NetworkRail

Eastern Region

Capital Delivery



Hinckley Proposed Strategic Rail Freight Interchange Pre NSIP Rail Report

Prepared by: Geoff Bounds, Development Manager CD-E

Date: 26.10.23.

Approved by: Samuel Afolabi, Sponsor **Date:** 26.10.23.

Approved by: Alastair Birnie, Project Manager **Date:** 26.10.23.

Accepted by:

Date:

eB Reference: TBC



OFFICIAL



Eastern Region – Capital Delivery

1. Contents

Section	Item Pa			
1.	Contents 1			
1.	Contents 1			
2.	Version Control 2			
3.	Abbreviations 3			
	Autoritations			
4.	Background			
_				
5.	Executive Summary			
6.	Strategia Contaut	8		
б.	Strategic Context 6.1 Rail Freight Demand	8		
	6.2 Development of the Strategic Rail Freight Network	8		
	6.3 HNRFI Rail Strategic Assessment	10		
	0.5 THAN I Null Strategic Assessment	10		
7	Network Connectivity	13		
	7.1 General	13		
	7.2 Track	14		
	7.3 Signalling and Operational Interface Arrangements	14		
	7.4 Earthworks	15		
	7.5 Telecoms	16		
	7.6 Electrification	16		
	7.7 DNO Electrical Supplies	17		
	7.8 Structures	17		
	7.9 A5/A47 Bridge Works	18		
8.	Level Crossings	19		
0.	8.1 General	19		
	8.2 Directly Impacted Level Crossings	19		
	8.3 The Outwoods Replacement Bridge	19		
	8.4 Remote Level Crossings	20		
	8.5 Narborough	21		
9.	Network Capacity 22			
	9.1 Principles for Assessing Network Capacity for an SRFI	22		
	9.2 Assessing Network Capacity for HNRFI	25		
	9.3 Proposed New Station opposite HNRFI, near Elmesthorpe	28		
	9.4 Future Freight and Passenger Growth	29		



2. Version Control

Version	Date Issued	Issued to
Draft 0.1	15.03.22	Project team, client for review/comment
Draft 0.2	21.03.22	
Draft 0.3	20.04.23	
Version 1.0	20.04.23	Final issued to client
Version 2.0	04.05.23	All parties
Version 2.1	09.05.23	All parties
Version 2.2	26.10.23	All parties
Version 3	14.11.23	All parties
Version 3.1 (Draft)	14.11.23	All parties
Version 3.2	20.12.23	All parties
Version 4.0 (Draft)	05.01.24	All Parties
Version 4.1	05.01.24	All Parties
Version 4.2	08.02.24.	All Parties



3. Abbreviations and Definitions

As low as reasonably practicable.		
Advanced Timetable Team		
Closed circuit TV monitoring		
Development Consent Order		
Department for Transport		
Distribution Network Operator		
East Midlands Control Centre		
Freight Operating Company		
Hinckley National Rail Freight Interchange		
Level Crossing Review Panel		
Manned crossing, box worked		
Major Signalling Review Panel		
Office of Rail & Road		
Route Strategy Planning Group		
Strategic Freight Network		
Signal Post Telephone		
Strategic Rail Freight Interchange		
Train Describer		
Working Timetable		
Also known as a <i>point</i> or a <i>switch</i> it it is an element of the track system		
that creates a diverging route from the main line. Specifically in context		
of HNRFI a <i>turn out</i> is the connection that forms the diverging route from		
the Network Rail network into the terminal.		
HNRFI along with all SRFI developments also relies on two turn outs		
linked together to connect the east bound and west bound lines of the		
Leicester to Nuneaton line. These two turn outs in combination are		
known as a main to main crossover.		
This refers to sections of track that are free from turn outs or crossings.		
This refers to sections of track that are free from turn outs of crossings.		
Track circuits form part of the signalling system. Specifically a track		
Track circuits form part of the signalling system. Specifically a track		
circuit involves running low voltage electrical current through the rails on designated sections of track such that when a train is present it forms a		
short circuit. This illuminates a display on the signalling panel so		
providing a visual indication to the signaller that a train is present on that		
section of line. Track circuit sections are separated by insulated block		
joints to prevent electrical interference between adjoining sections.		



4. Background

- 4.1 Network Rail has been requested by Tritax Symmetry (Hinckley) Ltd (the Promoter) to undertake a rail, strategic, technical and network capacity evaluation of their proposals to site an SRFI alongside the Leicester to Nuneaton Railway Line to the east of Hinckley. This new terminal will be known as Hinckley National Rail Freight Interchange (HNRFI).
- 4.2 This technical evaluation assesses:
 - a. the strategic alignment of the proposed terminal with wider rail freight strategic objectives from a rail industry perspective including siting an SRFI at the proposed location
 - b. the viability of connecting the internal SRFI rail network (reception lines, loading/unloading lines and all ancillary rail facilities) to the Network Rail network. This includes the impact of the terminal on affected level crossings on the Leicester to Nuneaton railway line.
 - c. a statement of indicative capacity on the connecting network to support the planned level of train service movements/day.
- 4.3 Network Rail adopts a consistent basis of approach in assessing the above elements to support any SRFI proposal nationally, that will be submitted via the NSIP process to secure a DCO. This approach has been applied to assessing the viability of HNRFI.
- 4.4 Network Rail has a duty of care through the regulatory obligations in its Licence Conditions to ensure that any third-party proposal to enhance connectivity into and use of the UK national rail network achieves an appropriate level of balance between addressing the requirements of the Promoter whilst at the same time safeguarding the regulatory and contractual obligations and rights that exist with all existing users of the network both freight and passenger. This balance of responsibilities has been safeguarded in assessing the viability of HNRFI.
- 4.5 Network Rail also works closely with Central Government via the DfT to enhance and promote use of the UK rail network in support of delivering sustainable and environmentally sustainable freight and passenger transport. In the context of freight growth specifically, Network Rail has actively supported DfT in development and delivery of the Strategic Freight Network (SFN) since 2005. This aligns with Government policy to secure freight mode shift migration from road to rail where this is commercially viable.
- 4.6 Great British Rail Transition Team Ltd (GBRTT), formed by the DfT, have undertaken a comprehensive analysis of the potential to grow rail freight, following a Call for Evidence in July 2022. The conclusion to that work was announced on the 20th December 2023 and is now imbedded in the Government's policy, to grow rail freight by at least 75% measured in net freight tonne kilometres (being payload, not simply train movements). The development of privately funded SRFI's is recognised as key to delivering on this target.



5. Executive Summary

- 5.1 Network Rail has been requested by Tritax Symmetry Hinckley) Ltd (the Promoter) to undertake a rail strategic, technical and network capacity evaluation of their proposals to site an SRFI (HNRFI) alongside the Leicester to Nuneaton Railway Line to the east of Hinckley. This new terminal will be known as Hinckley National Rail Freight Interchange.
- 5.2 This technical evaluation assesses:
 - a. Strategic alignment of the proposed development with Network Rail's wider strategic objectives for development of the UK rail network as defined by DfT.
 - b. The viability of connecting the terminal to the Network Rail network
 - c. Affected level crossing assessments
 - d. An assessment of indicative network capacity to support the proposed level of train movements.
- 5.3 In terms of strategic demand, between 1994 and 2005 when the DfT first promoted development of the SFN, rail freight grew to 9.1% of all UK freight movements annually. Of this approximately 20% was intermodal traffic. Since commencement of the SFN programme in 2005 intermodal rail freight has grown by 59%. This growth is forecast to continue through to the late 2040s.
- 5.4 The SFN programme is intended to enhance the capability of key UK rail freight routes to support the movement of longer and heavier freight trains and supports Government freight mode shift objectives.
- 5.5 For rail intermodal mode shift and growth forecasts to be achieved there needs to be investment in high quality inland terminals in key regional locations. Increasingly, private sector promoters are developing such terminals. The benefits of this investment are evidenced by accelerated levels of rail traffic growth to/from these terminals.
- 5.6 For any new terminal proposal Network Rail, through its Licence Condition obligations, has a balancing duty of care to support the promoter's development whilst at the same time ensuring that the proposed development does not compromise both Network Rail's wider network stewardship obligations and the contractual rights of other users of the network.
- 5.7 The means by which Network Rail has addressed this is set out in Section 6 of this report. However, Network Rail is satisfied that, strategically, HNRFI, if consented, would support strategic Government and rail industry targets for intermodal rail freight growth and delivering freight mode shift from road to rail.
- 5.8 HNRFI also connects into the gauge cleared SFN cross country route from Felixstowe to the West Midlands and connections into the West Coast Main line at Nuneaton which has important connectivity benefits for the movement of deep-sea container traffic to and from Felixstowe, London Gateway and Liverpool, as well as other ports, including for the growing short-sea containerised traffic market.



5.9 Network Rail has a structured process, PACE (Project Acceleration in a Controlled Environment) that has replaced its former GRIP process. The illustration below shows how PACE is split into 5 phases. These phases are in turn split into 8 stages that broadly correspond with the stages of the former GRIP process



- 5.10 All rail works have been assessed within the *Strategic Development and Project Selection* phase of PACE. Where previously on SRFI developments the level of pre NSIP assessment would have been assessed to the equivalent of ES2 stage the key operational elements of the Hinckley project (track and signalling) have been assessed to equivalent of ES3 single option level. Network Rail has adopted this approach on SRFI developments going forward to better position post DCO development and delivery of this key element of the rail connection works.
- 5.11 In all respects Network Rail is satisfied based on the level of development work undertaken to date that connecting HNRFI to the network is technically viable and that the network connections are capable of being physically delivered and taken into operational use.
- 5.18 Network capacity has been analysed to an established process that Network Rail applies to any SRFI development nationally and based on forecast traffic volumes provided by the promoter. This identifies available paths within the Working Timetable (WTT) all of which dovetail without adverse impact on both existing freight or passenger traffic and any known train service enhancement.
- 5.19 The current Rules of the Route does not assume that trains will run between 23:00 and 05:00 other than for engineering train movements as required as the Leicester Nuneaton line is subject to overnight closure for planned engineering works for 16 weeks out of every year. This is a historic reservation. However, evaluation of capacity between 05.00 and 23.00 has confirmed that sufficient network capacity exists to meet the forecast traffic volumes for HNRFI up to full traffic maturity.



5.20 Overall Network Rail is satisfied that, on the basis of the development work undertaken to date, there are no rail obstacles to the development and taking into operational use of HNRFI. Given its location, and on the emerging performance of other SRFI facilities, Network Rail is confident that HNRFI will play an important role in supporting freight mode shift from road to rail.





6. Strategic Context

6.1 Rail Freight Demand

- 6.1.1 At privatisation in 1994, rail accounted for 5% of all UK freight movements annually. Of this, approximately 10m tonnes was intermodal (container movements) from the UK deep- sea ports at Southampton and Felixstowe to a small number of inland distribution terminals.
- 6.1.2 Between 1994 and 2005 when the DfT first promoted development of the Strategic Freight Network rail freight grew to 9.1% of all UK freight movements annually. Of this approximately 20% was intermodal traffic.
- 6.1.3 Between commencement of the SFN programme in 2005 and 2021, intermodal rail freight has grown by 59 % and is forecast to continue to grow through to the late 2040s.

6.2 Strategic Freight Network

- 6.2.1 The SFN programme is intended to enhance the capability of key UK rail freight routes in terms of loading gauge, capacity and the ability to support the movement of longer and heavier freight trains.
- 6.2.2 The primary benefits of investment in the SFN network are:
 - a. Improved national and regional productivity through efficient movement of high volumes of freight.
 - b. Increased supply chain reliability.
 - c. Contributes significantly to carbon reduction objectives.
 - d. Aids motorway and major trunk route decongestion through removal of HGV movements
 - e. Improved road traffic accident statistics.
- 6.2.3 For rail intermodal mode shift and growth forecasts to be achieved there needs to be investment in three specific elements. These are:
 - a. Increased port capacity (deep-sea and short-sea)
 - b. Enhanced rail network capability (gauge and train lengths)
 - c. High quality, strategically placed inland logistics distribution terminals
- 6.2.4 Increased port capacity has been delivered by port operators at:
 - a. Felixstowe
 - b. London Gateway
 - c. Southampton
 - d. Liverpool
 - e. Tilbury
 - f. Teesport
 - g. Immingham

All of the ports listed have good connectivity potential to HNRFI via the SFN network



- 6.2.5 Government has invested in the SFN for intermodal growth primarily through gauge enhancement to support the movement of 9'-6" deep-sea containers on standard height platform wagons, increased capacity to handle a greater volume of intermodal services and the ability of key routes to handle longer trains. Train lengths of up to 775m are accepted as the rail freight industry standard in the UK.
- 6.2.6 Increasingly private sector promoters are developing major new SRFI facilities both within the Golden Triangle of UK logistics operations in the Midlands and also in key regional distribution areas such as:
 - a. London and the South-East
 - b. The North-West
 - c. The North-East
 - d Central Scotland
- 6.2.7 The benefits of this investment in high quality inland terminal capacity are evidenced by accelerated levels of rail traffic growth to/from these terminals.
- 6.2.8 Although market demand analysis in support of new terminal proposals rests with the promoter Network Rail looks to see evidence of this when considering the strategic value of any new terminal proposal. This allows Network Rail to be satisfied that where a terminal is connected to the network there is supporting evidence that traffic to/from the terminal will be moved by rail where this is commercially viable.
- 6.2.9 The Great British Railways Transition Team Ltd (GBRTT) has been tasked to progress the element of the Williams Shapps Plan for Rail 2021 which stated:

"To support a green recovery, railways need to encourage a shift away from planes, cars and lorries, [to] become the best option for long-distance travel and improve the whole journey experience. This includes...improving freight connectivity through interchanges and creating links with freeports. This will help rail fulfil its role as a public service that supports achieving net zero across the whole economy and transport system."

- 6.2.10 The conclusions to GBRTT's commissioned Market Assessment report "Intermodal Rail Freight Interchanges: levelling up and regional provision" [May 2022] have been provided separately to this report.
- 6.2.11 GBRTT has announced the conclusions to its Call for Evidence in July 2022, for the Rail Freight Growth Target, which as at Dec 2023, is set at a minimum increase of 75 % of net freight tonne kilometres growth by 2050. This is the first long-term target of its kind and by setting this, Government has demonstrated its strong commitment to supporting freight growth over the coming decades.



- 6.2.12 The methodology selected provides the best value for money with public sector funding targeted at tactical capacity and capability schemes, assumed to be delivered to complement private sector activity. This assumes the highest capital investment by the private sector into SRFI's and complementary, smaller, Intermodal Rail Freight Interchanges ('IRFI's') than any of the other options considered. HNRFI would therefore make a significant contribution towards this target.
- 6.2.13 HNRFI is located on Network Rail's Strategic Freight network (SFN) in a key section of the cross-country link line between the WCML and south / southwest and south Wales links via Nuneaton, The Midland Main Line at Leicester and the East Coast Main Line and Felixstowe line, at Peterborough.
- 6.2.14 As such HNRFI will provide:
 - opportunities for inter-SRFI and smaller regional Intermodal Rail Terminals (IRFI) traffic flows that Hinckley will offer for its tenants - such flows after all being part of the rationale for a greater number and disposition of intermodal facilities.
 - that Hinckley's off network reception lines will provide useful off network layover capacity for intermodal service circuits serving the facility.
- 6.3 HNRFI Rail Strategic Assessment
- 6.3.1 Network Rail has a regulatory obligation to the ORR under its Licence Condition obligations to work with promoters of any third party funded enhancement to the rail network to ensure that their proposals are fairly and equitably assessed, align with Network Rail's wider strategic and stewardship responsibilities for the UK rail network and that the proposals do not adversely impact on existing network operations.
- 6.3.2 At the outset Network Rail discussed the proposed development with the promoter to gain a clear understanding of the key requirements. This included:
 - Location of the terminal geographically, in context of the known logistics distribution areas within the UK and in terms of its connectivity to the SFN network.
 - b. The general layout of the rail terminal.
 - c. The operating principles for the rail terminal.
 - d. Connection requirements
 - e. Key target milestone dates which as a minimum will include:
 - i. Target NSIP submission date.
 - ii. Target DCO award date.
 - iii. Target commencement of site construction.
 - iv. Target in use date for the network connection/s.
 - v. Any phased delivery requirements for the rail connection works.
- 6.3.3 Following on from these discussions Network Rail has a regulatory obligation to assess the proposal for alignment with both the DfT and Network Rail's wider strategic objectives for the UK rail network prior to commencing any development work on behalf of the promoter. This is achieved by presenting the proposal to the relevant Network Rail Route's Route Strategy Planning Group (RSPG) forum. This is a standard procedure for any rail network enhancement proposal nationally.



- 6.3.4 Where a proposal is confirmed as having strategic fit it will be endorsed by RSPG for development. This endorsement may also impose specific requirements that need to be taken into consideration through the development and construction process.
- 6.3.5 Where an enhancement proposal is deemed not to have strategic alignment the promoter would be informed of this and the reasons why. Where possible Network Rail will work with the promoter to amend the proposal to satisfactorily address areas of concern.
- 6.3.6 However, where ultimately strategic alignment cannot be achieved Network Rail would be unable to support further development of the proposal.
- 6.3.7 In line with this policy HNRFI was presented to the London & North Eastern Route RSPG in February 2019. RSPG confirmed the proposal as having strategic alignment. The only issued raised by RSPG was the need to undertake early network capacity analysis to confirm network capacity to operate the planned level of service. This has been undertaken as part of the pre-NSIP development work and the methodology of approach and outputs are detailed at Section 9 of this report.
- 6.3.8 Based on the issues set out at 6.3.2 Network Rail therefore fully satisfied itself prior to commencement of development works that HNRFI:
 - Is geographically well positioned within the UK logistics "golden triangle" and is therefore ideally placed to support freight mode shift from road to rail.
 - b. Due to its location within the UK logistics "golden triangle" Network Rail is satisfied that HNRFI will address market demand.
 - c. Is well located in terms of highway connections to allow onward distribution within the East and West Midlands regions.
 - d. Is well located in terms of rail network connectivity by connecting directly into the Felixstowe to the Midlands and the North primary SFN rail route. This route is already gauge cleared throughout from the port of Felixstowe to connections with the gauge cleared West Coast Main Line at Nuneaton and beyond there into the West Midlands.
 - e. Has good rail network connectivity to the deep-sea ports of Felixstowe, London Gateway, Southampton Liverpool, Teesport, Tilbury and Immingham via pre-existing gauge cleared SFN routes.
 - f. Has good rail network connectivity via gauge cleared routes to regional distribution clusters in London and the South-East, the North-West, the North- East and Central Scotland and is thus well positioned to support the migration of domestic intermodal traffic between HNRFI as a hub and regional distribution centres, from road to rail.
 - g. The layout of the terminal presents no insurmountable challenges to development. Layout and connectivity issues are more fully addressed at Sections 7-9 of this report.
 - Operating principles have been reviewed by Network Rail and present no insurmountable challenges to development. These issues are more fully addressed at Section 7 of this report
 - The network connection arrangements for the terminal presents no insurmountable challenges to development. Layout issues are more fully addressed at Section 7 of this report.
 - j. The key target milestones are achievable taking due account of Network Rail's project governance processes for development and delivery of a project of this magnitude and complexity and bearing in mind Network Rail's experience in delivering similar works for SRFI connections elsewhere on the network.



6.3.9 Having satisfied itself in a strategic context Network Rail has entered into a Basic Services Agreement with the promoter to support development of the rail works (excluding the internal rail terminal) in support of the promoter making an application via the NSIP process for a DCO to develop and build the terminal.





7. Network Connectivity

7.1 General

- 7.1.1 Determining the viability of successfully connecting HNRFI to the network is important both to Network Rail and the promoter prior to an NSIP application being made.
- 7.1.2 Assessing the viability of connecting the terminal to the network is a technical assessment which is completed, as a minimum, to Network Rail's ES2 level and considers the viability of the connections in terms of the following key assets:
 - i. Track
 - ii. Signalling and operational interface arrangements
 - iii. Earthworks
 - iv. Telecoms
 - v. Electrification (where appropriate)
 - vi. DNO electrical supplies
 - vii. Structures
 - viii. Level Crossings
- 7.1.3 The basis of approach is to have addressed development in these areas to:
 - i. Confirm viability of making the connections to the network.
 - ii. Provide confidence to the promoter on network connectivity to support the NSIP application.
 - iii. Provide a solid grounding for further development through final option selection, detailed design, construction and taking into operational use of the connections if the DCO is granted.
- 7.1.4 There are two options for Network Rail and the promoter to address this key element of pre NSIP development work:
 - i. The promoter enters into an enhancement contract with Network Rail for Network Rail to undertake the ES2 development works. (Network Rail delivered)
 - ii. The promoter procures the development work from a competent Network Rail approved supplier with Network Rail reviewing the outputs for acceptability. (Asset Protection).

In the case of HNRFI the promoter has elected to procure the works direct from Messrs WSP. This approach is in line with ii) above.



- 7.1.5 As well as the technical assessment referenced in this section an assessment has also been made of:
 - i. Impact of the additional traffic on level crossings (Section 8)
 - ii. The impact of the proposal in terms of network capacity to support the forecast additional traffic demand to/from the terminal (Section 9).

7.2 Track

- 7.2.1 Designs have been prepared by WSP showing the location of the two proposed connection points to the terminal. These together form the east and west end connections.
- 7.2.2 Each connection is formed of a 25 mph turn out (see Abbreviations and Definitions) into the Down Nuneaton line with 25mph main to main crossovers. Connection speeds are generally set at 25mph for an SRFI as this aligns with the step down/step up in speed of a train entering or departing the terminal. Trap point protection is provided to both connections to avoid collisions in the event of an unauthorised train movement from the terminal towards the Down Nuneaton line. This connection arrangement is considered to be a standard network connection for a freight terminal.
- 7.2.3 All turnouts are standard geometry and are suitable both for the proposed turnout speed and level of usage envisaged (traffic volumes and axle weight of the traffic).
- 7.2.4 The proposed locations of the east and west end connections have been reviewed by Network Rail both at a project (delivery and commissioning) and Asset Management (maintenance and renewal) level and are deemed acceptable.
- 7.2.5 Network Rail will also be responsible for the installation, maintenance, inspection and renewal of short lengths of plain line on the terminal side of the connection points up to the east and west end exit signals. These lengths of plain line form part of the Network Rail connection.
- 7.2.6 The precise limits of these plain line sections will be determined post award of the DCO under next stage development to tie in with signalling design requirements (signal locations and track circuit berths). This is consistent with established practice for an SRFI development.
- 7.2.7 The terminal operator will be responsible for the design, procurement, installation, testing and commissioning of all trackwork on the terminal side of the exit signal limits. The promoter and Network Rail will work together to ensure all issues on the design and construction interface between the connections and the terminal track work are satisfactorily addressed. Again, this is established practice for any SRFI development nationally.

7.3 Signalling and Operational Interface Arrangements

- 7.3.1 New/altered signalling will be required for each of the two proposed connections to HNRFI
- 7.3.2 This will take the form of three new/altered signals for each connection comprising:
 - i. A new/altered entry signal from the network
 - ii. A new exit signal positioned towards the terminal end of the plain line section inside of the connection referred to in Section 5.2.5
 - A new/altered protecting signal to protect against head on collisions for trains using the main to main crossovers.



- 7.3.3 Full track circuiting will be provided to both connections within the signalling limits described above. This will allow the Network Rail signaller full visibility of all train movements over the connections and assurance of when the train has fully transitioned the connections.
- 7.3.4 Prior to an NSIP submission being made Network Rail now insists that a full operational interface assessment is made to determine the means by which operational responsibility will be transferred between the Network Rail signaller and the terminal operator for inbound trains and vice versa for departing services. This enables a much greater level of confidence for both parties on signalling and operational arrangements prior to the NSIP application. Network Rail is satisfied that this has been adequately addressed for HNRFI.
- 7.3.5 It is a requirement of the operation of HNRFI that arriving trains can be routed directly from the network onto one of the main terminal lines, as well as from the network to reception sidings and then from the reception sidings to the terminal. Network Rail and the promoter have established a safe and satisfactory method of dealing with this requirement.
- 7.3.6 Signalling control for the connections will be undertaken from the signalling control centre at Derby and specifically the workstation responsible for all wider train movements on the Leicester – Nuneaton line.
- 7.3.7 A signaller workload assessment will be undertaken as part of post DCO development of the signalling works along with changes to the signaller panel to accommodate the new connections
- 7.3.8 The proposed signalling arrangements have been reviewed and accepted by Network Rail's Major Signalling Review Panel (MSRP) and confirmed as acceptable.
- 7.3.9 The proposed signalling arrangements have also been reviewed by Network Rail's Asset Management team for maintenance and renewal activities and deemed acceptable.

7.4 Earthworks

- 7.4.1 The Leicester to Nuneaton line is on α 1 in 162 rising gradient running east to west between the proposed HNRFI east and west end connections.
- 7.4.2 The promoter will need to create a level plateau for the loading/unloading terminal and, as a result of this and the rising gradient on the network, the entry line to the terminal from the east end connection will be on a rising gradient as will the exit line between the terminal and the west end connection.
- 7.4.3 As a consequence there will be a need for earthworks on the Network Rail/ terminal boundary which will need to tie in with and not compromise the earthworks on the Leicester Nuneaton line
- 7.4.4 The promoter has produced cross sections and proposals for the earthworks throughout the rail frontage of the terminal and these have been reviewed by Network Rail's earthworks asset team.
- 7.4.5 Further earthworks development and design will be required assuming a DCO is granted. However, Network Rail is satisfied, based on the current level of development work, that the proposed earthworks are viable.



7.5 Telecoms

- 7.5.1 The scope of telecoms works related to HNRFI is expected to be:
 - Protection and diversion as necessary of existing lineside telecoms services and equipment. This will particularly apply at the two connection points but may include diversion and protection of services linked to earthworks and the works to reconstruct overbridge WNS 13 (see Section 5.8).
 - ii. Provision of Signal Post Telephones (SPTs) at all new/changed signals.
 - iii. Provision of a telecoms/data link between the terminal operator and the Network Rail signaller. This is required to allow the terminal operator to confirm the berthing slot to the Network Rail signaller and forms part of the arrangements at 5.3.4 and 5.3.5 and also to input details of the departing train to Network Rail's TD system prior to despatch of the train from the terminal.
- 7.5.2 The scope and design of telecoms works will be defined further post award of the DCO. However, Network Rail has reviewed the telecoms proposals as prepared to date and is satisfied on the viability of these.

7.6 Electrification

- 7.6.1 The Leicester Nuneaton line is not currently electrified.
- 7.6.2 Overhead electrification exists on the West Coast Main Line at Nuneaton and is targeted for implementation on the Midland Main Line through Leicester within the next decade.
- 7.6.3 In a wider context "infill" electrification of the cross-country route from Felixstowe to the West Midlands via the Leicester Nuneaton line has previously been mooted. Although there is no firm commitment to electrify this route at this stage, it is likely to be required in the medium to long term in support of plans for carbon reduction of the UK rail network.
- 7.6.4 In the context of HNRFI, all services to/from the terminal are expected to be diesel and / or diesel alternative fuel hauled at start up. However, if the cross-country route were to be electrified there would be an expected transition for much if not all of the traffic to transition to electric haulage. For this reason, Network Rail considers it appropriate that "passive provision" is made for future electrification of the terminal.
- 7.6.5 Passive provision for the future electrification of HNRFI has been incorporated in two ways:
 - i. Provision of space on the terminal plateau for the future addition of electrified reception lines. These become necessary under electrification to allow the the final positioning move of the wagons onto the gantry roads, via an electrified headshunt.
 - ii. Allowing appropriate space for the later addition of OLE structures and equipment.
- 7.6.6 No specific design work in respect of an OLE system is required at this stage other than the provisions above.
- 7.6.7 However, Network Rail is satisfied that the promoter has incorporated appropriate passive provision for future electrification into the proposals for HNRFI.



7.7 DNO Electrical Supplies

- 7.7.1 New DNO supplies will be required at both connection points for the following:
 - Points heating to all Network Rail controlled points to safeguard reliable operation under icing conditions.
 - ii. A possible requirement to augment signalling power supplies for new/altered signals at each connection point.
- 7.7.2 The detailed requirements for the DNO supplies will be determined through post DCO award development works. However, Network Rail and the promoter are satisfied that the requirements above can be adequately met through the overall DNO supply arrangements for the HNRFI site.

7.8 Structures

- 7.8.1 One over line structure, over bridge WNS13 Burbage Common Lane, is impacted by the HNRFI proposals.
- 7.8.2 The existing structure is a Network Rail owned three span masonry arch structure.
- 7.8.3 The promoter requires demolition and construction of a new bridge structure in this location as part of the highway works associated with development of HNRFI.
- 7.8.4 The new bridge construction works require a wider replacement structure. A bridleway would also be accommodated alongside the railway. These works will involve changes to the Network Rail boundary.
- 7.8.5 Provision of a bridleway alongside the operational railway will require appropriate containment and screening provisions such that there can be no planned or unplanned incursion from the bridleway onto the operational railway by equestrian users and that the risk of horses being startled by a passing train is appropriately mitigated.
- 7.8.6 The detailed arrangements for this screening will be addressed through post DCO development works and will be implemented as part of the bridge reconstruction works.
- 7.8.7 Localised land boundary changes will be required to accommodate the bridleway.





Burbage Commmon Road Overbridge (Existing)

7.9 A5/A47 Bridge Works

- 7.9.1 The A5 crosses the Leicester to Nuneaton line west of Hinckley by means of a Network Rail owned road under rail bridge at a point c3miles west of the HNRFI west end connection.
- 7.9.2 Works are proposed to this bridge as part of a programme of works to improve the A5 trunk road. The existing bridge is a single span metallic deck structure supported on brick piers. The bridge has a clearance of 4.6m (15'-0") from carriageway to soffit and for this reason is classed as a "low bridge" and provided with road vehicle collision protection beams. Network Rail has no planned works to the structure other than routine inspections and minor maintenance works as required.
- 7.9.3 Given the separation between the HNRFI west end connection and the A5 bridge there is no direct correlation between the works to deliver the HNRFI connections and any works that may be required to the bridge. Network Rail is aware of the proposed Mountpark development that will connect into the A5 adjacent to the bridge. Assuming HGV access will be required off the A5 in both directions the promoter will need to fund a road lowering scheme beneath the bridge to secure the required clearance. This is subject to Network Rail confirming the adequacy of the existing abutment footings to accommodate the required level of carriageway lowering. These works, if progressed, will have no impact on the HNRFI scheme.

Formatted: Font: Network Rail Sans

OFFICIAL



Eastern Region – Capital Delivery

- 7.9.4 In the same way there is no requirement to classify the respective works as interfacing projects as there is no inter dependency between them. Network Rail is also aware of Midlands Connect proposals to upgrade the 53 mile section of the A5 that links the M6 and the M1. It is understood that these proposals have completed the Strategic Outline Business Case stage and that, subject to funding, there is a desire to progress further development of the proposals for the central section including the affected bridge, in the period 2025 2030.
- 7.9.5 The form of the A5 improvements is unclear but it is assumed it will involve making the road a dual carriageway. This being the case the span of the existing bridge is insufficient to accommodate carriageway widening and accordingly the bridge would need to be replaced as part of the improvement scheme. Such works are fairly commonplace across the Network Rail network as the UK trunk road network is enhanced.
- 7.9.6 For the bridge works in question the Leicester Nuneaton line would be blocked west of Hinckley to allow demolition of the existing structure and the new bridge to be slid into place. Typically this would result in a 96 hour line blockage and would prevent any movement of traffic to/from HNRFI in a west bound direction. There would be no constraint to arrivals and departures at HNRFI from the east. In these situations affected trains would either be timed to run prior to the blockade, re routed to arrive/depart eastbound or cancelled. This may therefore involve a level of short term disruption to HNRFI traffic to/from the west but would be managed in line with standard rail industry protocols. Other than this the A5 improvement works will have no impact on HNRFI.
- 7.9.5 There is therefore no impact on delivery of the HNRFI works resulting from proposals to upgrade the A5 trunk road and the associated underbridge.

Formatted: Font: Network Rail Sans

Formatted: Font: Network Rail Sans

Formatted: Font: Network Rail Sans



8. Level Crossings

8.1 General

- 8.1.1 The assessment of level crossings has considered all crossings between Nuneaton and Glen Parva Junction in the following three categories:
 - i. those <u>directly impacted</u> by the proposed Hinckley SRFI, i.e. where there is a risk arising from: a) Construction of the terminal impacting the crossing directly
 - b) additional freight trains up to a length of 775 metres physically obstructing the crossings whilst awaiting access to the Interchange or restricting the sighting of trains in the opposite direction. This will occur where the train entering the terminal is either stationary or travelling at reduced speed on the approach to the signal controlling entry to the terminal.
 - crossings between Nuneaton and Glen Parva Junction not directly impacted by the above specific circumstances.
 - iii. Narborough.
- 8.1.2 It should be noted that the following definitions apply to level crossings in the context of this report:

Protected: Any crossing equipped with either barriers and warning lights or gates.

Passive: Any crossing that is not equipped with barriers, gates or warning lights.

8.2 Directly Impacted Crossings

- 8.2.1 Those crossings directly impacted by the proposed terminal development are (from east to west) Thorneyfields Farm No.2, Elmesthorpe, Earl Shilton, Barwell and The Outwoods.
- 8.2.2 The recommended option for each of these crossings is that, in the event of HNRFI being constructed and brought into use, *Earl Shilton* and *Barwell* level crossings would have to be closed outright as a matter of course as development of the interchange (warehousing, Reception lines and the rail loading/unloading lines) would physically obstruct the legalised routes of the respective rights of way over both crossings. *Thorneyfields Farm No 2* and *Elmesthorpe* level crossings would be closed with the footpaths diverted via nearby bridges; and *The Outwoods* level crossing closed, with the footpath diverted over a new bridge in the same location.

8.3 The Outwoods Replacement Bridge

8.3.1 Network Rail is supportive of proposals for provision of a replacement footbridge at this location.



- 8.3.2 In principle, and subject to the bridge being constructed to the appropriate standards, Network Rail is willing to assume ownership and maintenance of the structure post completion subject to the following conditions:
 - i. Payment of a commuted sum (amount to be agreed between the promoter and Network Rail) for future maintenance.
 - Leicestershire County Council assuming responsibility for maintenance and replacement of surfacing to the bridge deck and stairway treads and, to the extent required, public footway lighting.
 - iii. The design and construction of the bridge making appropriate passive provision for future electrification of the Leicester to Nuneaton railway line. At a minimum this should provision appropriate clearance to the soffit of the bridge deck for, at minimum, normal OLE clearance and 1.8m high parapets.
 - iv. All designs will need to be reviewed by Network Rail's Engineers
 - v. The applicant will be responsible for the acquisition of any land needed to facilitate provision of the bridge and obtaining all necessary consents along with all associated costs
- 8.3.3 Provision of the bridge and its form of construction is the responsibility of the promoter working in conjunction with the planning authorities.

8.4 Indirectly Impacted Crossings

- 8.4.1 Those in the second category were (from east to west) Twittens, Hinds, Durhams, Holts, Jericho and Padge Hall Farm. All of these crossings are passive (see 8.1.2)8.4.2 Whilst Network Rail remain of the view that the introduction of the HNRFI proposed traffic levels will have an impact on the indirectly impacted level crossings as set out above Network Rail also appreciates the benefits of the overall scheme and that the promoter is facilitating 5 level crossing closures as part of the scheme.
- 8.4.3 Taking all of these matters into consideration, Network Rail has agreed a contribution from the promoter towards the cost of outside limits level crossing works to mitigate any HNRFI traffic impacts. These are not specific to any particular crossing.
- 8.4.5 Acceptance of this offer is dependent on the Development Consent Order being secured. In the event HNRFI is not consented, then Network Rail will continue to manage the risk at each of the individual crossings as is undertaken currently.
- 8.4.6 This contribution will become due in full at such time as the first network connection (or both if commissioned jointly) becomes operational.
- 8.4.7 The agreement relating to this contribution will be dealt with in the Framework Agreement.

8.5 Narborough

8.5.1 Although not directly impacted by the proposed development this crossing was subject to separate assessment because of the specific local sensitivities raised relating to its location on a public road already experiencing congestion.



- 8.5.2 Narborough crossing has been assessed in terms of existing usage. Current barrier down times are in the order of 17 19 minutes in any one hour. This is not considered by the ORR to be excessive in terms of a town centre level crossing. Assuming a worst case scenario whereby any given HNRFI traffic doesn't pass the crossing in the same barrier sequence as a train in the opposite direction, it will increase barrier down time by 2.5 minutes per train movement. However, due to the signalling arrangements associated with HNRFI, no more than two train movements per hour can occur, therefore the impact of HNRFI traffic on the crossing at Narborough can only increase barrier down time by a maximum of 5 minutes in any one hour. As such the change in barrier down time will remain within acceptable limits.
- 8.5.3 Based on the October recorded normal working days, barrier down times of between 11.5 minutes and 23.8 minutes were recorded in the AM peak hours; and between 12.2 minutes and 19 minutes in the PM peak hours. With the paths available to HNRFI traffic, this would be increased to a maximum of 24 minutes. This is well within the rail industry barrier down time limits for a town centre level crossing down time of 40.45 minutes maximum. Most will be closed for significantly shorter periods. Over the 3-hour peak, the barrier down time increases by 1-2 % due to HNRFI traffic, with the level crossing still open for at least 70 % of the time during each peak 3 hours.
- 8.5.4 A peak time analysis has been undertaken which has identified that in the morning peak from 07:00 and 10:00 only one HNRFI suitable path is available between 9:00 and 10:00. In the evening peak between 16:00 and 19:00, only two HNRFI suitable paths are available, one after 16:00, adding 1.75 minutes barrier downtime (as it coincides with the passage of an existing booked service); and one after 17:00, adding 2.5 minutes barrier downtime.
- 8.5.5 Assessment of crossing issues at Narborough has concluded that much of the problem that occurs at this location currently stems from highway centric constrictions to free road traffic flows to the north side of the crossing and poor driver discipline in blocking back over the crossing when the highway is congested.
- 8.5.6 Discussions are being held between Network Rail and Leicestershire County council to address these issues which are pre existing and not materially impacted by the proposed HNRFI development.



9. Network Capacity

9.1 Principles for Assessing Network Capacity for an SRFI

- 9.1.1 Network Rail considers an assessment of network capacity an essential as part of the pre-NSIP development for any SRFI and insists on this prior to sign off of the Statement of Common Ground in support of the NSIP application.
- 9.1.2 In order to assess the availability of network capacity, Network Rail requires the promoter to define the maximum volume of trains/day the terminal is likely to handle along with an assessment of the ramp-up profile for traffic growth.
- 9.1.3 The maximum volume of trains/day an SRFI can handle will be governed by a combination of terminal capacity and market demand. However an SRFI is expected to handle a minimum of 4 trains/day and start up capability for the terminal should provision for this traffic volume. This may then build out through phased development to a higher daily traffic volume.
- 9.1.4 Where an SRFI has more than one connection it is also necessary to understand the split of the forecast traffic volume in each direction.
- 9.1.5 It is also necessary to recognise that for an SRFI every inbound train has a corresponding departing move, therefore for a terminal assessed as having, say, a 16 train/day capability that will equate to 32 separate train movements on/off the terminal in any one 24-hour period.
- 9.1.6 Ramp-up forecasts for SRFI facilities have tended to occur over an extended period. Typically start up volumes have been in the order of 1-2 trains/day rising to full volume over a 25–30 year period. However, more recent SRFI facilities, notably *iport* at Doncaster and East Midlands Gateway have experienced much more rapid volume growth. This is considered to stem from:
 - As the critical mass of SRFI's in the UK increases, it generates both increased confidence in and reliance on rail for bulk container movements with high levels of reliability.
 - ii. The increased move to e-commerce in the UK retail sector.
 - iii. The relationship between having warehousing and rail freight interchange facilities adjacent to each other driving efficiencies in the supply chains.
- 9.1.7 At the pre NSIP stage it is impossible for a promoter to say with confidence source or end points for rail traffic as this will totally be governed by commercial demand and which may change over time
- 9.1.8 Freight mode shift wise an SRFI has the potential to address three key logistic segments:
 - Container movements by rail from deep-sea ports or regional distribution clusters to the SRFI rail terminal for direct transfer to HGV for local "last mile" transport to end customers.
 - ii. Container movements from deep-sea ports by rail to then be off loaded and held at the SRFI pending being called forward by an end customer either by road or rail. This is an "inland port" type operation intended to assist in reducing port congestion.



iii. Container movements from either deep-sea ports or regional clusters by rail to warehouse units on the SRFI for storage/added value operations and then onward distribution either by road or rail.

It should be noted that of these only the operation at iii) has a link to the warehousing on site.

- 9.1.9 Again at the point of making the NSIP application the promoter will be unable to provide clarity on which of the activities at 9.1.8 the terminal will be involved in noting that it could be all three.

 Notably recent SRFI facilities accommodate all three.
- 9.1.10 For the reasons set out above, therefore, Network Rail assesses network capacity for an SRFI in the following way:
 - i. Intermodal traffic in the UK tends to derive from or travels to the following key centres:
 - a) Deep-sea ports: Typically, Felixstowe, Southampton, London Gateway, Liverpool, Teesport, Tibury, Immingham. These flows will be on gauge cleared routes to allow unconstrained movement of deep-sea containers
 - b) Channel Tunnel:
 - c) Regional Distribution "clusters": the Midlands North- West; North-East; Central Scotland, Wales or London and the South-East.
 - d) **Short-sea ports**: this is an emerging market as more European traffic is diverted from the short-sea English Channel road ferry crossings.
 - ii. Given uncertainties over the volume of traffic to/from each of these centres at this juncture, meaningful analysis of paths back to source points or end destinations is impossible. Therefore, for any SRFI development, Network Rail assesses capacity on the route the terminal connects into up to key junctions on the network where traffic to/from the above locations would disperse onto different routes.
- 9.1.11 Pathing assessment also requires the following factors to be taken into consideration:
 - i. The WTT to be used for the analysis. This provides clarity on existing train paths
 - ii. Any known service development aspirations
 - iii. Any known rail network capacity enhancement proposals material to the analysis
 - iv. Timetable planning rules
 - v. The version of analysis to be used
 - vi. Traction type class of locomotive
 - vii. Trailing loadings total weight of the train (usually the worst case)
 - viii. Trailing lengths required to define places where the train can be held (regulated)
- 9.1.12 As with the technical evaluation, evaluation of network capacity can be addressed in one of two ways:



- Network Rail can undertake this through their Advanced Timetable Team (ATT) team at Milton Keynes.
- ii. The analysis can be sourced from a competent external supplier with the Network Rail ATT team pre agreeing the remit on which the assessment is undertaken and validating the assessment outputs.
- 9.1.13 Evaluation of network capacity, by using the agreed WTT, applies the following important principles:
 - i. It ensures that all existing contracted passenger and freight services using the network are "first on the graph".
 - ii. Factoring in other known timetable/service developments ensures that these are legislated for in the analysis.
 - iii. Times when the network is blocked for planned maintenance (usually overnight) are factored in

In combination this ensures that any path identified for the SRFI traffic will dovetail with and have no adverse impact on these activities.

- 9.1.14 Pre NSIP assessment of network capacity for any SRFI is based on it being a "snapshot in time" view on capacity. It does not:
 - i. Warrant that the paths identified in the analysis will remain available at commencement of rail operations to/from the SRFI.
 - ii. Warrant the identified paths to the SRFI traffic.
- 9.1.15 Assuming a DCO is granted, further capacity analysis will be undertaken prior to Network Rail submitting a Network Change application. Network Change is an established rail industry process where Network Rail consults with and secures approval from affected rail industry partners for a proposed change to the network. In the case of an SRFI it will be for new connections and changed signalling arrangements. Again, this analysis is undertaken on the same basis as set out at 9.1.13 and 9.1.14 above.
- 9.1.16 Notwithstanding the provisions above, for all SRFI developments to date, there has been no problem in securing actual paths at commencement of operations. As such there is a high level of confidence that paths identified through development analysis and as described above will largely be available at commencement of SRFI operations.
- 9.1.16 Securing a firm contractual path for an SRFI operation is achieved by a Freight Operating Company (FOC) bidding for a path on behalf of an end customer once the SRFI connection has become operational. Once granted the path is then:
 - Taken into the FOC's track access contract. This then has the effect of making the path a firm contractual right that is not time limited.
 - ii. Incorporating the path into the WTT.



9.2 Assessing Network Capacity for HNRFI

- 9.2.1 The promoter has confirmed that HNRFI at traffic volume maturity will be a 16 trains/day terminal. This therefore will involve 32 separate train movements on/off the terminal within any one 24-hour mid-week period.
- 9.2.2 As discussed at 9.1.6 the traffic ramp-up profile for HNRFI, in light of experience with recent SRFI developments, may be faster than has traditionally been the case. For this reason, the ramp-up profile for the traffic has been ignored and capacity assessed on the mature volumes.
- 9.2.3 The promoter has assessed that of the 16 trains/day the following split will apply between east and westbound arrivals and departures:

To/From the East: 10 trains/day (20 movements)

To/from the West: 6 trains/day (12 movements)

9.2.4 The analysis limits that accord with the principles at 9.1.10 ii) are:

Direction	Location	Distance	Run Time
To/from the east: To/from the West Midlands:	Wigston/Leicester Water Orton	8-12 miles 22 miles	15-20 minutes 30 minutes
Wildianas.	Crewe Basford Hall	68 miles	110 minutes
To/from the WCML North:	Nuneaton North Chord	7 miles	15 minutes

9.2.5 Factors at 9.1.11 as applicable to HNRFI:

WTT used:	May 2020 (pre COVID)*

Known service development Midlands Connect: Assume 1 additional train/hour between Coventry and Leicester stopping at Narborough and Hinckley. Timed for Class 170.

Known network capacity Recognises the aspirations to improve capacity in the Leicester corridor over time. This includes 4 tracking through the corridor, grade separation at Wigston, doubling of Syston south chord. This work is not currently a committed scheme and is

undated.

Timetable planning rules: Assumed at this stage. Specifically, a conflicting movement for a train arriving / departing the

movement for a train arriving / departing the terminal cannot take place on and off the terminal, while there is another train in section between

Hinckley and Croft. So, for example:



- A train arriving at HNRFI from Nuneaton could not pass HNRFI West Junction until a passing train had passed Hinckley, or a passing train could not pass Croft until the train had arrived at the terminal
- For a train arriving from the Leicester direction then a second train could only pass Croft once the first train had arrived on the terminal
- For a train departing towards Leicester no train should be between Hinckley and Croft in either direction. When following another service towards Croft, the first train must have passed or arrived at Croft, before the departing train can pass HNRFI East Junction.
- For a train departing towards Nuneaton no Down direction train should be between Croft and Hinckley. When following another service towards Hinckley, the first train must have passed or arrived at Hinckley, before the departing train can pass HNRFI West Junction.

Analysis tool(s), and version number:

RailSys version 10 with conversion to be compatible with RailSys 12 used for indicative TPR values.

Traction type: Class 66

Load: 1800T

Train length: 775m

Train Speeds:

All HNRFI traffic Class 4 intermodal trains with a maximum permitted speed of 75mph.

All existing passenger services at planned speeds within the WTT up to the 90mph maximum permitted line speed.

All other class 4 freight trains at planned speeds within the WTT with a maximum permitted speed of 75mph

Class 6 freight trains at planned speeds within the WTT with a maximum permitted speed of 60mph.

Analysis Hours: 05.00 – 23.00.



Overnight pathing has not been modelled at this stage due to current planned overnight engineering access 16 weeks out of each year. However, recognising that HNRFI, in common with all other SRFIs, will be a 24 hour operational terminal, options exist to vary the existing engineering access arrangements to accommodate overnight pathing as this is required. Alternatively it is possible to "flight" services onto HNRFI pre 23.00 and release them back onto the Network into appropriate paths after 05.00. Both of these options are established protocols nationally for dealing with overnight traffic to/from an SRFI and are therefore appropriate to HNRFI.

Other Assumptions:

Speeds within the terminal are max 15mph

There can be no more than three train movements on/off HNRFI in one hour. Of these no more than two can be in any one direction. This assumption reflects both timetabling and the logistics of terminal operations.

- 9.2.6 HNRFI capacity analysis was undertaken by Messrs WSP with Network Rail's ATT team providing input to the study remit and reviewing/validating the study outputs. This aligns with the approach set out at 9.1.12 ii)
- 9.2.7 Network Rail is therefore satisfied that sufficient network capacity exists in the WTT to support the forecast level of traffic to/from HNRFI in both east and west bound directions. No allowance had been taken in this assessment for any capacity increase as a result of HS2. Accordingly the recent announcement of the cancellation of HS2 Phase 2 does not change this conclusion.
- 9.2.8 Beyond this Network Rail also considers that there are strategic opportunities to further enhance network capacity to the further potential benefit of HNRFI, to the extent this may be required, through the following:
 - Delivery of additional freight capacity between Felixstowe, Peterborough, Leicester (including enhanced capacity in the Leicester corridor) and Nuneaton for services to the West Midlands, North-West and Central Scotland through delivery of the F2M&N programme.
 - Development of an alternative engineering access strategy allowing overnight access to/from HNRFI.
 - iii. Post COVID changes to freight and passenger demand which are not yet fully understood.



iv. Freeing up of additional capacity on the West Coast Main Line as a result of development and delivery of HS2 South of Handsacre Junction, on the WCML.

9.3 Proposed New Station opposite HNRFI near Elmesthorpe

- 9.3.1 Network Rail has been asked to consider the viability of providing a new passenger station close to Elmesthorpe, potentially opposite HNRFI, both to serve the villages of Elmsthorpe and Earl Shilton and the rail freight terminal itself.
- 9.3.2 Functionally it is assumed that the facility would comprise:
 - i. 2 x 100m (nominal) platforms
 - ii. A cross platform interchange footbridge with lifts to ensure DDA compliance
 - iii. Platform lighting, seating and waiting shelters to rail industry standards
 - iv. Car parking for X cars with new highway access and car park lighting.
- 9.3.3 However the proposed location of the station facility opposite HNRFI presents additional challenges that are both significant and undesriable. These are:
 - i. For passenger stations where trains are required to terminate and stable overnights generally Network Rail seeks for the station to have a gradient no steeper than 1 in 500.
 - For intermediate stations where the stopping time is short duration, and with the train under the control of the driver at all times, the ruling gradient through the station has no formally prescribed limits. Generally, however, it is desirable for the gradient to be as shallow as possible. In this respect the ruling gradient at the proposed site is 1 in 168.
 - i. Although this gradient is not without precedent at other existing stations on the network, as a new station facility it would be preferable for the gradient to be eased if practicable. This in turn would necessitate increasing the gradient on the approaches to the station. The ruling gradient on the main lines at the site is too steep to accommodate the platforms on an acceptable level without major works to reprofile the gradients either side of creating a broadly level plateau for the station. This would result in the main line gradient (rising east—west) being steeper either side of the station. As well as necessitating significant track and formation engineering works this change in gradient
 - profile would adversely impact the performance of west bound non stopping trains.

 iv. There is inadequate space for 2 platforms beside the existing lines, which is used by express passenger services as well as a stopping services and freight. This could only be addressed by slewing the main lines to the west onto new formation which would involve significant additional earthworks—which would be detrimental to the Applicant's planned works west of the Network Rail boundary.
 - An option to create a two track "station loop" off the main line would while technically not impossible add further time into the station stop and would require more trackwork and a larger land take and have greater detrimental impacts than those referenced at iv above involve creating two new junctions between the proposed east and west end connections to the terminals. These junction arrangements would not however be compliant with rail industry standards in terms of signal spacing and braking distances. As such this is not therefore a viable option.

Formatted: Font: Network Rail Sans, 11 pt, Font color: Accent 5

Formatted: List Paragraph, Numbered + Level: 1 + Numbering Style: i, ii, iii, ... + Start at: 1 + Alignment: Right + Aligned at: 1.9 cm + Indent at: 2.54 cm

Formatted: Font: Network Rail Sans, 11 pt

Formatted: Font color: Auto

Formatted: Font: Network Rail Sans, 11 pt

Formatted: Font: Network Rail Sans

Formatted: Font: Network Rail Sans



- 9.3.4 Given the above Netwwork Rail considers the overall cost of works to create the proposed station facility would be prohibitively expensive to be significant.
- 9.3.5 Network Rail is not aware of any work having been done to establish a needs case exists for a station at this location. However catchment from local communities is likely to be low both due to the size of Elmsthorpe and Earl Shilton and the close proximity to the existing rail head at Hinckley. Commuting to/from the terminal relies on good rail connectivity not only at the site but at the centres of population employment is forecast to derive from in the Transport Assessment. In several cases there is no direct rail connection while others are too close to the terminal to make it realistically viable for intending passengers to use the hourly stopping service. In overall therefore Network Rail is of the view that the needs case for a new station at this location is low-consultation with Cross Country Trains has confirmed that inclusion of an additional station call in their Birmingham to Leicester stopping services would add journey time and hence compromise the ability to platform these trains at both Birmingham New Street and Leicester. The increased journey time would also mean that additional rolling stock and traincrew would be needed to operate the service. For these reasons Cross Country Trains believes that provision of a new station is unlikely to be viable in business case terms.
- 9.3.46 9.3.6Network Rail is aware of proposals by the promoter to improve the bus links to Hinckley and Nuneaton, which will route along the A47 link road, to limit private car usage for commuting to/from HNRFI and believes that in this instance, this will better serve employees wishing to commute by public transport
- 9.3.7 In terms of operational performance the station would be located between 2.5 miles and 3 miles east of the existing station facility at Hinckley and 4 miles to the west of the existing station at Narborough. Currently all hourly stopping services on the Nuneaton to Leicester line call at both stations. 9.3.8The effect of the additional station stop would be both to add time to the Birmingham Leicester stopping services and adversely impact both network capacity and performance of non-stopping freight and passenger services on this key cross country route.
- 9.3.98 Post the Covid Pandemic the UK rail industry is facing major challenges to reduce its OPEX cost base while likely levels of usage are such that it would be difficult to make a business case justification for provision of a new station at this location.
- 9.3.109 In overall-summary therefore Network Rail considers that provision of a new station facility at Elmsthorpe is not supportable.
- 9.4 Future Passenger and Freight Growth
- 9.4.1 In respect of future increases in frequency of passenger and freight services on the Leicester Nuneaton line forecast increase in levels of traffic are generally not currently known.
- 9.4.2 However, typically, any increase in traffic levels will occur incrementally and over an extended period.
- 9.4.3 In the context of HNRFI therefore the applicant can only deal with the forecast incremental impact of the HNRFI traffic on the Leicester Nuneaton railway line over and above existing service levels.
- 9.4.4 These impacts have been taken into account in the pre NSIP rail development work and the means by which these will be addressed is as set out in this report.



Eastern Region

9.4.5 It will be a matter for future schemes to define the incremental increase in traffic over and above HNRFI forecast levels and to define the means by which any impacts arising from those traffics will be addressed.





Network Rail Capital Delivery East Midlands Trent House RTC Business Park Derby DE24 8UP

This document is the property of Network Rail. It shall not be reproduced in whole or part nor disclosed to a third party without the written permission of Network Rail. Uncontrolled copy once printed from its electronic source. Published and issued by Network Rail, Network Rail, One Eversholt Street, London, NW1 2DN Registered in England and Wales No. 2904587 www.networkrail.co.uk Copyright 2019 Network Rail Infrastructure Limited. All rights reserved.