight beneficial effects in the form of a reduced risk of flooding to the existing railway.

1.6.90 There will also be slight beneficial effects to water quality due to the change from agricultural use which is currently a key issue preventing the Langford Brook (Bicester to Ray, including Gagle Brook) and Padbury Brook catchments reaching Good Water Framework Directive (WFD) status.

Heritage (built and archaeology) (ES Chapter 10)

1.6.91 The ES Chapter considers both archaeological issues, and built heritage. It is informed by a comprehensive **baseline** including a range of desk-top evidence and data from Historic England's National Heritage List, the Oxfordshire Historic Environment Record, historic mapping, LiDAR data, and satellite imagery, as well as work undertaken by the project team including site visits, geophysical survey, aerial photographic survey and archaeological trial trench evaluation.

1.6.92 The assessment of **built heritage** impacts in the ES Chapter utilises the findings of the Built Heritage Assessment of Significance and the Built Heritage Impact Assessment. Comments from statutory consultees have also been addressed as part of an iterative process. Impacts on both designated and non-designated heritage assets during both the Construction and Operational Phases have been considered and assessed; these include those which directly (physically) affect the assets as well as changes which may result through development within their settings.

1.6.93 The assessment included the Grade II listed Threshing Barn on the Main Site and consider the OxSRFI proposals to retain the barn as part of a wider 'Central Hub' area which incorporates Ashgrove Farm. By seeking to preserve the immediate setting of the Barn through the retention of the surrounding farmstead, which provides the greatest contribution to the significance of the barn, the Proposed Development helps to minimise impacts.

1.6.94 In addition, and further to consultation with Historic England and the Oxfordshire County Council Conservation Officer, the mound or bund at the end of the Heyford Park Airbase has been reduced to a half height to minimise impacts on the Conservation Area and help to preserve the historical context of the runway.

1.6.95 The assessment also takes account of cumulative effects as well as embedded and additional mitigation. The conclusion of the Chapter in terms of built heritage is that effects range from minor adverse to negligible and as such, there would be **no significant effects on any of the identified heritage assets** at any stage of the development.

1.6.96 With regard to archaeology, the ES Chapter sets out that a programme of archaeological excavation, recording, analysist, reporting and publication is planned for archaeological receptors and is secured via a DCO requirement. The ES Chapter concludes by stating that as a result of the archaeological mitigation, and as a result of design measures which avoid some known features of potential interest, **none** of the resulting residual effects on archaeological features would be considered significant in terms of EIA Regulations.

Ground Conditions (ES Chapter 11)

1.6.97 The assessment of ground conditions covers the geology, soils, and potential contamination across the proposed development site. It includes both desk-based studies and on-site investigations to understand the baseline conditions and identify any risks or mitigation measures required.

1.6.98 The site primarily consists of agricultural land with some historical industrial use, including a former landfill (Ardley Landfill) and a composting facility. The underlying geology is predominantly White Limestone Formation, with some localised areas of Rutland and Forest Marble Formations.

1.6.99 Ground investigations confirmed the presence of limestone and minimal contamination in most areas. Ground investigations identified limited contamination, primarily associated with the former landfill. Hazardous ground gases such as methane and carbon dioxide were detected in the landfill area, necessitating mitigation measures. The rest of the site showed very low risk of ground gas accumulation.

1.6.100 Investigations undertaken by the Applicant which were completed in 2026 identified low concentrations of PFAS within surface water, sediment and limited groundwater locations across the Main Site (included at **ES Appendix 11.11**). The evidence indicates that the principal source is historic contamination associated with the former RAF Upper Heyford Airfield, with the Main Site acting primarily as a receptor and conveyance pathway. The concentrations identified are significantly lower than those reported elsewhere within the local catchment and are not considered to present a significant risk to human health or controlled waters. The existing contamination management framework, remediation strategy requirements and CEMP (**ES Appendix 2.3**) measures are considered appropriate to manage PFAS alongside other contaminants that may be encountered during construction.

1.6.101 The OxSRFI site is underlain by the Principal Aquifer of the White Limestone Formation classified as having good chemical and quantitative status. Groundwater monitoring indicated the presence of perched and deeper groundwater bodies. Leachate from the landfill was found to flow eastward, with limited risk to controlled waters due to natural attenuation.

1.6.102 The OxSRFI site contains significant limestone mineral resources, but current demand is met by nearby active quarries. Excavated materials will be reused on-site, limiting the demand on local resources and transport links.

1.6.103 Ardley Cutting and Quarry is designated as a Site of Special Scientific Interest (SSSI) for its nationally important exposures of Jurassic rocks. The Proposed Development will affect only the northern boundary of the site, where new rail connections are planned. This will require excavation of existing rock faces located within a railway cutting, which are currently not publicly accessible.

1.6.104 Ardley Trackways SSSI is located to the south-east of the site and is designated for its paleontological significance, particularly the presence of dinosaur footprints in Jurassic limestone. The development does not directly affect the SSSI.

1.6.105 **Embedded mitigation** measures which are incorporated into the design of the OxSRFI scheme or included as a standard practice, include the following:

- Construction Environmental Management Plan (CEMP):
  - Controls risks to surface water and construction worker health.
  - Includes best practice from CIRIA[2] guides.
  - Covers sediment control (e.g. seeding stockpiles, silt traps).
  - Spill prevention and response (e.g. bunded fuel areas, spill kits).
  - UXO awareness and response protocols.
  - Personal protective equipment and hygiene measures;
  - Mechanisms and processes to assess and appropriately manage the presence of contamination, including PFAS.
- Material Management Plan (MMP) under the CL:AIRE '*Definition of Waste: Development Industry Code of Practice*'[3]:
  - Ensures reuse of excavated soils meets environmental and health standards.
  - Avoids unnecessary disposal to landfill.
- Earthworks Strategy:
  - Cut and fill balance to avoid import/export of materials.
  - Placement of fill to specification to avoid differential settlement.
  - Retention and reuse of topsoil for landscaping.
- Design Measures:
  - Fuel storage bunding and impermeable refueling areas.
  - Gas protection measures for buildings in Zones A1a, A1b, and A2.
  - Retention and new exposures of Jurassic rock faces to enhance geological visibility.
  - Geotechnical design for slopes and retaining structures near rail and road assets.

1.6.106 Beyond the standard measures identified above, additional measures have also been proposed during construction to further manage specific potential risks of impacts or issues, including:

- Remediation Strategy for Ardley Landfill:
  - Clay cap installation and leachate management system.
  - Hydrogeological risk assessment to protect aquifers.
  - Controls hazardous ground gases and leachate.
  - Includes gas monitoring during earthworks.
  - Adheres to EA permit conditions.

[2] CIRIA is the Construction Industry Research and Information Association

[3] This is a nationally recognised framework for the re-use of excavated materials on development sites provided certain conditions are met to ensure materials are appropriate, and helps reduce waste. These are often abbreviated to 'DoWCoP'

- Asbestos Management:
  - Pre-demolition asbestos survey for Ashgrove Farm.
  - Safe removal and handling under Control of Asbestos Regulations 2012.
- Previously Unforeseen Contaminated Soil Treatment:
  - Bioremediation or other treatment under Environmental Permit or exemption.

1.6.107 For post-construction **operational** phase measures to be implemented (during the use of the site) include:

- Gas Protection in Buildings:
  - Installation of gas protection measures in accordance with CIRIA guidance for Zones A1a, A1b, and A2.
- Landfill Monitoring:
  - Annual groundwater monitoring to ensure compliance with EA permit.
  - Remedial action if significant breaches are detected.
- Health and Safety Protocols:
  - Workers to follow HSE guidance during maintenance or ground disturbance.
  - Continued use of PPE and hygiene measures during groundworks.

1.6.108 The Proposed Development is expected to have an overall **negligible adverse effect** on ground conditions, provided that the recommended mitigation measures are implemented. The reuse of site materials and careful management of landfill areas will contribute to a safe and sustainable development.

Socio-Economic (ES Chapter 12)

1.6.109 The Socio-Economic Chapter provides a description of the relevant socio-economic baseline conditions of the Main Site and surrounding area together with a assessment of the likely significant effects of the Proposed Development during construction and once the Development is complete and operational.

1.6.110 The sub-regional area used for the assessment has been defined based on travel-to-work patterns and drive-times.

1.6.111 In terms of the **baseline position**, Cherwell District has shown strong economic performance and demographic growth in recent years. As of 2023, the district supported 90,000 jobs marking a 12.5% increase over the past five years. Cherwell demonstrates sector specialisms compared to the national average, particularly in agriculture motor trades, and wholesale and retail. These figures exceed sub-regional averages, highlighting Cherwell's competitive edge. The district has outpaced both sub-regional (6.5%) and national (5%) employment growth rates, reinforcing its attractiveness for investment. In terms of economic output, Cherwell's Gross Value Added (GVA) reached £5.161 billion in 2022, reflecting a 19% increase in line with national trends.

1.6.112 Data suggests that many residents commute outside the district for higher-paid jobs. Census data confirms this, showing a net outflow of commuters: around 61,000 people leave Cherwell daily for work, while 58,000 commute in. This pattern highlights opportunities to create more local jobs and reduce the need to travel.

1.6.113 **During the construction phase**, the Proposed Development would provide economic benefits supporting demand for an average of 790 construction jobs per year for a 7-year period. Beneficial effects at the local level would be enhanced through the Applicant engaging with local employment initiatives.

1.6.114 **Once complete and operational**, based on standard employment densities for a scheme of this kind, the Proposed Development is estimated to support around 7,195 net additional FTE jobs (9,607 gross jobs), as well as further jobs in the sub-region through multiplier effects. Other benefits include

- In addition to direct employment, it is estimated that the OxSRFI scheme would support a further 3,600 FTE jobs in the sub-regional economy.
- Local economy – it is estimated that based on the gross, direct FTE jobs (9,607 FTEs), the OxSRFI scheme could generate around £482.3m in GVA per annum.
- Business rates – based on the proposed quantity of warehouse floorspace, the OxSRFI scheme will generate in the region of £21.9m in business rates per annum.
- Health and wellbeing – the OxSRFI scheme will provide access to open space and nature through green infrastructure proposals, with access to active travel through footpath and cycleway connections.

1.6.115 The Proposed Development is expected to generate employment opportunities for a wide range of residents within Cherwell and the wider sub-region across a diverse range of job roles and skills levels. These

opportunities will benefit unemployed individuals by offering access to jobs, training, and pathways back into the labour market. Additionally, the development may attract those who currently commute out of Cherwell for work, which includes approximately 60,000 residents, helping to reduce out-commuting and promote more sustainable travel-to-work patterns.

1.6.116 The development will also support the growing labour market resulting from planned housing growth. Over 24,000 new homes are expected to be delivered across the district, particularly in Bicester and Banbury, increasing the working-age population. Furthermore, the rising pension age—from 66 to 68 by the mid-2030s—is expected to extend working lives and increase labour force participation among older residents.

1.6.117 Given the scale and diversity of employment opportunities, the development is expected to have a **major beneficial impact** on both the local and sub-regional labour markets. This effect is considered significant and long-term. The Proposed Development will have **beneficial effects** in relation to deprivation and health and wellbeing of residents and workers through the provision of employment and income opportunities, access to active and sustainable travel opportunities and through access to open space and nature provided onsite.

Materials and Waste (ES Chapter 13)

1.6.118 The materials and waste impact assessment identifies the likely significant environmental effects associated with the use of materials (including construction materials) and management of solid waste arising from the demolition, construction and operation of the Proposed Development. The study area for the assessment covers the Application Site, focusing on the use of materials on-site. A secondary study area referred to within the assessment as the 'Expansive Materials and Waste Study Area' extends to the sites of nearby waste management infrastructure and regional mineral resource planning areas, up to 30km from the Application Site.

1.6.119 The requirement for construction materials from the proposed development is large, as is the potential to generate waste. During construction, large volumes of material would be excavated however the vast majority is expected to be suitable for reuse on-site. Demolition works would be required as part of the Main Site preparation works, including demolition of the In-Vessel Composting (IVC) Facility, parts of Ashgrove Farm and existing roads/hardstanding. A high

proportion of this demolition and site clearance material is expected to be suitable for reuse and recycling on site.

1.6.120 The Proposed Development will seek to utilise as much excavated soil sourced from within the Main Site as possible. A commitment has been made to achieve a cut and fill balance within the Order Limits with exception of the excavation material arising from the boundary of the Ardley Landfill. It is proposed that landfill waste excavated from Ardley Landfill where the rail alignment intersects the landfill area, will be reprofiled atop the existing Ardley Landfill (within Cells A and B).

1.6.121 Material generated by the Proposed Scheme which is unable to be re-used (either due to no demand for the material on other sites or due to unexpected contamination) will be disposed of off-site at a suitable permitted facility. The quantity of expected waste is **not** expected to give rise to significant effects.

1.6.122 The exact source of materials required for the construction of the Proposed Development cannot be defined at this stage. However, materials for construction would be sourced locally where practicable by the contractor. Given the Application Site's proximity to identified reserves of construction materials and expected construction waste types and volumes, the impact from aggregate extraction is **not** expected to give rise to significant effects.

1.6.123 The main **mitigation** measure relating to this topic, is the development and implementation of a Construction Environmental Management Plan (CEMP). The CEMP will include:

- management methods to prevent any short-term construction phase impacts (e.g. construction dust and the risk of accidental spillages);
- good materials management methods (e.g. the re-use of temporary works materials from haul routes, plant and piling mattresses); and
- risk-specific method statements (which describe how each task should be undertaken) in order to address environmental impacts throughout the Proposed Development.

1.6.124 A Site Waste Management Plan (SWMP) will also be developed and will:

- identify the likely quantities of construction, demolition and excavation waste to be generated and how these wastes can be reduced, managed and disposed of.
- contain a Materials Management Plan (MMP) which would set out how all construction phase materials are managed.

1.6.125 With mitigation measures in place, **no significant** effects on materials and waste are anticipated. Once **operational**, waste is expected to be generated from the logistics operations only. Waste generation and material use during the operation of the Proposed Development, are **not** expected to give rise to significant effects.

Soil Resources and Agricultural Land (ES Chapter 14)

1.6.126 The Chapter assesses the potential impacts of the Proposed Development on two sensitive receptors: soil resources and agricultural land quality.

1.6.127 Baseline information was collected through a combination of desk study and field survey. The Application Site comprises a mix of permeable moderate to shallow heavy soils over limestone and heavy slowly permeable soils.

1.6.128 **ES Appendix 14.1** undertakes an assessment of the impacts on agricultural land and soils, and shows that a very small percentage (approximately 8%, 37.7ha) of the agricultural land is in the 'best and most versatile' quality. While this represents a significant adverse effect as defined by standard metrics, the ES Chapter confirms that soils will be protected and retained on-site and will form part of the landscaping or habitat enhancement features proposed.

1.6.129 Mitigation for potential loss or damage to soil resources is available in the form of a site specific Soil Management Plan (SMP) (included as part of the CEMP (**ES Appendix 2.3**), in accordance with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. The SMP will include:

- Depth and method of topsoil stripping and stockpiling;
- Identification of landscaping topsoil requirements and assessment of suitability and availability of on-site resources;
- Means of subsoil protection from compaction damage (e.g. specific pathways and restricted areas for construction traffic) and remedial measures (such as ripping/subsoiling) to remove damage

1.6.130 The SMP will protect all soil resources preserving them for reuse in landscaping on site. This reduces the effect on soil resources to **negligible**.

1.6.131 The Proposed Development will lead to the permanent loss of 37.7ha of best and most versatile land. This is a **significant** permanent **major adverse** effect.

Climate Change (ES Chapter 15)

1.6.132 Climate change in the context of EIA can be considered in two parts: the impact of greenhouse gas emissions (GHGs) caused by the Proposed Development, which contribute to climate change; and the potential impact of changes in climate on the Proposed Development. Both are considered within the climate change assessment. The assessment includes several elements including:

- Greenhouse Gas emissions assessment
- Climate Change Risk Assessment
- Carbon Management Plan
- Energy Strategy

1.6.133 The assessment identifies that the 'future baseline' trend is towards reduced emissions associated with the built environment, energy and transport sectors, in line with national commitments to achieving net zero emissions by 2050.

1.6.134 With regard to current climate, the baseline is the local and regional climate and resulting weather patterns informed by Met Office data. The future baseline climate conditions have been sourced from worst case climate projection data for the local area. With regard to future climate issues there is overlap between Chapter 15 and the assessment of flood-risk issues in Chapter 9.

1.6.135 Embedded **mitigation** measures attributed to the construction phase of the Proposed Development include best working practices defined through a Construction Environmental Management Plan (CEMP) (**ES Appendix 2.3**). These will ensure that, where possible, construction activities generating GHG emissions are undertaken efficiently to minimise those emissions.

1.6.136 Embedded mitigation measures attributed to the operational phase of the Proposed Development encompass measures to reduce the operational energy consumption, such as improved energy efficiency, and the inclusion of low and zero carbon technologies (such as air source heat pumps and solar PV). Electric vehicle charging spaces will be provided (covering 25% of car parking spaces) to support road-user emissions reductions. Woodland planting is incorporated through the landscape design, which would enable carbon to be captured over the Proposed Development's lifetime as the woodland matures.

1.6.137 With regards to climate resilience and adaptation, design measures have been embedded to enhance the Proposed Development's resilience to extreme weather events and heightened temperatures. Resilience of the Proposed Development with regards to flood risk has been assessed separately, within Chapter 9: Water Environment.

1.6.138 Additional mitigation measures for the construction phase of the Proposed Development include the commitment to strive to reduce embodied carbon in construction, primarily through reduced material use and the specification of lower carbon materials. Full details of the strategy to reduce emissions are set out in the Carbon Management Plan (**ES Appendix 15.5**).

1.6.139 Additional mitigation measures for the operational phase of the Proposed Development include improved accessibility of the Proposed Development by lower carbon and healthier alternatives (detailed within the Framework Travel Plan and Public Transport Strategy). In addition, the Carbon Management Plan details further opportunities to reduce operational GHG emissions.

1.6.140 In **assessing likely effects** residual emissions arising from the construction and operation of the Proposed Development have been quantified (accounting for embedded and additional mitigation measures where possible) and total 334,139 tCO2e, and 140,907 tCO2e per annum (not accounting for the decarbonisation of the Proposed Development over its lifetime as electricity, transport and construction sector emissions reduce), respectively. The magnitude of such emissions has been considered in the context of national carbon budgets and policy, accounting for all mitigation measures, and has been determined to align with national net zero policy. Therefore, the impact of the Proposed Development on climate change for both the construction and operational phases, in addition to the whole lifetime, has been assessed to result in **minor adverse effects, which are not significant**.

1.6.141 Assessment of in-combination climate change impacts have been included within individual environmental topic chapters where relevant, i.e. where climatic changes could modify the Proposed Developments other environmental impacts. The main areas where there is potential for in combination impacts, subject to separate assessment, are considered to be: ecology and arboriculture, landscape and visual, and water environment.

Cumulative Effects (ES Chapter 16)

1.6.142 The chapter presents an assessment of the likely cumulative effects of the OxSRFI Proposed Development, based on conclusions from across the ES.

1.6.143 Cumulative adverse impacts on those local residents closest to the Proposed Development, with regard to environmental effects relating to Air Quality, Noise, and Lighting, are shown to be mitigated to minimal levels, and not significant. An exception to this relates to noise and potential effects on properties close to Middleton Stoney Road in western Bicester where changes to traffic behaviour following highways improvements is anticipated. The Applicant has proposed a mitigation strategy for this to remove this likely impact.

1.6.144 The likely impact interactions on ecology forms part of the assessment in ES Chapter 6. The proposed construction and operational mitigation is shown to be effective in minimising the extent and magnitude of any likely adverse effects from the Proposed Development. Indeed, the proposed comprehensive green infrastructure including habitat retention and enhancement, and new habitats (including BNG), helps reduce any likely residual adverse cumulative effects to below significant levels.

1.6.145 In respect of in-combination (intra-project) effects, the main sensitive receptors are residents who are affected, both adversely and beneficially, by a number of potential effects or impacts. The main impact interactions relate to visual effects on a number of receptors, including some residents closest to the site and other sites, as well as users of nearby public rights of way (PROW) and the road network. Many of these same receptors (including the wider communities of which they form a part) will experience notable transport and economic benefits as a result of the Proposed Development.

1.6.146 Mitigation is proposed where necessary in each environmental aspect chapter to minimise or avoid significant effects. The receptors most likely to experience any adverse cumulative effects of the Proposed Development in combination with other sites are those receptors likely to experience residual significant effects of the Proposed Development alone. While the significant transport benefits of OxSRFI may be reduced with additional currently noncommitted developments added, the likely significant economic benefits from OxSRFI may be increased further when considered in the context of cumulative investment and development at other nearby sites.

1.7 SUMMARY OF OVERALL CONCLUSIONS

1.7.1 Chapter 17 of the ES provides a summary of conclusions regarding overall effects of the Proposed Development.

1.7.2 The ES shows that the OxSRFI scheme incorporates a range of design and environmental measures which will help retain and enhance existing habitats and deliver a successful high-quality scheme.

1.7.3 The design of the proposals responds to the Application Site's context and environment and to the results of extensive surveys and appraisals. This process has ensured that the potential for any adverse environmental effects has been minimised and that the opportunities for environmental benefits are maximised.

1.7.4 The ES suggests that there would only be **significant adverse** residual environmental effects from the Proposed Development on the following receptors:

- Noise and Vibration – receptor R28 (Ardley Fields Farm Cottages) – in respect of operational noise from the Main Site but only if the property, which is currently in use as an office, is converted back to residential use.
- Visual – localised effects on users of PROW within the site.
- Soil Resources and Agricultural Land – the loss of agricultural land to built development.
- Cumulatively - the Proposed Development is likely to have some significant residual effects in combination with one or more other committed or proposed development site, including some localised significant visual effects, and loss of agricultural land, but also significant cumulative transport and socio-economic benefits.

1.7.5 A range of likely **benefits** will be delivered by the OxSRFI scheme which include some that have been assessed as significant. Some of the beneficial effects are:

- Transport – several highways improvements at roads within the vicinity of the Main Site which reduce driving delay at junctions, improve severance / NMU Amenity / Fear and Intimidation. Some significant beneficial effects are likely as a result of the highways improvements.

- Ecology including Arboriculture – proposed mitigation in respect of calcareous grassland (IEF of National importance), GCN and invertebrates, including several of the priority butterfly species listed within the Ardley Cutting and Quarry SSSI citation. Some significant beneficial effects are likely as a result of the proposed mitigation.
- Water Environment – reduced risk to flood on the Main Site, and improvements in water quality through measures included in the drainage system.
- Socio-Economic and Health – benefits in the form of new employment opportunities, investment in the local economy (i.e., the GVA per annum), business rate, improved opportunities for health and wellbeing, including active travel. Some significant beneficial effects are likely, including employment opportunities and GVA.

1.7.6 The ES provides a sound basis for an assessment of likely effects from the Proposed Development.