

Tritax Symmetry (Hinckley) Limited

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

The Hinckley National Rail Freight Interchange Development Consent Order

Project reference TR050007

Environmental Statement Volume 1: Main Statement

Chapter 19: Accidents and disasters

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Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
Regulation 14

This document forms a part of the Environmental Statement for the Hinckley National Rail Freight Interchange project.

Tritax Symmetry (Hinckley) Limited (TSH) has applied to the Secretary of State for Transport for a Development Consent Order (DCO) for the Hinckley National Rail Freight Interchange (HNRFI).

To help inform the determination of the DCO application, TSH has undertaken an environmental impact assessment (EIA) of its proposals. EIA is a process that aims to improve the environmental design of a development proposal, and to provide the decision maker with sufficient information about the environmental effects of the project to make a decision.

The findings of an EIA are described in a written report known as an Environmental Statement (ES). An ES provides environmental information about the scheme, including a description of the development, its predicted environmental effects and the measures proposed to ameliorate any adverse effects.

Further details about the proposed Hinckley National Rail Freight Interchange are available on the project website:



The DCO application and documents relating to the examination of the proposed development can be viewed on the Planning Inspectorate’s National Infrastructure Planning website:

<https://infrastructure.planninginspectorate.gov.uk/projects/east-midlands/hinckley-national-rail-freight-interchange/>

Chapter 19 ◆ Major accidents and disasters

INTRODUCTION

- 19.1 This chapter sets out the approach that TSH has adopted to assess the potential effects deriving from the vulnerability of the Proposed Development to relevant major accidents and disasters and the potential for the development to cause major accidents and disasters as required by the EIA Regulations 2017 (Schedule 4, Paragraph 8):

‘A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through thorough risk assessments pursuant to EU legislation ... or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.’

- 19.2 There is the potential for the Proposed Development to be affected by major accidents or disasters and consequently there is a potential for the Proposed Development to impact on human health and the environment. For the purposes of this chapter, accidents are considered to be an occurrence resulting from uncontrolled developments in the course of construction and operation of a development (e.g. major emission, fire or explosion). Disasters can result from man-made hazards such as terrorist acts or natural hazards such as naturally occurring extreme weather events or ground related hazard events (e.g. subsidence, landslide, earthquake).
- 19.3 Due to this potential, this chapter explains the control measures in place in the construction and operational phases of the Proposed Development to ensure that the Proposed Development’s vulnerability to accidents and disasters results in the risk of potential significant effects being As Low As Reasonably Practicable (ALARP).
- 19.4 The term ALARP describes the desirable level with which risks are managed and controlled. For a risk to be defined as ALARP a risk must be appropriately managed through the use of mitigation.
- 19.5 This chapter (and its associated figures and appendices) is intended to be read as part of the wider ES, with particular reference to Chapter 7: *Land use and socio-economics*, Chapter 8: *Traffic and Transport*, Chapter 9: *Air Quality*, Chapter 10: *Noise and Vibration*, Chapter 11: *Landscape and Visual Effects*, Chapter 12: *Ecology and Biodiversity*, Chapter 13: *Cultural Heritage*, Chapter 14: *Surface Water and Flood Risk*, Chapter 15: *Hydrogeology*, Chapter 16: *Geology, Soils and Contaminated Land*, Chapter 17: *Materials and Waste* and Chapter 18: *Energy and Climate Change*.

- 19.6 Each of these chapters provide a baseline of receptors and identify topic relevant mitigation measures for this assessment to consider when assessing the potential effects deriving from major accidents and disasters.
- 19.7 The structure of this chapter differs from the typical chapter structure used elsewhere in this ES due to its nature of focusing on risks relevant to the Proposed Development and signposts other documentation where these risks have been/will be addressed.

EIA SCOPING OPINION

- 19.8 This chapter has been produced in line with the Secretary of State’s 2020 Scoping Opinion which advised that:

‘The ES should include a description and assessment (where relevant) of the likely significant effects resulting from accidents and disasters applicable to the Proposed Development. The Applicant should make use of appropriate guidance (e.g. that referenced in the Health and Safety Executives (HSE) Annex to Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development’s susceptibility to potential major accidents and hazards. The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development’s potential to cause an accident or disaster. The assessment should specifically assess significant effects resulting from the risks to human health, cultural heritage or the environment. Any measures that will be employed to prevent and control significant effects should be presented in the ES.’

- 19.9 In addition to the above, Table 19.1 sets out comments received in the 2020 Scoping Opinion (ES Appendix 6.2 - document reference 6.2.6.2) and documents our approach to including these within the assessment.

Table 19.1 Scoping Opinion comments and a summary of responses

2020 Scoping Opinion Comment	Summary of approach
In respect of the scope of the transport and traffic assessment for the HNRFI, the 2020 Scoping Opinion recommended that the assessment of major accidents and disasters should consider risks from hazardous loads (Scoping Report 2020 paragraph 4.2.1) and the potential impacts of an increase in rail freight movements, both generally and specifically in respect of the operation of the existing level crossing in the centre of Narborough on the Leicester to Hinckley railway (paragraph 4.2.4)	Risks associated with hazardous loads, increased rail freight movements and the operation of level crossings are considered within this chapter.
Public Health England (PHE) would expect to see information about how the	Chapter 1: <i>Introduction</i> of this ES explains that the EIA for the HNRFI is following

2020 Scoping Opinion Comment	Summary of approach
<p>applicant would respond to accidents with potential off-site emissions (e.g., flooding or fires, spills, leaks or releases off-site).</p> <p>Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.</p>	<p>Rochdale Envelope assessment principles. The level of information provided is sufficient to fulfil the requirement of the EIA Regulations to assess the ‘expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned’ (EIA Regulations 2017, Schedule 4, Paragraph 8).</p> <p>All risks during the construction, and operation of the Proposed Development have been considered within this chapter.</p> <p>All potential hazards from accidents and disasters have been considered to determine their relevance to the Proposed Development. Details follow in the assessment below.</p> <p>The EIA has not assessed decommissioning because the HNRFI is intended to be a permanent development and consideration for decommissioning at this stage would be too hypothetical to be meaningful. As such powers in relation to decommissioning are not being sought through the DCO.</p>
<p>PHE would expect the applicant to consider:</p> <p>‘the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations: both in terms of their applicability to the development itself, and the development’s potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations’.</p>	<p>The relevance of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations to the Proposed Development have been considered.</p> <p>It is concluded that neither are applicable to the Proposed Development and whilst there may be pathways associated with hazardous loads handled by occupiers they would be categorised as Controlled</p>

2020 Scoping Opinion Comment	Summary of approach
	<p>Substances in the Planning (Hazardous Substances) Regulations 2015 and therefore it would be the occupier’s responsibility to secure hazardous Substances Consent under the Planning (Hazardous Substances) Act 1990. Control measures within these regulations ensure that occupiers take all necessary measures to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any major accidents which occur.</p> <p>In addition, with regards to the transportation of materials Network Rail, have through consultation confirmed that freight associated with the HNRFI can be added without exceeding capacity constraints. All freight will be driven within the standards set by Network Rail. This ensures the safe transportation of all materials.</p> <p>There are no other pathways by which relevant hazards would interact with the Proposed Development to give rise to vulnerability.</p>
<p>PHE support the inclusion of an estimation of community anxiety and stress in every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible.</p>	<p>Health is covered in relevant chapters, such as Chapter 7: <i>Land use and socio-economics</i>, Chapter 8: <i>Transport and traffic</i>, Chapter 9: <i>Air Quality</i>, Chapter 10: <i>Noise and Vibration</i>, Chapter 11: <i>Landscape and visual effects</i>, Chapter 12: <i>Ecology and biodiversity</i>, Chapter 13: <i>Cultural heritage</i>, Chapter 14: <i>Surface water and flood risk</i>, Chapter 15: <i>Hydrogeology</i>, Chapter 16: <i>Geology, soils and contaminated land</i>, Chapter 17: <i>Materials and waste</i>, Chapter 18: <i>Energy and Climate Change</i> and Chapter 21:</p>

2020 Scoping Opinion Comment	Summary of approach
	<p><i>Cumulative Impacts and in-combination effects.</i></p> <p>A separate Health and Equality Briefing Note provides a central location for all health-related assessment content (Appendix 7.1, document reference 6.2.7.1).</p> <p>This chapter assesses the potential effects deriving from the vulnerability of the Proposed Development to relevant major accidents and disasters and the potential for the development to cause major accidents and disasters.</p>

CONSULTATION

19.10 Consultation with the regulatory authorities and the public were made, in advance of, and following publication of the PEIR. Regulatory authority comments are provided in Table 19.2 and themes raised by the public are noted below together with our response.

Table 19.2 Summary of section 42 consultation (2021) responses

Consultee	ID/Ref	Consultee Comment	Response
Hinckley and Bosworth Borough Council	C3.EM.2 32	<p>In line with the expectations of Public Health England (“PHE”), we would expect to be advised on and scrutinise all “information about how TSH would respond to accidents (including on the Strategic Road Network) with potential off-site emissions (e.g., flooding or fires, spills, leaks, or releases off-site). We would similarly expect to understand how scenarios are derived and on what basis testing and or planned is undertaken. Assessment of accidents should: identify all potential hazards in relation to</p>	<p>An assessment of external sources of hazards and hazards associated with the construction and operation of the HNRFI is provided within this chapter.</p> <p>The assessment reports mitigation in place to ensure the risk of potential significant effects are As Low As Reasonably Practicable (ALARP).</p> <p>The proposed mitigation and design of the HNRFI have been updated in accordance with the consultation undertaken.</p>

Consultee	ID/Ref	Consultee Comment	Response
		<p>construction, operation, and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident to mitigate off-site effects.</p> <p>We would expect to offer direct insights into the range of information available as part of the ES. Specifically, we expect to be part of an iterative design process to be able to provide direct input on measures to manage or avoid the risks identified by PHE during the construction of the SRFI at Hinckley. We note that where a Construction Environmental Management Plan (CEMP), is to be submitted in outline with the DCO application with the final version it will be subject to later approval by the relevant planning authorities in accordance with a DCO Requirement.</p> <p>Where the risks identified by PHE at the operational stage, are purposefully broad and in line with the principles of a Rochdale Envelope, we agree that the level of information provided needs to be sufficient to fulfil the requirement of the EIA Regulations. We have concerns that as it currently stands there is insufficient information on the 'expected significant adverse effects of the development on the environment deriving from the</p>	<p>Chapter 3: <i>Project description</i> provides a full account of the HNRFI design. Further detail on the mitigation measures referenced within this chapter is provided within the respective documents.</p> <p>This chapter has been updated from that submitted within the PEIR. This update has been completed in accordance with the consultation feedback received.</p> <p>TSH has taken into consideration consultation with local police, fire, ambulance and health services and Network Rail during design development. A discussion on the emergency protocols in place are provided within this chapter.</p> <p>The EIA has not assessed decommissioning because the HNRFI is intended to be a permanent development and consideration for decommissioning at this stage would be too hypothetical to be meaningful. As such powers in relation to decommissioning are not being sought through the DCO. A separate Health and Equality Briefing Note provides a central location for all health-related assessment content (Appendix 7.1, document reference 6.2.7.1).</p>

Consultee	ID/Ref	Consultee Comment	Response
		<p>vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned' (EIA Regulations 2017, Schedule 4, Paragraph 8).</p> <p>We understand that during the consultation / pre-application stages, TSH have continued to consult with local police, fire, ambulance and health services and Network Rail. We are not entirely clear as to what extent and on what basis this consultation has taken place. Moreover, we have concerns as we do with the whole process of assessment and finalisation of the design of the SRFI at Hinckley will take into account all these considerations including access for the emergency and security services.</p>	
<p>Sapcote Parish Council</p>	<p>C3.EM.2 83</p>	<p>In the PEIR application, neither the transport chapter, nor the chapter dealing with accidents and disasters models the routes that would be taken by HGVs and other development traffic in the event of incidents on the M69 which lead to delays or closure.</p>	<p>A comprehensive package of on and off-site transport improvements are proposed as part of the Proposed Development. This includes improvements to public transport, Smarter Travel Measures, highway improvements and a HNRFI HGV Route Management Strategy (document reference 17.4) which will include a package of measures that will assist in managing and monitoring HGV movements. The proposed highway improvements of the M69 J2 upgrade and the A47 link road will improve road connectivity</p>

Consultee	ID/Ref	Consultee Comment	Response
			and facilitate access to the scene of a major accident event.
Huncote Parish Council	C3.EM.2 67	No measures are mentioned for mitigating major accidents and disasters.	The assessment reports mitigation in place to ensure the risk of potential significant effects are As Low As Reasonably Practicable (ALARP).

19.11 Section 47 responses noted the following themes. A response to these key themes regarding how they have been considered within this chapter is provided below:

- Presence of the nearby Stanton Calor Cylinder Distribution Centre and associated underground pipe -risks associated with the distribution centre are assessed in the external sources of hazard section and the risks of diverting existing utilities is covered within the Construction hazards section.
- Traffic impacts associated with delays and closures of M69 - Chapter 8: Transport and traffic models and assesses the traffic impacts associated with the proposed development. Leicestershire Fire and Rescue have noted that the proposed highway improvements of the Junction 2 M69 upgrade and the A47 Link Road will improve access to the scene of a major accident.
- Plans for evacuation of the site in the event of a major on-site incident resulting in the inability to use the M69 motorway or A47 Link Road as a route - tEmergency protocols aren is discussed in this chapter.
- Risks and dangers associated with freight and concerns regarding Narborough train crossing - risks associated with increased rail freight movements and level crossings are assessed in the operational hazards section.
- Construction phase incidents- an assessment of construction phase risks is provided in the Construction hazards section.
- Flooding on railway - an assessment of the risk of flooding is provided in the external sources of hazard section.
- Lack of mitigation measures identified = this assessment reports mitigation in place to ensure the risk of potential significant effects are ALARP.
- Consultation with emergency services and how the outcomes have been addressed - emergency protocols are discussed in this chapter.

19.12 In addition to the above, during the pre-application stage TSH has taken into consideration

consultation with local police, fire, ambulance and health services and Network Rail during design development on aspects of the HNRFI including emergency and non-emergency access, emergency protocols, level crossings and road connectivity.

APPROACH AND CONSIDERATION OF VULNERABILITY

19.13 When considering the likely vulnerability of a development to major accidents or disasters there are three key criteria, derived from best practice and guidance set out in *Major Accidents and Disasters in EIA: A Primer*, published by the Institute of Environmental Management and Assessment¹:

- Is the development a source of hazard that could result in a major accident and/or disaster?
- Does the development interact with any external sources of hazard?
- If an external man-made or natural hazard occurred, would the presence of the development increase the risk of significant environmental effect(s) to an environmental receptor occurring?

19.14 These criteria are explored in the following sections which are structured based on the feedback received in the 2020 Scoping Opinion (ES Appendix 6.2 - document reference 6.2.6.2).

19.15 Particular focus is given to the identification of potential major accidents and/or disasters which either arise due to the Proposed Development or have the potential to effect the Proposed Development which then has a potential to impact on human health or the environment. Attention is then given to the identification of appropriate risk management structures, existing design measures or legal requirements, codes and / or standards; and question whether they adequately control both health and safety and environmental risks to ensure that the risk of potential significant effects is As Low As Reasonably Practicable (ALARP).

19.16 The following data has been reviewed to identify potential hazards and assist this assessment:

- UK's current National Risk Register²
- Local community risk registers³
- Data including Scoping Opinion comments from the Health and Safety Executive; and

¹ Institute of Environmental Management and Assessment, 2020. Major Accidents and Disasters in EIA: A Primer.

² UK's current National Risk Register: <https://www.gov.uk/government/collections/national-risk-register-of-civil-emergencies>

³ Local community risk registers: [REDACTED]

- Construction Design Management risk registers

19.17 In addition to the content below, the vulnerability of the HNRFI to major accidents and disasters from an environmental perspective is taken into account in the assessment of a range of topics reported in this E S, comprising Chapter 7: *Land use and socio-economics*, Chapter 8: *Traffic and Transport*, Chapter 9: *Air Quality*, Chapter 10: *Noise and Vibration*, Chapter 11: *Landscape and Visual Effects*, Chapter 12: *Ecology and Biodiversity*, Chapter 13: *Cultural Heritage*, Chapter 14: *Surface Water and Flood Risk*, Chapter 15: *Hydrogeology*, Chapter 16: *Geology, Soils and Contaminated Land*, Chapter 17: *Materials and Waste* and Chapter 18: *Energy and Climate Change*.

External sources of hazard

19.18 This section explores external sources of hazards as identified by the National Risk Register and the Leicestershire Community Risk Register and determines whether the Proposed Development would increase the risk of significant environmental effects from external natural or man-made hazards.

19.19 Whilst each relevant external hazard source is explored below, overall, it can be concluded that through the review TSH has not identified any pathways by which external sources of hazard would interact with the Proposed Development to give rise to vulnerability and the risk of potential significant effects is ALARP.

Flooding

19.20 A flood risk assessment is provided within Chapter 14: *Surface Water and Flood Risk*. The results from the modelling have been used to support the Proposed Development and help inform mitigation measures embedded into the design, this includes the construction of a Sustainable Drainage System (SUDS) led surface water drainage system as part of the whole project. The system will provide attenuation up to the 1 in 100-year storm event, and includes an additional 60% allowance for the potential effects of high impact climate change. Additionally, reduced rates of discharge from the Main HNRFI Site as a result of the drainage strategy may provide downstream benefits in the form of reduced flood risk.

19.21 The assessment advises that latest best practice guidance on working near watercourses should be followed by construction workers, such as the Health and Safety Executive's 'Personal buoyancy equipment on inland and inshore waters (1995)'. Adherence to this guidance is secured through the Construction Environmental Management Plan (document reference 17.1).

19.22 The vulnerability of the Main HNRFI Site to a major disaster or accident, following mitigation, is considered negligible. Therefore, when considering flooding, the risk of potential significant effects associated with the Proposed Development is ALARP.

Severe weather

19.23 An assessment of climate change resilience is provided within Chapter 18: *Energy and Climate Change*. The assessment reviews the vulnerability of the Proposed Development

during construction and operation to the potential impacts of climate change such as those from extreme weather and long-term climate change. The assessment utilises and applies the most valid and recent data available in accordance with best practices and utilises both UKCP09 and UKCP18 projections where possible.

- 19.24 The Proposed Development has considered the design of structures, drainage and buildability carefully in accordance with potential climatological effects. This includes the use of SUDS in hard-surfaced areas wherever suitable to mitigate the impact of heavy precipitation events. Further information is available in Chapter 18: *Energy and Climate Change* Appendix 18.4.
- 19.25 It is noted that the impacts of climate change on the Proposed Development during the construction phase will be managed through the Construction Environmental Management Plan (document reference 17.1), which contains detailed procedures to mitigate any potential impacts associated with extreme weather events. This will compliment best practice mitigation measures employed in the construction industry.
- 19.26 Chapter 18: *Energy and Climate Change* also proposes a number of climate change-related mitigation measures for the operational phase based on long-term projections. The following will be included within the management of the Main HNRFI Site through the requirements in the DCO to ensure a high quality environment is maintained throughout, including its shared areas of public realm and unadopted areas:
- Emergency response and contingency plans in place;
 - Ensure effective, essential winter maintenance;
 - Regularly reviewed and updated winter maintenance plans;
 - Regular maintenance of assets to detect deterioration and damage;
 - Standard operating procedures in place for use in the event of necessary road/rail closure and/or traffic diversion;
 - Use of construction materials with superior properties which offer increased tolerance to fluctuating temperatures;
 - Road user warning systems in place in areas exposed to high winds;
 - Regular sweeping and cleaning to remove debris;
 - Effective vegetation maintenance;
 - Regular surveys, management and monitoring of street lighting to ensure asset stability; and
 - Regular maintenance and cleaning of drainage systems.
- 19.27 Following this mitigation, the assessment confirms that there are no significant effects

when considering the Proposed Development's vulnerability to climate change. Therefore, the risk of potential significant effects associated with the Proposed Development's vulnerability to climate change is ALARP.

Major accidents

- 19.28 The types of major accidents reported in the UK's current National Risk Register include major transport accidents and industrial accidents.
- 19.29 TSH has not identified any pathways by which external sources of industrial accidents would interact with the Proposed Development to give rise to vulnerability. The activities undertaken at Stanton Calor Cylinder Distribution Centre are subject to numerous health and safety regulations and are contained within that site. Therefore, they are not considered relevant to the HNRFI. . The risk of accidents can therefore be considered ALARP.
- 19.30 Chapter 8: *Transport and traffic* provides a full assessment on the strategic and local highway network within the vicinity of the HNRFI Site and the accessibility of the HNRFI Site for road-based movements. It reports that a Construction Traffic Management Plan (document reference 17.6) will be implemented by the contractor to address the potential adverse effects of the construction on the local surrounding highway network .
- 19.31 In addition, a comprehensive package of on and off-site transport improvements are proposed as part of the Proposed Development. This includes improvements to public transport, Smarter Travel Measures, highway improvements and a HNRFI HGV Route Management Strategy (document reference 17.4) which will include a package of measures that will assist in managing and monitoring HGV movements.
- 19.32 The proposed highway improvements of the Junction 2 M69 upgrade and the A47 Link Road will improve road connectivity and facilitate access to the scene of a major accident event. This has been noted by Leicestershire Fire and Rescue.
- 19.33 With these provisions in place the risk of potential significant effects associated with the Proposed Development is ALARP.

Malicious attacks

- 19.34 Malicious attacks reported in the UK's current National Risk Register include attacks on transport systems and infrastructure.
- 19.35 As reported above, where external hazards require an emergency response, the improved road connectivity afforded by the proposed Junction 2 M69 upgrade and the A47 Link Road will facilitate access to the scene of the event.
- 19.36 The Proposed Development includes security infrastructure to serve the HNRFI, including fencing, gates, security kiosks, and security lighting. HNRFI has emergency and security

access via Burbage Common Road at its northern end near Elvesthorpe.

19.37 With these provisions in place the risk of potential significant effects associated with the Proposed Development is ALARP.

Construction Hazards

19.38 The construction of the HNRFI involves many key activities such as the demolition of buildings and structures and the building of new rail infrastructure, the rail port, logistics buildings and an energy centre.

19.39 The Proposed Development is not a direct source of hazard over and above those standard construction activities that are described in Chapter 3: *Project description*. These activities are subject to relevant statutory and regulatory controls and additional mitigation and safeguards as explained in the relevant technical chapters and enforced through the DCO.

19.40 A full account of the detailed considered construction methodologies and measures proposed to protect the environment and local amenity during construction are provided in the following documentation:

- Construction Environmental Management Plan (document reference 17.1) – describing the measures the Applicant proposes to protect the environment of the HNRFI Site and its surroundings during construction;
- Construction Traffic Management Plan (document reference 17.6) – which will include measures to ensure that construction traffic will not cause an unacceptable increase in traffic on local roads. The plan will include routing restrictions for construction traffic;
- Site Waste and Materials Management Plan (document reference 17.3) – covering the minimisation and management of waste generated during construction.

19.41 The Proposed Development will include the diversion of existing utilities, all connections to all existing off site utility infrastructure will be undertaken by utility providers under their existing statutory powers and safety protocols.

19.42 Overall, in appraising the vulnerability of the Proposed Development to major accidents and disasters, it is considered that the wide range of established safety and security legislation applicable to the construction of a SRFI is generally sufficient to ensure that the risk of potential significant effects is ALARP.

Onsite hazards

19.43 With regards to onsite hazards, the HSE confirmed through consultation that there are no major accident sites and no major accident hazard pipelines within the draft Order Limits of the Proposed Development and (HSE letter, 25 November 2020, in appendix 2 of the 2020 Scoping Opinion). The updated and final Order Limits for the HNRFI have not resulted in any major accident sites and any major accident hazard pipelines being identified.

19.44 It is also noted that there are no licenced explosives sites in the vicinity of the Proposed Development.

19.45 Therefore, the risk of potential significant effects associated with the Proposed Development is negligible and ALARP.

Operational Hazards

19.46 The Proposed Development is not a direct source of hazard over and above those standard construction operational activities that are described in Chapter 3: *Project description*. It is also subject to relevant statutory and regulatory controls and additional mitigation and safeguards as reported within the ES, these are:

- ISO 45001 Health and Safety management system. TSH will have a management system in place which accords to ISO 45001 during operation;
- Rail Operations Report (Appendix 3.1 - document reference 6.2.3.1). This document validates that the HNRFI can operate within the current rail network capacity. This confirmation is based on a detailed assessment of the current train timetable and consultation with Network Rail to ensure that freight associated with the HNRFI can be added without exceeding capacity constraints. Network Rail have confirmed through statement that the freight associated with the HNRFI can be added to the network without affecting capacity.
- Lighting Strategy (document reference 6.2.3.2); The strategy notes that all illumination levels will be set as low as practicable while complying with safety and security recommendations and the design levels set out in BS EN 12464 'Light and lighting – Lighting of work places – Part 2: Outdoor work places' and BS 5489-1 'Design of road lighting- Lighting of roads and public amenity areas'. It confirms that an indicative external lighting design has been produced that minimises light pollution.
- Other Consents and Licences Report (document reference 5.2). This document summarises the other consents, licences and agreements that, in addition to the DCO, TSH intends to obtain, to allow the construction, operation and maintenance of the HNRFI.

19.47 Operational hazards are further explored in the following key operational aspects of the Proposed Development.

19.48 Overall, in appraising the vulnerability of the Proposed Development to major accidents and disasters, it is considered that the wide range of established safety and security legislation applicable to the operation of a SRFI is generally sufficient to ensure that the risk of potential significant effects is ALARP.

Transportation of Hazardous Loads

19.49 In common with other SRFIs it is anticipated that the HNRFI will cater for occupiers who

will handle non-hazardous products and materials. TSH envisages that most and potentially all freight passing through the HNRFI would be non-hazardous. However, in the event that an individual occupier wished to handle hazardous substances in quantities that would render them Controlled Substances as identified in the Planning (Hazardous Substances) Regulations 2015 it would be the occupier's responsibility to secure hazardous Substances Consent under the Planning (Hazardous Substances) Act 1990.

- 19.50 In addition, with regards to the transportation of materials Network Rail, have through consultation, confirmed that freight associated with the HNRFI can be added without exceeding capacity constraints. All freight will be driven within the standards set by Network Rail. This ensures the safe transportation of all materials.
- 19.51 With any potential hazardous loads managed under strict regulations the risk of potential significant effects associated with the transportation of hazardous loads is ALARP.

Hazardous waste

- 19.52 It is not expected that any significant quantity of hazardous waste will be produced during the operational phase. Although there will be oily rags and other light plant maintenance wastes that will be hazardous. Any hazardous waste produced during the operational phase will be segregated and stored securely before being disposed of by an approved and appropriately licensed hazardous waste contractor, in accordance with the Hazardous Waste Regulations (as amended 2015) and the associated Hazardous Waste Classification Guidance (2015).
- 19.53 With any potential hazardous waste managed under strict regulations the risk of potential significant effects associated with operational hazardous waste is ALARP.

Increased rail freight movements

- 19.54 Generally freight carried in the UK has a better safety record than freight carried by road. By enabling a transfer of freight from road to rail the HNRFI should thus help to reduce accidents. In addition, the DCO application is accompanied by a Rail Operations Report (Appendix 3.1 - document reference 6.2.3.1) that reviewed potential hazards to rail operations and their avoidance or mitigation. This document validates that the HNRFI can operate safely within the current rail network capacity limits and this is supported through Network Rail confirmation. Therefore, the risk of potential significant effects associated with increased rail freight movements, including derailments, is ALARP.
- 19.55 With regards to risks at level crossings, it has been identified that there is the potential for freight trains to be held at signals on their approaches to the HNRFI. Where this happens, trains might temporarily obstruct existing level crossings or block views along the line, creating a risk that pedestrians might attempt to walk along the railway to get around the end of the train, climb under the couplings of stationary freight wagons or cross when it is not safe to do so because their view of an approaching train is blocked.
- 19.56 Following discussion with Network Rail, the application incorporates the measures in Table 19. 2 to maintain public safety and mitigate key risks at level crossings. In addition,

the Rail Operations Report (Appendix 3.1 - document reference 6.2.3.1) reviewed potential hazards to rail operations at the level crossing in central Narborough and confirms risks are ALARP.

Table 19.2: Level crossing modifications proposed in connection with the HNRFI development

Level crossing	Works proposed These diversions are shown in the access and right of way plans document reference 2.3 to 2.3D.	Access and limitations proposed in the draft DCO
Thorney Fields Farm No 2: Grid Ref: SP480959 Footpath No. XU17/2 1 km NW of Sapcote.	The level crossing will be closed and the existing public right of way diverted with pedestrians rerouted to an existing bridge over the railway south of Thorney Fields Farm.	Permanent closure and PROW diversion
Elmesthorpe: Grid Ref: SP471958 Footpath No. T89/1 between Bostock Close and the B581 Station Road, opposite the Wentworth Arms public house.	Permanent closure. Pedestrians will instead be able to cross the railway using the existing Station Road bridge, 75 metres to the south-west.	Permanent closure and PROW diversion
Billington Rough: Grid Ref: SP460954 Footpath No: U50/3-U50/4 from Elmesthorpe.	Permanent closure. The footpath to the east of this level crossing will be stopped up, meaning that the level crossing would have no future purpose. Pedestrian traffic wishing to cross the railway will be diverted to the railway bridge forming part of the A47 Link Road, c. 750 metres to the south-west.	Permanent closure and PROW diversion
East of Bridge Farm: Grid Ref: SP457952 Footpath No. V23/1 from Barwell.	Permanent closure. The footpath to the east of this level crossing is proposed to be stopped up, meaning that the level crossing would have no future purpose. Pedestrian traffic wishing to cross the railway will be diverted to the railway bridge forming part of the A47 Link Road, c. 400 metres to the south-west.	Permanent closure and PROW diversion
The Outwoods: Grid Ref: SP442941 Footpath no. U8/1-U52/1, connecting Burbage and the	Replacement of the level crossing with a pedestrian footbridge, with associated minor public rights of way diversions connecting to this	Permanent closure and PROW diversion

Level crossing	Works proposed	Access and limitations proposed in the draft DCO
Hinckley Academy and John Cleveland Sixth Form Centre in Hinckley.	<p style="text-align: center;">These diversions are shown in the access and right of way plans document reference 2.3 to 2.3D.</p> footbridge.	

19.57 With these mitigations in place the risk of potential significant effects associated with increased rail freight movements because of the HNRFI and their interaction with level crossings is ALARP.

Dealing with accidents with potential off-site emissions

19.58 During the operation of the HNRFI there will be ongoing management of the Main HNRFI Site through the requirements in the DCO to ensure a high quality environment is maintained throughout, including its shared areas of public realm and unadopted areas to.

19.59 An initial Hazard Identification workshop has been completed prior to the submission of the DCO. This workshop involved the review of hazards and identified actions for the detailed design stage. A key action involves a commitment to work with operators in ensuring that the operational and maintenance procedures are in place to cover all the hazards noted. Following this workshop, a hazard record will be produced and developed through the course of the project life cycle in accordance with EN50126 to enable hazards to be designed out or mitigated where feasible. This record will cover a review of the HNRFI operational system, inclusive of the movement of trains, movement of staff on site, electrical risks, fuelling activities and all other maintenance requirements. Any residual hazards will be transferred to the operator prior to entering service. Initial conclusions are that this process of reviewing risks ensures that all operational risks are ALARP.

19.60 A site-wide HGV Route Management Plan and Strategy (document reference 17.4) sets objectives and a strategy for the delivery of measures to promote sustainable freight management. It identifies existing local HGV restrictions in the area and specifies the proposed routes on the strategic road network that will be promoted for HGV journeys to and from the HNRFI as well as routes through the local villages where HGV movements will be restricted. An HGV signage strategy is included within the HGV Route Management Plan and Strategy submitted with the DCO application (document reference 17.4).

19.61 The HGV Route Management Plan and Strategy (document reference 17.4) includes a package of measures that will assist in managing and monitoring HGV movements. Enforcement methodologies have been agreed with the Relevant Planning and Highway Authorities. These measures are as follows:

- An information campaign, identifying the undesirable routes to / from the site. It will make clear any potential enforcement measures applied, so that occupiers will make

their drivers aware to avoid these routes.

- Providing route information leaflets to HGV drivers, to guide them to use the desirable routes to / from the site.
- Automatic Number Plate Recognition (ANPR) system at the Site Access and within the Site as part of the monitoring strategy.
- A regular process of engagement and liaison with occupiers, to understand the origin / destination of HGVs traffic.
- Encourage occupiers and fleet operators to sign up to the Fleet Operator Recognition Scheme (FORS) or the Construction Logistics and Community Safety (CLOCS) programme. Both make it a requirement to ensure that a suitable, risk assessed vehicle route to the site is specified and that the route is communicated to all principal contractors and drivers and that these routes are to be used at all times.
- Sensitive routes, such as Sapcote and Stoney Stanton (LCC jurisdiction) or Pailton and Wyken (WCC jurisdiction), will be monitored through use of ANPR.. This is subject to agreement with respective planning and highway authorities.
- On site management measures to include:
 - Vehicle Booking Systems
 - Driver Welfare Facilities
 - Early arrival bays
 - Restricted Parking
 - Back loading

19.62 With these mitigations in place the risk of potential significant effects associated with the HNRFI is ALARP.

Emergency protocols

19.63 During the pre-application stage TSH has taken into consideration consultation with local police, fire, ambulance and health services and Network Rail during design development. The design of the HNRFI takes into account considerations including access for the emergency and security services via Burbage Common Road at its northern end near Elmesthorpe. In addition, the main site access will be via the A47 Link Road and will be the only non-emergency road access to the HNRFI. Emergency protocols are secured through the requirements in the DCO. As reported above, where external hazards require an emergency response, the improved road connectivity afforded by the proposed Junction 2 M69 upgrade and the A47 Link Road will facilitate access to the scene of the event.

19.64 With provisions in place for emergency access and response the risk of potential significant effects is ALARP

Energy centre

19.65 The HSE confirmed in the 2020 Scoping Opinion (HSE letter, 25 November 2020, in appendix 2 of the 2020 Scoping Opinion) that it had no comments on electrical safety in the proposed HNRFI. Photovoltaic installations and the proposed energy centre will operate in accordance with relevant electrical safety regulations such as:

- ISO 45001 Health and Safety management systems;
- The supply of Machinery (safety) Regulations 2008 (SI 2008/1597);
- The noise Emission in the Environment by equipment for use outdoors Regulations 2001 (SI 2001/1701) as amended by SI 2001/3958 and SI 2005/3525;
- The Electrical Equipment (Safety) Regulations 1994 (SI 1994/3260);
- The pressure Equipment Regulations 2008 (SI 1999/2001) as amended by the SI 2002/ 1267;
- The Equipment and Protective Systems (EPS) Intended for use in Potentially Explosive Atmospheres Regulations (SI 1996/192) as amended by SI 2001/ 376; and
- The PV modules shall be safety tested to IEC61730 by an accredited test laboratory.

19.66 With the energy centre operating under these regulations the risk of potential significant effects is ALARP.

Occupational health and safety

19.67 Risks associated with occupational health and safety are not considered applicable to the HNRFI due to detailed UK Health and Safety legislation, such as:

- ISO 45001 management system
- The Workplace (Health, Safety and Welfare) Regulations 1992
- Management of Health & Safety at Work Regulations 1999
- The Dangerous Substances and Explosive Atmospheres Regulations 2002
- The Control of Major Accident Hazard Regulations 2015

19.68 Further to this, the Proposed Development includes security infrastructure to serve the HNRFI, including fencing, gates, security kiosks, and security lighting all secured through the HNRFI DCO.

- 19.69 The lorry park with welfare and fuelling facilities will be located to the south of the proposed A47 Link Road, from which it will be accessed. Access to the lorry park, driver welfare building and lorry filling station will be controlled so that it is available for HNRFI-related hauliers only. This is in order to prevent the facility being used as a general-purpose service area and truck stop by passing motorway traffic. This assists with the safety of all staff working at the HNRFI.
- 19.70 To conclude, the risk of potential significant effects associated with occupational health and safety is ALARP.

SUMMARY

- 19.71 In addition to this chapter, the DCO application is accompanied by the following documents which secure the provisions necessary to avoid or reduce the Proposed Development's vulnerability to accidents and disasters:
- Construction Environmental Management Plan (document reference 17.1)
 - Lighting Strategy (Appendix 3.2 - document reference 6.2.3.2)
 - Construction Traffic Management Plan (document reference 17.6)
 - HGV Route Management Plan and Strategy (document reference 17.4)
 - Site Waste Management Plan (document reference 17.3)
 - Other Consents and Licences Report (document reference 5.2)
 - Rail Operations Report (Appendix 3.1 - document reference 6.2.3.1)
- 19.72 It is also noted that the Proposed Development will accord to relevant UK risk and safety regulations which set out existing approaches to managing risk in the construction and operational phases.
- 19.73 Further to regulations, an integrated approach to the control and management of risks has been considered within the design of the construction and operation phases of the Proposed Development. This ensures that vulnerability to major accidents and/or disasters has been taken into account in the design and environmental assessment and the risk of potential significant effects associated with the Proposed Development will be reduced to ALARP.
- 19.74 To conclude, through the review of all relevant hazard sources TSH has identified appropriate mitigation measures to ensure that the risk of any pathways by which hazards would interact with the Proposed Development to give rise to vulnerability are ALARP. The overall risk of potential significant effects associated with the Proposed Development is ALARP.
- 19.75 This summary is repeated in tabular form in Tables 19.3 and 19.4.

Table 19.3 - Summary of effects

Description of impact	Inherent mitigation measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Significance of effect	Additional mitigation measures	Residual effect	Proposed monitoring
The overall risk of potential significant effects associated with the Proposed Development is ALARP.							

Table 19.4 – Summary of mitigation

Description of impact	Effect	Mitigation measures adopted as part of the project	Secured by	Responsible party
<p>The DCO application is accompanied by the following documents which secure the provisions necessary to avoid or reduce the Proposed Development’s vulnerability to accidents and disasters:</p> <ul style="list-style-type: none"> • Construction Environmental Management Plan (document reference 17.1) • Lighting Strategy (Appendix 3.3 - document reference 6.2.3.2) • Construction Traffic Management Plan (document reference 17.6) • HGV Route Management Plan and Strategy (document reference 17.4) • Site Waste Materials Management Plan (document reference 17.3) • Other Consents and Licences Report (document reference 5.2) • Rail Operations Report (Appendix 3.1 - document reference 6.2.3.1) <p>With regards to operational hazards, an initial Hazard Identification workshop has been completed prior to the submission of the DCO. This workshop involved the review of hazards and identified actions for the detailed design stage. A key action involves a commitment to work with operators in ensuring that the operational and maintenance procedures are in place to cover all the hazards noted. Following this workshop, a hazard record will be produced and developed through the course of the project life cycle in accordance with EN50126 to enable hazards to be designed out or mitigated where feasible. This record will cover a review of the HNRFI operational system, inclusive of the movement of trains,</p>				

movement of staff on site, electrical risks, fuelling activities and all other maintenance requirements. Any residual hazards will be transferred to the operator prior to entering service.