OXFORDSHIRE
STRATEGIC RAIL FREIGHT INTERCHANGE

DCO Submission

Environmental Statement

Chapter 6: Ecology including Arboriculture
Appendix 6.10: Shadow Habitats Regulation Assessment (sHRA)

Document 6.6J (tracked)
Rev C~~B~~

On behalf of
Oxfordshire Railfreight Limited

Prepared by FPCR Ltd.
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ES6.10: Shadow Habitat Regulations Assessment (sHRA)

Client

Oxfordshire Railfreight Limited

Project

Ardley, Oxfordshire Strategic Rail Freight Interchange (OxSRFI)

Date

~~May~~ October 2026

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-	Final	HK / SH 20.01.26	RG / 23.01.26
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1.0 INTRODUCTION

1.1 The following assessment has been prepared by FPCR Environment and Design Ltd. (FPCR) on behalf of Oxfordshire Railfreight Ltd. It assesses any likely significant effects upon the integrity of Oxfordshire Meadows Special Area of Conservation (SAC) in relation to the Proposed Development known as Ardley, Oxfordshire Strategic Rail Freight Interchange (OxSRFI) that is the subject of an application for a Development Consent Order.

1.2 This document considers the specific characteristics of the Proposed Development and the potential pathways via which these could result in a Likely Significant Effect on the integrity of the Oxfordshire Meadows SAC and associated Sites of Special Scientific Interest (SSSIs). Oxfordshire Meadows SAC is located approximately 13km from the OxSRFI site at its closest point (Figure 1).

~~1.2~~1.3 Sections 1.7 – 1.9 provide the chronology of the previous amendments to the sHRA responding to comments from consultees and PINS. Sections 1.10 – 1.13 outline the current queries this updated sHRA is responding to and the necessary procedural updates arising from amendments to the Order Limits through the 'change application'.

Description of Development

~~1.3~~1.4 The Proposed Development comprises the construction of a Strategic Rail Freight Interchange and industrial units with associated infrastructure. The location of the Scheme is described in detail with reference to its various component parts within Chapter 2 of the Environment Statement for the Site: Description of Development and Alternatives.

~~1.4~~1.5 In brief, the majority of new build development will be located within the "Main Site" including new rail connections and associated works. The remaining components of the proposals primarily comprise land required for off-site highway improvements.

~~1.5~~1.6 The main components of the Scheme are as follows:

- **Strategic Rail Freight Interchange:** Construction of an intermodal freight terminal with supporting infrastructure.
- **Warehousing:** Up to 603,850 sqm of warehousing and ancillary buildings.
- **Ashgrove Farm Hub:** Retention and reuse of Ashgrove Farm as a central hub for estate management, training, and communal facilities.
- **HGV Parking:** Secure, dedicated parking area with driver welfare facilities.
- **Road Infrastructure:** New roads and upgrades to existing networks, including improvements to M40 junctions, bypasses for Ardley and Middleton Stoney, and link roads.
- **Pedestrian & Cycle Routes:** Enhanced infrastructure connecting the site to local communities.
- **Demolition & Earthworks:** Removal of existing structures, construction of terminal, rail connections, and landscape mounding.
- **Landscaping & Biodiversity:** Retention of key features, new planting, and biodiversity enhancements.
- **Utilities:** On- and off-site works for utilities, including foul drainage connections.

Planning Inspectorate Consultation Response Summary

1.61.7 On 03 October 2025 Oxfordshire Rail Freight Ltd. submitted a draft Habitats Regulations Assessment for review by the Planning Inspectorate (PINS) as part of its 'Pre-application Service'. The response received from PINS on 14 November 2025 is provided within Table 1.

Table 1: PINS Section 51 advice regarding draft application documents

Ref No.	Paragraph/ Section of draft document	Comment or question
1.	Description of proposed works	The proposed development description is not consistent with the authorised development described within the submitted draft Development Consent Order (dDCO). The dDCO for example does not refer to the relocation of a composting facility and also refers to an energy centre (Works No.6).
2.	N/A	The shadow HRA should be supported by an appropriate plan to identify the proposed development that has been the subject of the assessment (and consistent with point 1 above) and to identify the location of the designated site(s) in relation to the proposed development.
3.	Distance from site	The shadow HRA should set out the reasons for the selection of the proposed 13km and 17km study areas. These are used to identify the site screened in for likely significant effects but no evidence of the reasons for selection, based on reference to the development description and any relevant external guidance (such as from Natural England and / or the Environment Agency), are given. With reference to point 4 below, the applicant should review its study area to identify whether impact-pathways to other designated sites should be considered in the assessment. The review of study areas should consider the potential for sites supporting mobile species at greater distances from the proposed development.
4.	On-site impacts Off-site impacts	The shadow HRA is limited in its consideration of potential impact-pathways. There is no consideration for example of potential for LSE from emissions to air as a result of the construction and operation of the proposed development, including potential changes to both rail and road emissions. If the proposed development involves relocation of an existing composting facility and / or an energy centre, this should also be considered. This should be addressed in the final submitted document.
5.	Alone assessment	The alone assessment should be updated to take account of the points made above on considering a wider scope of potential impact pathways on designated sites. The conclusions that any potential impacts would be mitigated by distance and intervening habitats should be justified with reference to each impact-pathway and qualifying feature. Where potential LSE alone are assessed, an in-combination assessment of LSE should also then be provided.
6.	N/A	Reference should be included to the consultation undertaken, particularly with Natural England, and any feedback on the conclusions of this assessment received, particularly where it can be demonstrated that agreements have been reached on the outcomes of the assessment. We could not see reference to feedback from Natural England in the draft consultation report.
7.	N/A	In light of the comments on this document, the Inspectorate also advises that the applicant revisits the structure of the shadow HRA. With additional information provided, the current table format may need to be presented as a report in order to take account of all the points raised.

Consultation Response Summary

1.71.8 Natural England (NE) has reviewed an initial draft Shadow Habitats Regulations Assessment (sHRA) and provided feedback their letter dated 04 November 2025. NE agreed that there are no

impact pathways for direct impacts on Oxfordshire Meadows SAC, however recommended that, on receipt of detailed air quality modelling data, the sHRA be updated to consider potential impacts from air quality.

1.81.9 Comments were also received from the Planning Inspectorate[1] (PINS) following submission of the draft sHRA report during consultation. Specifically, PINS requested further information/ clarification regarding: i) the description of proposed works; ii) justification for the study areas distances selected for the identification of likely significant effects; iii) consideration of potential impact-pathways to other designated sites, particularly any sites supporting mobile species at greater distances from the proposed development; iv) consider a wider scope of potential impact pathways on designated sites, for example as a result of rail and road emissions to air during construction and operation of the proposed development, and v) that the alone assessment be updated to take account of the above points made above, with reference to individual impact-pathways and qualifying features as appropriate. Where potential LSE alone are assessed, an in-combination assessment of LSE should also then be provided.

1.91.10 No feedback specific to the draft sHRA document was received from other statutory consultees.

Amendments following ~~consultee~~ feedback

1.101.11 ~~This~~ An updated ~~updated~~ version of the sHRA ~~supersedes the draft report~~(dated May 2026) ~~was~~ submitted as part of the Applicant's responses to s51 Advice from PINS following Acceptance of the DCO Application. The revisions made at that time were in response ~~have been made in direct response~~ to comments from PINS and NE and reflected their advice on clarity, methodology, and alignment with best practice for Nationally Significant Infrastructure Projects (NSIPs).

1.111.12 Updates included:

- The description of the proposed works was ~~has been~~ updated to ensure consistency with the detailed description provided in Chapter 2 of the Environment Statement [Sections 1.4~~3~~-1.6~~5~~]
- An appropriate plan was ~~is~~ included that identifies the location of the Proposed Development and that of Oxfordshire Meadows SAC to support understanding of the project in relation to the designated site (Figure 1).
- Inclusion of details of consultation undertaken with statutory consultees, and of feedback received [Sections 1.7~~6~~-1.10~~9~~].
- A revised and more detailed description of the definition of the study area and a review of the study area to identify any impact-pathways to other designated sites and to consider the potential for sites supporting mobile species at greater distances from the Proposed Development [Sections 2.4-2.8].
- The consideration of potential impact-pathways on designated sites is expanded, and now includes reference to the potential for a likely significant effect from emissions to air as a result of the construction and operation of the Proposed Development [Table 3 and Sections 3.15-3.17].

[1] Oxfordshire Strategic Rail Freight Interchange– TR050008. Oxfordshire Rail Freight Ltd. Section 51 advice regarding draft application documents. Issued 14 November 2025.

- Confirmation that no in-combination assessment of any likely significant effect is required [Sections 3.18-3.20].
- Revision of the structure of this document.

Further Updates and Amendments, October 2026

1.13 This sHRA has been updated again following minor changes to the Order Limits for the DCO Application. From a procedural perspective, these changes are reflected on Figure 1.

1.14 In addition, written questions from the ExA focused on the potential effects of traffic generation along sections of the A40 and A34 of the Oxford Meadows SAC over the construction and operational periods of the project. Applying the 'precautionary principle ', as recommended by the ExA, the worst-case figures have been used in the updated assessment.

1.15 Clarification of the potential effects over these periods is provided at Table 3 and Paragraphs 3.15 – 3.17. These amendments have not altered the original conclusions of the sHRA.

Purpose of this Document

1.121.16 The following assessment is intended to provide the information necessary for the Competent Authority to fulfil their duty as required in Regulation 63 of the Conservation of Habitats & Species Regulations 2017 (*as amended*) (hereafter referred to as 'the Habitats Regulations').

1.131.17 Regulation 63 (1) of the Conservation of Habitats and Species Regulations 2017 (*as amended*) states that:

"a competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives."

1.141.18 Regulation 63 (2) further states that:

"a person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required".

1.151.19 Regulation 63 (3) states that:

"the competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regards to any representations made by that body within such reasonable time as the authority specifies".

1.161.20 Regulation 63 (5) goes on to state that:

"in the light of the conclusions of the assessment, and subject to regulation 64, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European Site or the European offshore marine site (as the case may be)."

1.171.21 Regulation 63 (6) concludes that:

"in considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given."

1.181.22 This sHRA assesses the potential for likely significant effects on European Sites due to the proposed development as outlined below. As such it provides essential technical information to support competent authorities in conducting a Habitats Regulations Assessment (HRA) and fulfilling their obligations under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (*as amended*).

2.0 THE HRA PROCESS

2.1 The Conservation of Species and Habitats Regulations 2017 (*as amended*) requires that appropriate steps are taken to avoid deterioration of habitats and species, for which sites on the national network are designated. A plan or project not directly connected with or necessary for the management of a site, but likely to have a significant effect upon it, either individually or in combination with other projects, must be subject to an Appropriate Assessment (AA).

2.2 The HRA process has developed into a four-stage process summarised as follows:

- **Stage One: Screening** – also known as the Test of Likely Significant Effect. If the Competent Authority cannot screen out a likely significant effect, an Appropriate Assessment is required.
- **Stage Two: Appropriate Assessment** – the Competent Authority will only agree to plans or projects that will not affect the integrity of a European site, also known as the "Integrity Test".
- **Stage Three: Alternative Solutions** – assesses any alternative solutions of a potentially damaging plan or project that failed the Integrity Test, and if it is determined there are no alternative solutions, the project cannot be agreed to, and it will either need to be changed or refused.
- **Stage Four: IROPI** - The final stage may allow a plan or project to proceed if after failing stage three if it is for Imperative Reasons of Overriding Public Interest, and only if suitable compensatory measures are secured.

2.3 In accordance with the "People Over Wind" ruling (High Court Justice for European Union Case 323/17)[2], the screening of likely significant effects takes place in the absence of any mitigation measures that would avoid or reduce any effects on Sites on the National Network.

2.4 This report identifies and considers ecological pathways between the Application Site and each National Network Site within the zone of influence. Each was screened (Stage One) for a likely significant effect alone and in-combination with other plans/projects. If there are any ecological pathways that could not be screened out without mitigation, alone or in-combination, a Stage Two Appropriate Assessment would be conducted and included in this document.

2.5 The zone of influence refers to the geographical area within which a plan or project is expected to have a measurable effect on an internationally designated site. There is no single guidance document which identifies specific study areas to be included, hence the approach used is on a case-by-case bases.

2.6 The search area for European sites was defined using a 15km radius from the Scheme's Order Limits, which is generally adopted and recognised as best practice. This buffer is considered precautionary and appropriate for identifying European sites that could be affected by indirect impacts such as air quality changes, hydrological alterations, or habitat fragmentation. As the Site is located within the Cherwell District the Habitat Regulation Assessment for the adopted Cherwell Local Plan 2011-2031 was also consulted. This identifies Oxford Meadows SAC as the only European site considered likely to be affected by plans and projects within the District.

2.7 In some cases, buffer distances may be extended, for example, to 20km for SPA or Ramsar sites supporting wintering birds, or 30km for SACs designated for certain bat species. A search of the wider 20km zone has also been undertaken to confirm the absence of such sites, and no additional internationally designated sites, including Special Protection Areas (SPAs), Ramsar sites or other SACs, were identified. Accordingly, the Oxford Meadows SAC, located approximately 13km from the site boundary, is the only relevant European site and is the sole focus of this screening assessment.

2.8 It is therefore deemed appropriate that the only Site on the National Site Newtwork considered within this report is the Oxford Meadows SAC.

[2] The Planning Inspectorate 2018. PINS Note 05/2018 Consideration of avoidance and reduction measures in Habitats Regulations Assessment: People over Wind, Peter Sweetman v Coillte Teoranta.

3.0 STAGE 1 – SHADOW HRA SCREENING

Baseline Information

Extended Phase 1 Habitat Survey and UKHab Survey

3.1 The Application Site is comprised of the 'Main Site' and the Highways Works Areas. The Main Site encompasses two sections of the Ardley Cutting & Quarry SSSI along the embankments of the Chiltern Railway line.

3.2 Habitats within the application site were surveyed by FPCR on the following dates:

- Main Site: 17-18th May 2021 with an update of the whole Main Site completed on 10-11th and 17-18th June 2025.
- SSSI Habitats: Detailed survey on 15-16-17th June 2022 and an updating detailed survey on 3rd-4th July 2025 that included additional areas following amendments made to the Order Limits area. Full details of the most recent survey are provided in the Ardley Cutting & Quarry SSSI Botanical Survey Report (Chapter 6: Ecology including Arboriculture, Appendix ES6.2) (FPCR, 2026).
- Highway Works Areas: 28-29th June and 11-12th August 2021, with additional areas incorporated into the revised Order Limits surveyed on 15th September 2022 and with a further update of the whole area plus added areas on 10-11th and 17-18th June 2025.

3.3 Habitat surveys followed the UKHab methodology and comprised a systematic walk over the Site to classify the broad habitat types and identify any Habitats of Principal Importance (HPI) for the conservation of biodiversity as listed within Section 41 (S41) of the NERC Act (2006) and identify a representative species list for each habitat. Habitats were mapped in the field using appropriate primary habitat codes, and where applicable secondary codes, with additional notes taken regarding the current 'condition' of habitats, completed in accordance with the Natural England's Technical Supplement. Any Habitats of Principal Importance for the conservation of biodiversity as listed within Section 41 (S41) of Natural Environment and Rural Communities (NERC) Act 2006[3] were identified.

Sites On the National Network Considered

3.4 A single internationally designated site was identified within 15km of the Proposed Development: Oxford Meadows SAC.

3.5 A summary of the designated features, conservation objectives, threats and pressures are presented in Table 1. The location of the SAC is relation to the Site is shown on Figure 1.

[3] *The Natural Environment and Rural Communities Act 2006.* [Online]. London: HMSO Available at: http://www.legislation.gov.uk/ukpga/2006/16/contents [Accessed 19.01.26].

Table 1: Summary of Designated Features

European Site/RAMSAR Site Potentially Affected		
Oxfordshire Meadows Special Area of Conservation (SAC) is located c.13km from the Proposed Development at its closest point (and c.17km from the Main Site). This SAC is underpinned by Cassington Meadows SSSI (1 unit and 2 features in favourable condition), Pixey and Yarnton Meads SSSI (2 units and 1 feature in favourable condition), Port Meadow with Wolvercote Common & Green SSSI (4 units and 1 feature in favourable condition), and Wolvercote Meadows SSSI (2 units and 1 feature in favourable condition).		
Qualifying Features	**Conservation Objectives**	**Threats and Pressures**
Annex I habitats and Annex II species are the primary reasons for selection of this site: ▪ Annex I habitat 6510: Lowland hay meadows. Considered to have vegetation communities which are unique in the world in reflecting the influence of long-term grazing and hay-cutting on lowland hay meadows. ▪ Annex II species 1614: Creeping marshwort *Apium repens*. Port Meadow (which makes up c.136.9ha of the c.267.4ha SAC) is the larger of only two known sites in the UK for creeping marshwort. There are no Annex I habitats or Annex II species present as a qualifying feature, but not a primary reason for site selection.	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation status of its Qualifying Features, by maintaining or restoring; ▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species ▪ The structure and function (including typical species) of qualifying natural habitats ▪ The structure and function of the habitats of qualifying species ▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely ▪ The populations of qualifying species, and, ▪ The distribution of qualifying species within the site.	Negative threats, pressures and activities with impacts on the Oxford Meadows SAC as identified on the standard data form comprise: Negative impacts both inside and outside the SAC ▪ Invasive non-native species ▪ Pollution to surface waters (limnic & terrestrial, marine & brackish) ▪ Human induced changes in hydraulic conditions Positive impacts are limited to inside the SAC ▪ Modification of cultivation practices ▪ Grazing In addition to the above, the Site Improvement Plan[4] for Oxford Meadows highlights the following threats and pressures relevant to the SAC in prioritised order: ▪ Hydrological Changes – improve knowledge (pressure/threat) ▪ Invasive Species – crassula (threat).

European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Oxford Meadows Special Area of Conservation (SAC) Site Code: UK0012845[5]

3.6 The Natural England Supplementary Advice document provides supplementary guidance on the targets for maintaining the favourable conservation status of the designated site, a summary of which is provided below.

3.7 In terms of lowland hay meadow habitat on site targets have been set to ensure that:

[4] https://publications.naturalengland.org.uk/file/5980083154059264 [Accessed 19.01.26].

[5] Natural England, 2019, European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Oxford Meadows Special Area of Conservation (SAC) Site Code: UK0012845 available online @ https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK0012845.pdf [Accessed 19.01.26].

- the extant of the feature is maintained at or above the baseline of 106.96ha,
- that the component vegetation types maintain their distribution (where applicable),
- allowances are made for adaptation and resilience,
- the overall extent, quality and function of any supporting features are maintained within the local landscape,
- an appropriate hydrological regime is defined and maintained,
- the abundance of the typical species of a MG4 *Alopecurus pratensis - sanguisorba* officinalis grassland type is maintained or restored as necessary,
- the properties of the underlying soil types are maintained,
- functionally linked land is maintained,
- the pattern of natural vegetation zonations/transitions is maintained,
- the frequency/cover of undesirable species is maintained,
- water quality and quantity are maintained,
- the concentrations and deposition of air pollutants are maintained, and
- the management measures (either within and/or outside the site boundary as appropriate) necessary to maintain the structure, functions and supporting processes associated with the feature are maintained.

3.8 On-site targets for creeping marshwort *Helosciadium repens* have been set to ensure that:

- the known actual area occupied by the feature is maintained. Typically this varies between 100 and 600m^2,
- the abundance of the population is maintained at a level above the baseline (100 plants),
- the distribution and continuity of the feature and its supporting habitat is maintained,
- the total extent of the habitat(s) which support the feature maintained at a baseline level of 164.97 ha,
- an appropriate hydrological regime is defined and maintained,
- the properties of the underlying soil types are maintained,
- invasive non-native plants are not present or that their effects are maintained at a level which does not significantly affect the feature,
- appropriate vegetation structure is maintained,
- water quality and quantity is maintained,
- allowances are made for adaptation and resilience,
- the concentrations and deposition of air pollutant are maintained,
- the management measures (either within and/or outside the site boundary as appropriate) that are necessary to maintain the structure, functions and supporting processes associated with the feature are maintained, and
- a suitable grazing regime is maintained.

SSSI Designation

3.9 Oxford Meadows SAC is legally underpinned by the following SSSIs:

- Cassington Meadows SSSI - neutral hay meadows and fen,
- Pixey and Yarnton Meads SSSI – unimproved floodplain meadows,

- Port Meadow with Wolvercote Common & Green SSSI - neutral grassland and Population of Schedule 8 plant - creeping marshwort, and
- Wolvercote Meadows SSSI - unimproved and semi-improved neutral grassland.

3.10 No pressures are listed for any of the SSSIs on the Natural England Designated Sites

Condition Assessment

3.11 The Common Standards Monitoring (CSM) provide a mechanism by which condition objectives for habitats, species, or other features of designated sites (e.g. SSSIs and SPAs) are set based on key attributes of the features[6]. This framework is provided in the form of CSM guidance which comprises a suite of documents including an 'Introduction to the Guidance Manual on Common Standards Monitoring' and other specific documents for species / habitat.

3.12 Site specific monitoring is completed in cycles of approximately six years. Whilst the assessment does not directly relate to the Conservation Objectives of European sites, the assessment provides a tool for management of SSSIs to ensure the favourable condition of the designated features can be maintained or restored as appropriate, and therefore provide a mechanism by which the favourable conservation status of designated features can be assessed.

3.13 A summary of the condition assessments for the SSSIs is provided in Table 2.

Table 2: Summary of Condition Assessment

SSSI Name	Feature	Condition	Date	Comment
Cassington Meadows	Floodplain fen (lowland)	Favourable	26/11/2021	Assessment based on historic unit-specific conditions
Cassington Meadows	Lowland neutral grassland (MG4)	Favourable	26/11/2021	Assessment based on historic unit-specific conditions
Pixey and Yarnton Meads	Lowland neutral grassland (MG4)	Favourable	20/08/2020	Assessment based on historic unit-specific conditions
Port Meadow with Wolvercote Common & Green	Lowland wet neutral grassland (MG11, MG13)	Favourable	15/07/2022	Assessment based on historic unit-specific conditions
Port Meadow with Wolvercote Common & Green	Population of Schedule 8 plant - Apium repens, Creeping Marshwort	Favourable	06/07/2010	Assessment based on historic unit-specific conditions
Wolvercote Meadows	Lowland neutral grassland (MG4)	Favourable	1/10/2010	Assessment based on historic unit-specific conditions

Stage 1 - Screening Assessment

3.14 The screening assessment presented in Table 3 has been informed by the conservation objectives for Oxford Meadows SAC and identified potential threats to these objectives (Appendix 1). Where necessary, this assessment has been updated to reflect changes to the Order Limits and to respond to raised queries.

Table 3: Ecological Pathway / Attributes and HRA Screening Assessment for Oxford Meadows SAC

Ecological Pathway / Attributes	Assessment method or threshold (if relevant) applied	Screening Assessment
Habitat loss	The underlying conservation objectives, and the supplementary advice state that	**No impact.**

[6] Common Standards Monitoring. JNCC, 2004.

Ecological Pathway / Attributes	Assessment method or threshold (if relevant) applied	Screening Assessment
	maintain the extent of the feature was necessary to maintain the favourable conservation status of the SAC	There will be no direct land take as a result of the development, which is located over 13km from the SAC.
Invasive non-native species	The standard data sheet lists invasive species as having a negative impact on the designated feature. Ensure that invasive non-native plants are not present or that their effects are maintained at a level which does not significantly affect the feature.	**No impact.** The SIP states the invasive New Zealand stonecrop *Crassula helmsii* is present on part of the site, but it is not currently in the areas occupied by creeping marshwort. An ongoing programme of control is in place to contain the spread of New Zealand stonecrop on site. No invasive species were recorded within the Application Site.
Hydrological Impacts	The standard data sheet identifies pollution to surface waters (limnic & terrestrial, marine & brackish) and human induced changes in hydraulic conditions as threats to the features of the SAC, while the SIP identifies that improved knowledge of impacts of hydrological changes is required. Supplementary advice also defines the appropriate hydrological regime for the site. Flooding regime: Maintain a hydrological regime which provides a cumulative duration of annual surface flooding which is typically less than 10 days between December-February and less than 3 days between September-November, with no inundations during March - August, subject to natural change. Water table; Maintain a hydrological regime which provides a consistently near-surface water table which typically averages depths of 35 cm (winter), 45cm (spring), 70cm (summer) and 60cm (autumn) below ground level.	**No impact.** There are no direct hydrological linkages via any running water courses between the Application Site and Oxford Meadows SAC. The Site is located within the Oxon Ray Operational Catchment, which is encompassed within the Cherwell and Ray Management Catchment[7]. Oxford Meadows SAC is located within the Ock Operational Catchment part of the Gloucestershire and the Vale Management Catchment The two management catchments converge within Oxford at the River Isis at a point located more than 3km downstream of the SAC. Chapter 9 of the Environmental Statement (Water Environment) states that groundwater for the Site flows southeast, with potential for some localised flow northwards. It does not identify Oxford Meadows SAC as a receptor.
Air pollution	Air pollution is not listed as a threat or pressure on the standard data sheet or the Site improvement plan. It is however discussed within the supplementary advice on the conservation objectives. It requires the maintenance of concentrations and deposition of air pollutants. *Maintain the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).*	**No impact.** Natural England's most recent guidance on air pollution sets five steps and specific thresholds to be considered with regards to emissions from road traffic. The B430 up to the A43, the A43 up to the A421, and the M40, are all expected to see increases of over 100 AADT (HDVs)-. Once the Ardley Bypass is constructed, construction vehicles will no longer use the B430. All of these proposed routes are beyond 200m of Oxford Meadows SAC, with the closest been the B430 at c.9km to the northeast.

[7] https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3012 [Accessed 19.01.26].

Ecological Pathway / Attributes	Assessment method or threshold (if relevant) applied	Screening Assessment
		An assessment of 'potential effects' to air quality is guided by the traffic flows predicted to pass ecological receptors. In this respect, only the affected road network (roads where the predicted increase is over 10% of the current traffic flow) is subject to detailed air quality assessment. This is to avoid assessment of effects where there is no credible risk of harm. The Transport Assessment Appendix 48 (AS-065) provides a 'worst-case' scenario over the construction period. This assessment confirms the predicted worst case on the A40 is expected are: total traffic 142 vehicles and 72 HGV. These predicted increases are 0.56% and 3.5%, respectively. With respect to the A34, the predicted worst-case traffic increases are: total traffic 142 vehicles and 72 HGV. These predicted increases are 0.17% and 0.92%, respectively. Given the predicted traffic increase over the construction period are below 10%, any increase in use over the construction period would not affect the air quality or increase potential risks to the integrity of the designated site. The operational development would increase AADT flows by 155 vehicles (2 LDVs and 153 HDVs) on the section of the A40 Northern By-pass Road which passes the Oxford Meadows SAC and 150 vehicles (59 LDVs and 91 HDVs) on the section of the A34 Wester By-pass Road which passes the SAC (scenario DS3A, P1280 of 6.3A.11 ES Appendix 3.1 Transport Assessment - part 11 of 11 - Appendices 44 -76 [AS-065]). As the predicted operational phase traffic increases on these roads do not exceed the DMRB criteria, these roads are similarly not defined as 'affected roads'. Consequently, the potential effects on the integrity of the designated site from increased airborne pollution over the operational period have been discounted.

Ecological Pathway / Attributes	Assessment method or threshold (if relevant) applied	Screening Assessment
		The proposals will see an increase in rail freight of up to 12 trains per day on top of the 80-120 trains at present. As the railway isn't electrified all trains would be run on diesel. It is not possible at this stage of the development to provide origin and destination information for the proposals given the variables of occupations, and the requirements to meet supply and demands of its customers. The secretary of State agreed with this stance in the Northampton Gateway SRFI; ***The Secretary of State notes that NR confirmed in their SoCG that there would be capacity on NLL for four trains per day at the start of operation of the Proposed Development, although this is subject to the origin and destination of each train being known (PR 5.4.41). The Applicant's view that no SRFI would be capable of providing the origin and destination information at this point of the development, given it is entirely dependent upon the occupants [of the development] and their operations, is accepted by the Secretary of State and he agrees with the Panel that this is a valid explanation as to why more certainty cannot be provided (PR 5.4.41).*** At present timetable works have focused on 75% of trains running to/from Birmingham and 25% to and from London via High Wycombe (Figure 2). Neither of these routes run past the Oxford Meadows SAC. As such Air pollution is screened out of the assessment.

3.15 ~~Whilst~~ As detailed in Table 3, the Proposed Development is not expected to increase traffic flows on relevant sections of the A40 Northern By-pass Road or A34 Western By-pass Road by more than the DMRB screening criteria. Therefore, a formal assessment of ~~, the~~ air quality assessment ~~undertaken~~ of potential road traffic impacts on ~~ecological designations~~ along this corridor is not required. Applying the precautionary principle, the potential effect over construction and operational ~~ nevertheless includes consideration of potential construction and operational effects~~ on the Oxford Meadows SAC is referenced in the air quality assessment. ~~.~~

3.16 As detailed within ES Chapter 4: Air Quality and Odour, Appendix 4.5 (Air Quality Modelling Results and Odour Survey Results) and ES Addendum (October 2026)[8], no exceedance of the 1% screening thresholds for annual mean nitrogen oxide (NO_X), ammonia (NH_3), Nitrogen deposition or Acid deposition is predicted within the Oxford Meadows SAC during construction and therefore no adverse effects are anticipated on the SAC as a result of air quality changes from construction traffic (neutral effect).

3.17 Similarly, the air quality assessment presented in the ES (and the ES Addendum) concluded that no exceedance of the 1% screening threshold is predicted in the concentrations of NO_X, NH_3, Nitrogen deposition or Acid deposition within Oxford Meadows SAC during the operation of the site (the analysis considered the period up to and including 2042, the end of the Local Plan period). As such, it is concluded that any changes in air quality will not lead to any detrimental effect on interest features for which the SAC is designated and the impact of air quality upon the SAC is considered to be neutral.

Effects In-combination

3.18 In accordance with the Habitats Regulations, consideration has been given to whether the proposed development could result in any likely significant effects in combination with other plans or projects.

3.19 As detailed in the preceding sections, all potential impact pathways, including pollution, hydrological change, air quality effects and habitat fragmentation have been robustly screened out due to the clear spatial, hydrological, and functional separation between the OxSRFI site and Oxford Meadows SAC. Each pathway has been shown to result in no likely significant effect when considered in isolation.

3.20 Given no risk of de minimis/appreciable (adverse) effects have been identified during the screening stage, an 'in combination' assessment has not been conducted as no in-combination effects can arise, regardless of the number or scale of other projects in the surrounding area.

Screening Conclusions

3.21 The screening assessment identified no impacts on Oxford Meadows SAC or its qualifying features from the following impact pathways:

- Habitat loss
- Invasive non-native species
- Hydrological impacts
- Air pollution

Conclusions

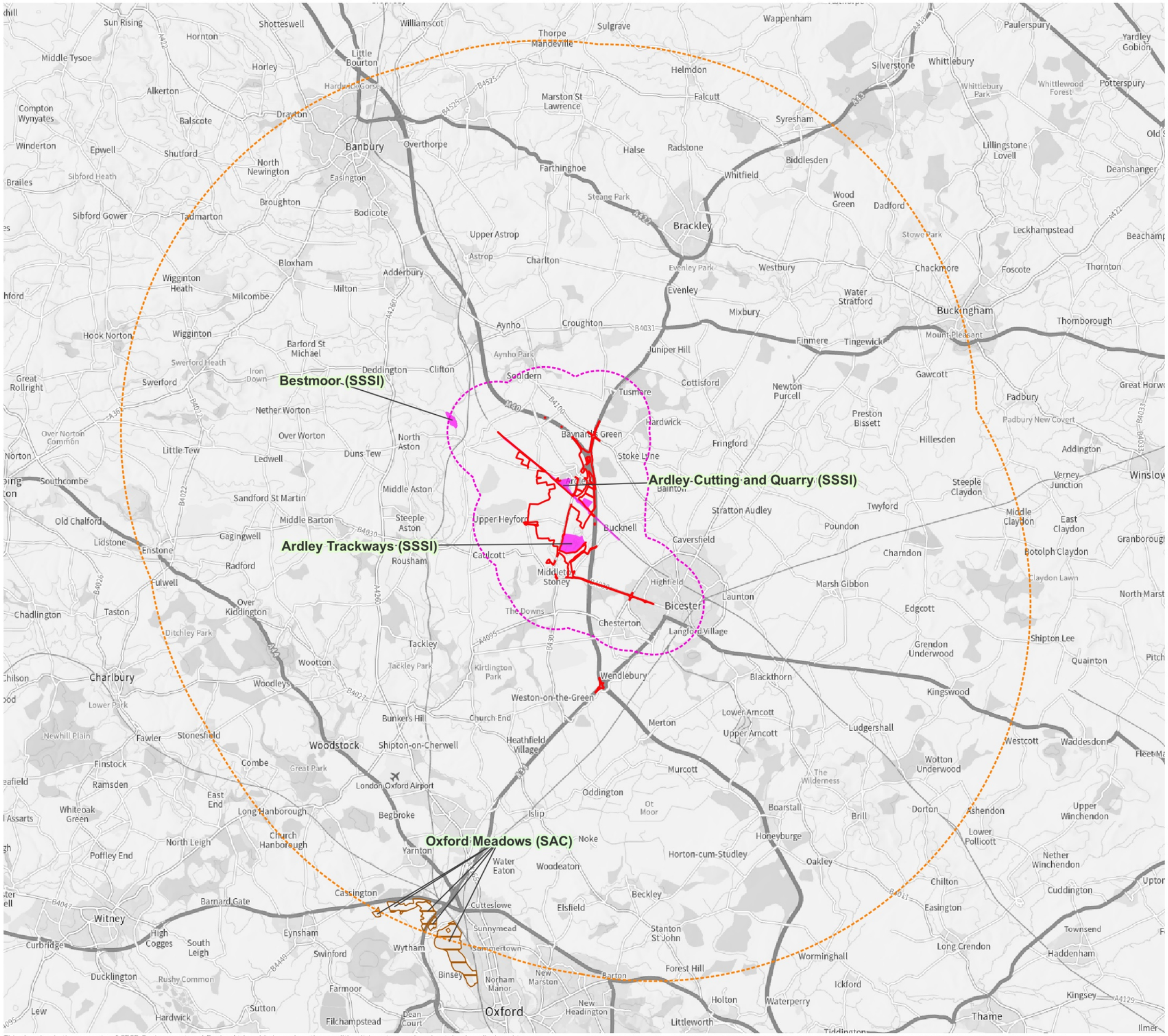
3.22 This Stage 1 screening assessment concludes that, given the substantial distance between the proposed OxSRFI development and Oxford Meadows SAC, the location of the Application Site outside of the SAC's operational catchment, and the nature of the development proposals, there

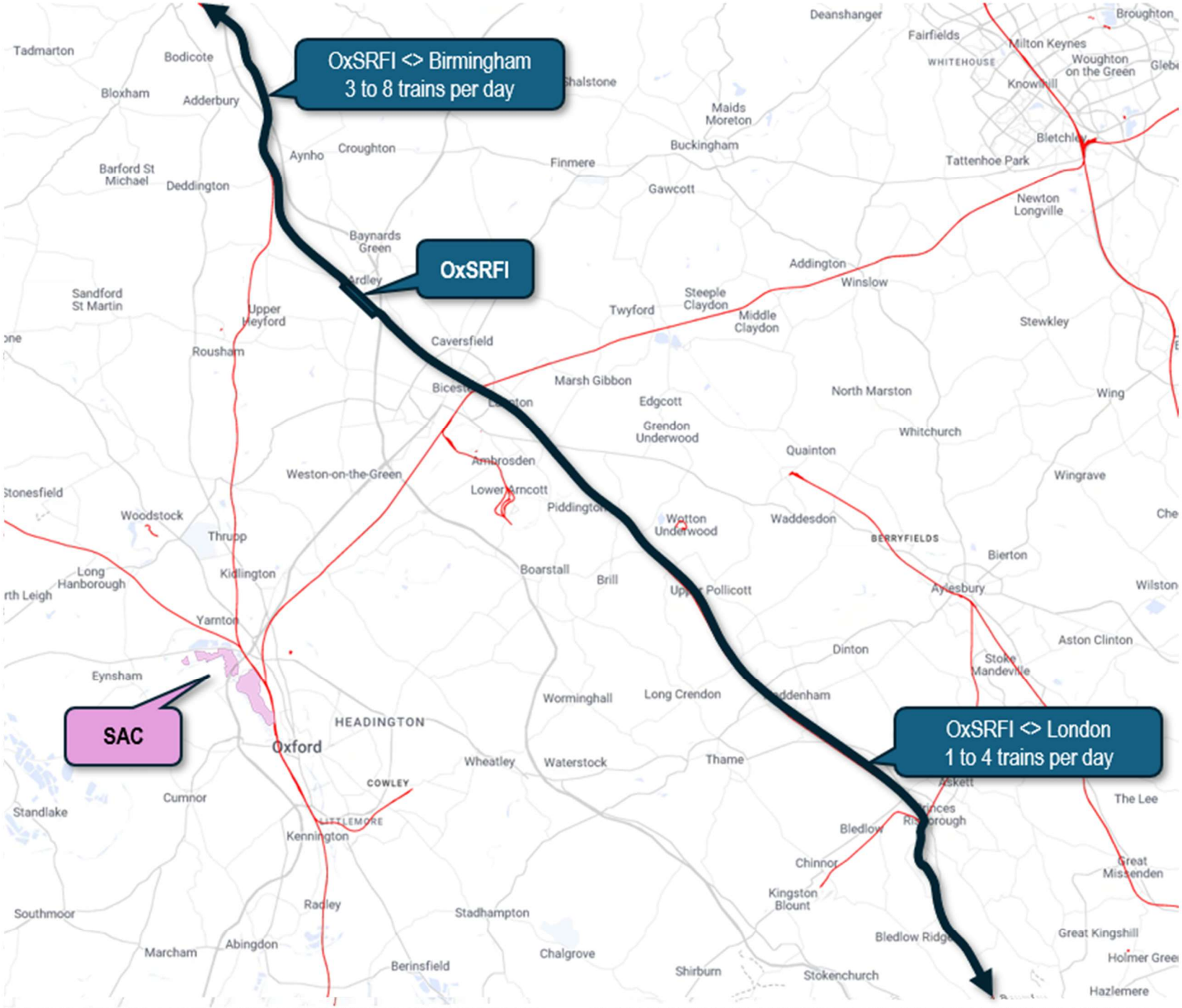
[8] Submitted at OxSRFI Examination Deadline 2.

are no viable pathways by which the project could give rise to Likely Significant Effects (LSE) on the SAC or its qualifying features.

3.23 As such, all impact pathways have been screened out and there is no requirement for the assessment to progress to Stage 2 (Appropriate Assessment) under the Conservation of Habitats and Species Regulations 2017 (*as amended*). The conclusion of no LSE applies both alone and in combination with other plans or projects.

3.24 This conclusion is based on a review of the spatial and functional relationship between the proposed development and Oxford Meadows SAC, informed by current guidance and evidence. The absence of a pathway for effect eliminates the potential for harm to the SAC's qualifying habitats and species.


Bestmoor (SSSI)
Ardley Cutting and Quarry (SSSI)
Ardley Trackways (SSSI)
Oxford Meadows (SAC)
Banbury
Bicester
Brackley
Buckingham
Oxford
Charlbury
Woodstock
Wendlebury
Bucknell
Middleton Stoney
Weston-on-the-Green
Ardley
Fringford
Stratton Audley
Launton
Wheatley
Thame
Kidlington
Witney
Deddington
Adderbury
Bloxham
Hook Norton
Chipping Norton
Enstone
Charlbury
Woodstock
Kirtlington
Islip
Oddington
Horton-cum-Studley
Beckley
Elsfield
Cuddington
Haddenham
Thame
Long Crendon
Worminghall
Forest Hill
Stanton St John
Waterperry
Holton
Ickford
Shipton-on-Cherwell
London Oxford Airport
Begbroke
Yarnton
Cassington
Eynsham
Wytham
Farmoor
Binsey
Sutton
Hardwick
Filchampstead
Littleworth
Barton
Summertown
Sunnymead
Cutteslowe
Water Eaton
Woodeaton
Noke
Ot Moor
The Wilderness
Murcott
Upper Arncott
Lower Arncott
Merton
Ludgershall
Kingswood
Blackthorn
Grendon Underwood
Wotton Underwood
Quainton
Shipton Lee
Edgcott
Marsh Gibbon
Poundon
Twyford
Middle Claydon
East Claydon
Botolph Claydon
Claydon Lawn
Charndon
Caversfield
Bucknell
Middleton Stoney
Highfield
Chesterton
Langford Village
The Downs
Tackley
Tackley Park
Kirtlington Park
Heathfield Village
Church End
Bunkers Hill
Woodleys
Wootton
Lower Park
Newhill Plain
Fawler
Stonesfield
Combe
Great Park
Finstock
Ramsden
Whiteoak Green
Long Hanborough
East End
North Leigh
Church Hanborough
Poffley End
Assarts
Begbroke
Yarnton
Cassington
Barnard Gate
Curbridge
High Cogges
South Leigh
Ducklington
Rushy Common
Lew
Hardwick
Sutton
Filchampstead
Dean Court
Farmoor
Swinford
Eynsham
Witney
Binsey
Wytham
Summertown
Sunnymead
Cutteslowe
Norham Manor
New Marston
New Headington
Oxford
Littleworth
Barton
Elsfield
Beckley
Stanton St John
Forest Hill
Worminghall
Ickford
Holton
Waterperry
Thame
Long Crendon
Haddenham
Kingsey
Ilmer
Tiddington
Chilton
Easington
Cuddington
Townsend
Nether Winchendon
Upper Winchendon
Lower Pollicott
Ashendon
Dorton
Brill
Boarstall
Oakley
Horton-cum-Studley
Honeyburge
Oddington
Islip
Noke
Yarnton
Begbroke
Cassington
Barnard Gate
Curbridge
Witney
Ducklington
Rushy Common
Lew
Hardwick
Sutton
Filchampstead
Dean Court
Farmoor
Swinford
Eynsham
Wytham
Binsey



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drawn date: 23/10/26
drwn/chkd: DV / SH

client: **Oxfordshire Railfreight Ltd**

project: **Ardley, Oxfordshire Strategic Rail Freight Interchange (OxSRFI)**

title: **RAIL ROUTE PLAN**
scale: 1:175,000 @ A3

number: **FIGURE 2**
rev: -

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Appendix A: Oxford Meadows SAC Citation and Conservation Objectives

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	Oxford Meadows
Unitary Authority/County:	Oxfordshire
SAC status:	Designated on 1 April 2005
Grid reference:	SP492090
SAC EU code:	UK0012845
Area (ha):	265.89
Component SSSI:	Cassington Meadows SSSI, Pixey and Yarnton Meads SSSI, Port Meadow with Wolvercote Common and Green SSSI, Wolvercote Meadows SSSI

Site description:
Oxford Meadows includes vegetation communities that are perhaps unique in reflecting the influence of long-term grazing and hay-cutting on lowland hay meadows. The site has benefited from the survival of traditional management, which has been undertaken for several centuries, and so exhibits good conservation of structure and function. Port Meadow is the largest of only three known sites in the UK for creeping marshwort *Apium repens*.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Creeping marshwort *Apium repens*

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0012845
Date of registration: 14 June 2005

[redacted]

On behalf of the Secretary of State for Environment, Food and Rural Affairs

European Site Conservation Objectives for Oxford Meadows Special Area of Conservation Site Code: UK0012845

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats and habitats of qualifying species**
- **The structure and function (including typical species) of qualifying natural habitats**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely**
- **The populations of qualifying species, and,**
- **The distribution of qualifying species within the site.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

H6510. Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)

S1614*. Apium repens*; Creeping marshwort

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 as amended from time to time (the “Habitats Regulations”). They must be considered when a competent authority is required to make a ‘Habitats Regulations Assessment’, including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where available) will also provide a framework to inform the measures needed to conserve or restore the European Site and the prevention of deterioration or significant disturbance of its qualifying features.

These Conservation Objectives are set for each habitat or species of a Special Area of Conservation (SAC). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving Favourable Conservation Status for that species or habitat type at a UK level. The term ‘favourable conservation status’ is defined in regulation 3 of the Habitats Regulations.

Publication date: 27 November 2018 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

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