OXSRFI

OXFORDSHIRE

STRATEGIC RAIL FREIGHT INTERCHANGE

Approach to Design including Quantum of Development

Document 10.3A
Revision V1

On behalf of
Oxfordshire Railfreight Limited

Prepared by Oxalis Planning
October 2026

PINS REF:	TR050008
Document Reference	10.3A
APFP Regulation	5(2)(q)
Author	Oxalis Planning
Date	October 2026
Revision	V1

APPROACH TO DESIGN INCLUDING THE QUANTUM OF DEVELOPMENT PROPOSED

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1. INTRODUCTION

1.1 At ISH1 the ExA posed questions in relation to the justification for the quantum and scale of the proposed development including the amount of floorspace. The Applicant explained that the design – including scale - of the scheme has evolved following the initial identification of the application site as a potentially suitable location for an SRFI. The scheme design, as now proposed, is the result of an extensive iterative design, assessment and consultation process, responding to the opportunities and constraints of the site and its context. The scale of development (i.e. total floorspace) proposed is a result of this design process as opposed to a pre-determined commercial aspiration required to make the scheme viable, nor is it an amount specifically required to address a specific quantified market need.

1.2 The proposed development (including its overall size and scale) has been informed by the Governments identification of the drivers of need for SRFI's and its conclusions that there is a compelling need for an expanded network of SRFI's. It has been informed by the market, both in terms of functional and operational requirements, and commercial demand. It has been informed by the physical containment and other features of the site and its context. It has been informed by all aspects of the environmental assessment process, which have informed design decisions, balancing judgements on layout and scale and the approach to minimising effects and managing impacts. It has also been informed by consultation, with the public and statutory bodies, with the scheme evolving and changing over an extensive period of evolution from inception to submission. The approach to the design of the scheme including how the final form of development (including its scale) has been arrived at, is set out and explained in the Design Approach Documents[1].

1.3 The proposed development is the conclusion of all of this work. Alternative design options have been assessed as a fundamental part of the iterative design process, at each stage balancing and assessing the full range of Policy objectives. This process has been driven by the overarching objective to deliver a successful SRFI, which addresses the Governments aspiration for a network of SRFI bringing about mode shift and widespread economic benefits, balanced alongside the challenges to avoid, minimise and manage harms to appropriate and acceptable levels. The Planning Statement (Document 5.4/APP-161) draws together the assessment of the application concluding that it fully accords with the NNNPS[2] and that the benefits of the proposals significantly and demonstrably outweigh the identified harms.

[1] Documents 5.5A/APP-166, 5.5B/APP-167, and 5.5C/AS-051).
[2] The National Networks National Policy Statement, 2024 ('NNNPS').

1.4 This Note seeks to expand on the overarching explanation set out above to outline the key factors that have informed the final design of the proposed development, specifically drawing out matters which have influenced the scale of the scheme. It covers the following factors:

- The need for an SRFI in this market area
- The identification of the application site
- The design process
- Comparison with other SRFI's in the UK

2. THE NEED FOR AN SRFI IN THIS MARKET AREA

2.1 Government sets out and explains in the NNNPS the various factors that constitute the drivers of need for SRFIs[3]. These drivers, the Government says, include the benefits of SRFI's in terms of:

- supporting supply chain resilience;
- meeting user or logistics business needs;
- increasing connectivity and enabling economic productivity and growth; and
- realising the full range of environmental benefits that rail freight can offer.

2.2 In terms of this latter point the Government have recently reaffirmed its ambitions to achieve a 75% growth in rail freight by 2050, with specific targets to 2040[4]. The Government concludes that '*SRFIs are crucial to rail freight growth*'[5].

2.3 The Government acknowledges that the recent development of some SRFIs goes some way towards facilitating an expanding network but say that '*to meet the Government's ambitions for rail freight growth there* ***remains a need*** *for appropriately located SRFI across* ***all regions***'[6] [our emphasis].

2.4 Having regard to these drivers and ambitions for mode shift, the Government concludes that there is '*a* ***compelling need*** *for an expanded network of SRFIs throughout the Country*'[7]. [our emphasis]

2.5 The Government does not seek to quantify the need for additional SRFIs, nor restrict the regions within which they should be located. The ambitions for an expanded

[3] NNNPS para 3.81 onwards
[4] Great British Railways sets course for rail freight growth - GOV.UK
[5] NNNPS para 3.99
[6] NNNPS para 3.101
[7] NNNPS para 3.103

network, read alongside the challenging targets for a 75% growth in rail freight, demonstrate the Government's desire for many more SRFI throughout the Country, both alongside and close to existing SRFI but especially in areas not currently well served. Whilst it notes that existing locations should be taken into account, this is to ensure that it achieves a more extensive cross-country network and it recognises that there will continue to be a natural clustering of SRFI in the distribution heartlands[8]. It specifically notes the challenges in expanding interchanges in London and the South East[9] and specifically requires consideration to be given to *'proposals for SRFIs in areas where there is* ***currently lesser provision'*** [10]. [our emphasis]

2.6 The work undertaken by the Applicant and its team concludes that those drivers of the need for SRFI's, identified by the Government, also apply to the market area within which OxSRFI is located. The work concludes that OxSRFI would expand the network of SRFI's into an area that is currently very poorly served by rail. Ie an area where there is currently 'lesser provision'.

2.7 For reference, that work is principally contained within the Planning Statement (Document 5.4/APP-161, the Market Analysis Report (Document 7.1/APP-311), and the GB Railfreight Supporting Statement (Document 7.2B/APP-313).

2.8 The area within which OxSRFI sits, is, strategically, exceptionally well located, with the potential to connect to both the strategic rail and road network and to an extensive market area. Its location in the south east, but close to the Midlands, and on the M40 corridor, means it is accessible to a large population. This means it is very attractive to logistics businesses seeking space for national and large regional distribution centres. These are the type of facilities and businesses, due to their scale, most likely to seek to and be able to, incorporate rail in their supply chains.

2.9 The area therefore has the fundamental attributes to help to facilitate the Government's ambition for mode shift, delivering logistics space that is rail served and enabling existing and future businesses - on site and in the catchment area - to utilise rail. Without an SRFI in this broad location, expanding the SRFI network, logistics operations in the area will continue to be entirely road based.

2.10 The Government concludes in the NNNPS, that reliance on road-based logistics is not an option. Nor is the delivery of a greater number of smaller rail freight

[8] NNNPS para 3.106
[9] NNNPS para 3.105
[10] NNNPS para 3.106

interchanges[11]. In this regard, the delivery of road-based logistics schemes in the area, now or in the future, reinforce the compelling need for an SRFI in this market area.

3. THE IDENTIFICATION OF THE APPLICATION SITE

3.1 Have regard to the factors outlined above, the Applicant has concluded that there is a compelling need for an SRFI to serve the market area within which OxSRFI sits.

3.2 The Main Site DAD paragraph 2.212 explains the reasons for the identification of the OxSRFI site. It explains that the Applicant identified the OxSRFI site because it has the crucial attributes for an SRFI. It provides access to the strategic rail and road network alongside access to markets and access to an existing and growing labour pool.

3.3 Importantly, initial assessment work also concluded that the character and topography of the site and its context provided the potential environment within which an SRFI could be developed, contained and the effects managed.

3.4 The Main Site is extremely well contained by existing physical features with the Chiltern Mainline to the north, the B430 to the east and the former US airbase at Upper Heyford to the west. It is contained from existing villages and other potential residential receptors and the areas character is influenced by other existing infrastructure including the strategic rail and road network, the Viridor energy from waste facility and Smiths Quarry as well as the expansion of Bicester and the growth at Upper Heyford. The environment of the site and its landform provide the opportunity for activity and buildings to be substantially screened and harm to the environment and potential receptors to be managed and minimised. Also see below regarding 'Containment and Landscape Structure'.

4. THE DESIGN PROCESS

4.1 The approach to and explanation of the design of the Main site is set out in the Main Site DAD[11]. It explains how assessment work has informed the preparation of the proposals and goes on to explain how the proposal has evolved in response to this work and to consultation and how design principles have been established. It

[11] NNNPS para 3.102 Table 1
[12] Main Site DAD – Document 5.5A/APP-166.

outlines how the approach to the design of the scheme has had regard to the Advice on Good Design produced by the Planning Inspectorate, including taking account of the four key stages of design, alongside other design guidance produced by the Government and the National Infrastructure Commission Design Group. The DAD explains the key components of the scheme and sets out the design principles and codes that will inform and control the detailed design process post consent.

National Policy Ambition

4.2 The NNNPS sets out the functional requirements for SRFI, including the scale and operational expectations of the rail freight terminal and the inclusion of warehousing. The NNNPS is clear that SRFI's are locations for businesses, capable now or in the future of supporting their activities by rail.[13] It recognises that SRFI's necessarily involve large structures, buildings and operations,[14] and that they deliver many benefits to the local economy.[15] The NNNPS requires Applicants to maximise local employment opportunities[16] and outlines the range of socio-economic benefits SRFI can deliver[17]. There is no expectation that the amount of warehouse floorspace should be limited or specifically justified based on market demand. The emphasis is for the private sector to identify opportunities for SRFI's to expand the network and then for Applicants to ensure that the economic benefits of SRFI's are maximised and for schemes to come forward in a form and at a scale which helps deliver the Governments overarching ambitions for mode shift and to achieve its targets for increasing rail freight use.

4.3 To achieve these policy ambitions necessarily means seeking to maximise the scale of and therefore the associated benefits of SRFI's, including where possible and appropriate, maximising the amount of rail served logistics floorspace.

4.4 In setting out the compelling need for a network of SRFI's the Government have concluded that the current logistics supply chain, based predominantly as it is on road based movement of goods, is unsustainable. Without new SRFI's the mode shift from road to rail will not be achieved. The Applicant's position, as set out in the Market Analysis Report (Document 7.1/APP-311), is that the significant demand from businesses for logistics space in the OxSRFI market area, now and in the future, will be forced to rely solely on a road based supply chain, unless SRFI's are brought forward in the area. It explains in section 5 the growing role and importance of rail in the supply chain and in section 6 sets out the role of SRFI's in both providing

[13] NNNPS para 4.80
[14] NNNPS – Paragraph 4.83
[15] NNNPS – Paragraph 4.84
[16] NNNPS – Paragraph 5.243
[17] NNNPS – Paragraph 5.245

logistics space and providing the opportunity for businesses, now or in the future, to utilise rail in their supply chain. It explains at paragraph 6.12 that, as a result of how SRFI's function and in light of the drivers of rail freight use, the demand for and level of use of a rail freight interchange will be driven by both the amount of warehousing on site as well as the presence of other warehousing (existing and emerging) in the area surrounding an SRFI together, as well as by the proximity and ease of access to other existing strategic rail freight facilities.

Containment and Landscape Structure

4.5 The Main Site DAD Section 2 explains how an initial landscape framework for the Main Site was developed based on the identification of key opportunities and constraints. This included retaining key landscape and ecological features, taking account of the topography of the site and the containment provided by existing physical features. It also explains that the initial design responded to the potential environmental effects on existing and proposed nearby properties and open countryside. Figure 7 in the DAD shows the Initial Concept Landscape Framework that was developed. It shows the approach to the establishment of development areas and extensive areas of retained and new landscape, including substantial and connected landscape buffers around the perimeter of the entire Main site. This reflects the explicit NNNPS recognition of the use of earthworks bunds (at NNNPS paragraphs 5.166 and 5.240) as an appropriate form of mitigation.

4.6 This broad landscape Framework, with the scheme contained to the north, east, west and partly to the south (by existing woodland blocks), with a central spine of retained landscape and ecological features and wide corridors of landscaped screening around the entire site, has endured through the design process.

Environmental Assessment Process

4.7 The DAD explains how the detailed design of the scheme has evolved in response to the extensive environmental assessment process. The environment assessment process has directly informed the development parameters, the nature and scale of the scheme and the mitigation proposed.

4.8 Section 3 of the DAD seeks to outline the key stages through which the scheme has evolved, through early scheme exploration, to key landscape structure and then evolution in response to the more detailed assessment and consultation process.

4.9 These changes include major alterations to the approach to access and highway mitigation, to the extent of landscaping around the southern part of the site, as well as many more subtle changes less visible on the scale of plans shown. These include the evolution of the Central hub, the incorporation of a lorry park, the

exploration of the potential to retain the IVC facility, the precise treatment and scale of the landscape screen mounds and alteration to the extent of development zones and building height parameters.

The Design Approach

4.10 The final form of the proposals, including the scale of floorspace proposed, is a response to the extensive, iterative design process that has been undertaken. It follows the Guidance set out by Government and the Planning Inspectorate on good design, having regard to and seeking to take account of the assessment and consultation process, whilst balancing the sometimes competing social, economic and environmental objectives. The scheme will deliver a large intermodal rail freight terminal, extensive warehousing for logistics businesses '*capable now or in the future, of supporting their commercial activities by rail'*[18]*,* alongside very extensive (around 60% of the Application Site) areas of green infrastructure. Throughout the process the overarching aim has been to design an SRFI which fully accords with the NNNPS, maximising the benefits of the proposal whilst seeking to avoid, minimise and appropriately manage the harms that come with nationally significant new infrastructure.

5. COMPARISON WITH OTHER SRFI'S IN THE UK

5.1 The challenge for Applicants to achieve an appropriate balance between operational requirements and environmental effects is not new or unique to OxSRFI. All existing consented SRFI have faced the same challenges. The extended OxSRFI team has members who have worked on all previously consented SRFI's and have brought this experience to the OxSRFI project. As the Applicant explained at ISH1, the scale and form of the OXSRFI proposal are similar to those being delivered, or developed at East Midlands Gateway (EMG), Northampton Gateway (NG) and West Midlands Interchange (WMI). The scheme at DiRFT, the first to be approved through the DCO consenting process, is substantially larger.

5.2 The schemes at EMG, NG and WMI all have large intermodal rail freight terminals, extensive and broadly similar levels of warehousing, with green infrastructure including landscape screen mounding around the perimeter of the sites and include major highway improvements in the form of new roads and improvements to existing roads.

[18] NNNPS para 4.80

5.3 The Applicant has prepared a Table which sets out key information relating to each project to help to provide a useful comparison between the OxSRFI proposals and those consented SRFI's elsewhere in the UK. This is attached to this Note at Appendix 1. The Applicant has also included at Appendix 2 of this Note, copies of the Illustrative masterplans for OxSRFI and these 3 schemes to further assist the comparative exercise.

5.4 The Table and Illustrative Plans show:

- The rail freight terminal on all four schemes is similar in form and capacity;
- NG and WMI are similar to OxSRFI in that they provide the opportunity for a rail spur into the yards of some buildings. EMG does not provide the opportunity for this;
- Whilst EMG and NG contain slightly less warehouse floorspace WMI is notably larger;
- At consent all of the schemes were designed on the basis of accommodating large regional distribution centres or national distribution centres. Take up at the 3 schemes has shown that demand is driven by occupiers seeking very large buildings. This reflects the anticipated demand at OxSRFI and the market evidence that this scale of operation is most likely to be attracted to an SRFI and most likely to be able to and seek to, utilise rail in their supply chain. All of the businesses located on EMG now use rail in their supply chain;
- The number of jobs likely to be created and the GVA delivered by each scheme is similar and is broadly proportional to the scale of the warehousing proposed (the figures shown are those set out at application submission so need to be compared having regard to the timing of each project – for example the EMG figures are proportionally lower because they were produced some time ago);
- None of the sites are located in designated landscape areas, although WMI is located within the Green Belt;
- As assessed in their respective ES's, the EMG, NG and WMI schemes would result in some significant landscape and visual effects, generally relating to the landscape of the Site and immediate context and views from surrounding settlement edges, properties and Public Right of Way;
- EMG, NG and OxSRFI are contained by physical features, with the terminal and all floorspace within a single campus surrounded by landscaped screen mounding. WMI is more disparate in its layout with a number of discrete parts separated by the existing highway network, the rail line, a canal and built-up areas. See Illustrative masterplans of the four schemes at Appendix Two;
- The scale of green space on the OxSRFI Site, at around 60%, is significantly greater than the green space on the other schemes.

Appendix 1 – Comparison of OxSRFI and approved SRFI

Site	**OxSRFI**	**East Midlands Gateway (EMG)**	**Northampton Gateway (NG)**	**West Midlands Interchange (WMI)**
Status	Pending Determination	Completed	Under construction	Under construction
Capacity – number of trains processed per day	12	16	16	10
Number of trains operating per day	N/A	6 (opened in Jan 2020)	1 (opened in June 2025)	N/A
Potential for Rail sidings directly into yards	Yes – 3 plots as shown on illustrative masterplan	No	Yes – 4 plots as shown on illustrative masterplan	Yes – 1 plot as shown on illustrative masterplan
Amount of warehousing (footprint only)	603,850 sqm	418,099 sqm as built	468,000 sqm	743,200 sqm
Take up summary	N/A	12 units across the site, average unit size (including mezzanine) = 48,050 sqm	6 units completed, under construction or full details submitted. Average unit size (including mezzanine) = 91,706 sqm	2 units under construction. Average unit size (including mezzanine) = 73,515 sqm

Buildings heights	Maximum 25.5m. Heights vary across the site	Maximum built 36m. Heights vary across the site	Maximum permitted 23m. Heights vary across the site	Maximum permitted 30m. Heights vary across the site
Dedicated Lorry park	Yes	No	Yes	No
Approximate jobs created - gross (assumption at application submission)	9600	7000	7500	8500 (slightly lower assumed job density)
GVA anticipated (at application submission)	£482m	£267m	£348m	£427m
Landscape designation / Green Belt	None	None	None	Green Belt
Amount of Green space across application site	Around 60%	Around 45%	Around 36%	Around 36%

Note: The information set out in this Table will in some instances not be precisely comparable because it be based on slightly different assumption made by each project team or because of the date at which the figures were set out.

APPENDIX 2 – Illustrative Masterplans from Approved SRFIs

GRID NORTH

Notes

1. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.

Key:

- Existing trees and woodland
- Existing hedgerows and other planting
- Grassland and open space (existing and proposed)
- Existing ponds and water features (including offsite)
- Public Right of Way (existing or proposed by others)
- Proposed footways and/or redirected PROW and/or cycleways (off-road routes)
- Proposed woodland and structural planting and scrub
- Proposed ponds, wetlands and drainage features
- Proposed individual, hedgerow trees and small tree groups

Ardley Road
Somerton Road
ARDLEY
ARDLEY WOOD
UPPER HEYFORD AIRFIELD (DISUSED)
INTERMODAL RAIL TERMINAL
Chilgrove Drive
Camp Road
VIRIDOR ARDLEY ENERGY RECOVERY FACILITY
Dewars Farm Quary
BIRCH SPINNEY
Manor Park
B430

0 100 200 300 400 500m
SCALE 1:5000

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Rev	Date	Details of issue / revision	Drw	Ch'd	Apv
P29.01	13.02.26	Final issue	CMW	TRJ	TRJ

Issues & Revisions

OxSRFI OXFORDSHIRE STRATEGIC RAIL FREIGHT INTERCHANGE

THE OXFORDSHIRE STRATEGIC RAIL FREIGHT INTERCHANGE AND HIGHWAYS ORDER 202X

Drawing Title

ILLUSTRATIVE MASTERPLAN

Regulation:	5(2)(o)	Document:	2.6
Drawn:	C. Warner	Checked:	T. Jackson
Approved:	T. Jackson	Date:	13.02.26
FPCR Ref:	8308-0002	Scale@A1:	1:5000

Project - Originator - Functional Breakdown - Spatial Breakdown - Form - Discipline - Number

OxSRFI-FPCR-ZZ-XX-DR-L-0002

Drawing Status	Rev
DCO SUBMISSION	P29

HEMINGTON

LOCKINGTON

A50

M1

JUNCTION 24

Zone A5 Units

Zone A6 Units

Proposed Intermodal site

Proposed Rail port

Zone A4 Unit

Zone A3 Unit

Zone A2 Unit

Zone A1 Unit

M1

Planning approved housing area

Transport Interchange

EAST MIDLANDS INTERNATIONAL AIRPORT

N

0 100 200 300 400 500m

Rev	Date	Details of issue / revision	Drw	Rev

ISSUES & REVISIONS

ROXHILL

EAST MIDLANDS GATEWAY
STRATEGIC RAIL FREIGHT INTERCHANGE

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE AND HIGHWAY ORDER 201X

Drawing Title

ILLUSTRATIVE MASTERPLAN SHEET 2

Scale	1: 2500	Drawn	J. von Fragstein
Size	A0	Reviewed	T. Jackson

Regulation
5(2) (o)

Document
2.11b

Drawing Status
SUBMISSION

Drawing No.
3252-L-17

Revision
-

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MILTON MALSOR

COLLINGTREE

COLLINGTREE TREE ROAD

A45

INTERMODAL RAIL TERMIAL

CHURCHILL WOODLAND

JUNCTION 15

GRANGE PARK

M1 MOTORWAY

HIGHGATE WOODLAND

A508

COURTEENHALL

N

J:\5700\5772\LANDS\Plans\5772-L-30 Landscape Plan REV E.indd

Roxhill Developments Ltd.
M1 Junction 15 West
Northampton

LANDSCAPE MASTERPLAN

1:5,000@A1
18 November 2016 OFD
5772-L-30 rev **E**

fpcr

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
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2.8A

sheet cut lines

sheet cut lines

sheet cut lines

2.8C

sheet cut lines

sheet cut lines

sheet cut lines

sheet cut lines

A5

M6 Junction 12

Car Park

Croft Lane

Croft Lane Community Park

Calf Heath Reservoir

Calf Heath Wood

Calf Heath Community Park

Straight Mile

Car Park

Vicarage Road

Existing Canal

A449

Station Road

Station Drive

1010

1020

1030

2010

3010

3020

3030

4010

4020

4030

4040

5010

5020

5030

2.8B

sheet cut lines

sheet cut lines

sheet cut lines

2.8D

N

0m 50m 100m 200m 500m

Key

- Existing Canal
- Existing Woodland & Trees
- Proposed water attenuation lagoons & swale network
- Landscaping
- Rail Infrastructure
- Road Infrastructure
- Estate Management Offices / Amenity and Welfare Facilities
- Residential Property and Curtilage
- Order Limits
- Permissive Paths

Revisions

West Midlands Interchange

Project
THE WEST MIDLANDS RAIL FREIGHT INTERCHANGE ORDER 201X

Drawing Status
SUBMISSION

Drawing Title
KEY PLAN
ILLUSTRATIVE MASTERPLAN

Drawing Size A1

Regulation	Document
5 (2) (o)	2.8

Drawn SM	Date MARCH 2018	Scale 1/5000	Reviewed PMJS

Drawing No.	Rev.
4049 - 100	05