A358 Taunton to Southfields Dualling Scheme

Preliminary Environmental Information Report - Chapter 4 Environmental Assessment Methodology

HE551508-ARP-EGN-ZZ-RP-LE-000019

08/09/21

Table of contents

Table of Tables

4 Environmental Assessment Methodology

4.1 Introduction

4.1.1 This chapter of the Preliminary Environmental Information (PEI) Report describes the approach taken for the preliminary Environmental Impact Assessment (EIA) of the proposed scheme, including the EIA Scoping process; introduces the requirements of the *Design Manual for Roads and Bridges* (DMRB); and outlines the overall approach to the likely significant effects of the proposed scheme.

4.1.2 As stated in Chapter 1 Introduction of this PEI Report, the proposed scheme falls under the criteria included in the *Infrastructure Planning (Environmental Impact Assessment) (EIA) Regulations 2017* (SI 2017/572) [1] (the 'EIA Regulations') and is therefore an 'EIA Development'. The application for Development Consent Order (DCO) must therefore be accompanied by a statutory Environmental Statement (ES) describing the findings of an EIA undertaken in compliance with the EIA Regulations.

4.1.3 The *National Policy Statement for National Networks* (NPSNN) [2] sets out the need for, and UK government's policies to deliver development of Nationally Significant Infrastructure Projects (NSIP) on the national road network in England and sets out the primary basis for making decisions of development consent for NSIPs in England. The *NPSNN* sets out the 'vision' and strategic objectives for national networks. The criteria for a PEI Report are included in sections 4 and 5 of the *NPSNN*. This PEI Report has been prepared in accordance with these criteria. This is confirmed in each technical section of this report.

4.1.4 The adopted scope, approach and method of assessment for each environmental aspect are outlined in the aspect PEI Report chapters (5-14), with further details such as survey methodology, also provided.

4.2 Environmental scoping

4.2.1 Highways England submitted a formal request for an EIA Scoping Opinion (the 'EIA Scoping Report') [3] for the A358 Taunton to Southfields Dualling Scheme (the 'proposed scheme') to the Planning Inspectorate (PINS) on 23 March 2021. The EIA Scoping Report outlines the proposed scope of works, the methodology to be applied in undertaking the EIA and the proposed structure of the ES. It was prepared in line with Regulation 10 of the EIA Regulations, DMRB LA 103 *Scoping projects for environmental assessment* [4], PINS *Advice Note 7 Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping* [5] and the environmental requirements of the NPSNN [6].

4.2.2 PINS reviewed and consulted on the EIA Scoping Report and published an EIA 'Scoping Opinion' on 5 May 2021 (case reference: TR010061) as to the information to be provided in the ES. The Scoping Opinion is available as an online report on the PINS website [7].

4.2.3 The Scoping Opinion and the comments from the consultees have been considered in preparing this PEI Report and in undertaking the EIA.

Design Manual for Roads and Bridges (DMRB)

4.2.4 The DMRB is the established guidance for assessing the potential environmental impacts of highway schemes and has been developed by Highways England in collaboration with relevant stakeholders.

4.2.5 The environmental assessment is based on the standards outlined within DMRB LA 104 *Environmental assessment and monitoring* [8]. The assessment also complies with the aspect specific standards. The level of assessment applied to each of the technical aspects in this PEI Report is given in each of the specialist aspect chapters (Chapters 5-14).

4.2.6 In 2020, the DMRB was extensively updated to ensure full compliance with the requirements of the EIA Regulations. Regulation 14 and Schedule 4 of the EIA Regulations identifies the information for inclusion in an ES. This includes the identification of environmental aspects considered likely to be significantly affected by the proposed scheme. These significant effects may be direct or indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent or temporary, beneficial or adverse.

Aspects Scoped in

4.2.7 The environmental aspects that should be considered as part of the EIA in line with the requirements of the EIA Regulations, and where they have been addressed in the DMRB and this PEI Report, are shown in Table 4-1.

Table 4-1 EIA environmental aspects and their location in the PEI Report

Aspects within the EIA Regulations	DMRB guidance	Topics in this PEI Report
Population	LA 112 *Population and human health* [9] LA 105 *Air quality* [10] LA 111 *Noise and vibration* [11]	Chapter 12 Population and human health. Will also draw on information provided in: Chapter 5 Air quality and Chapter 11 Noise and vibration
Human health	LA 112 *Population and human health* LA 105 *Air quality* LA 111 *Noise and vibration*	Chapter 12 Population and human health. Will also draw on information provided in: Chapter 5 Air quality Chapter 11 Noise and vibration
Biodiversity (for example fauna and flora)	LA 108 *Biodiversity* [12] LA 115 *Habitats Regulations assessment* [13]	Chapter 8 Biodiversity. Will also draw on information provided in: Chapter 13 Road drainage and the water environment.
Land (for example land take)	LA 109 *Geology and soils* [14]	Chapter 9 Geology and soils.
Soil (for example organic matter, erosion, compaction, sealing)	LA 109 *Geology and soils*	Chapter 9 Geology and soils.
Water (for example hydromorphological changes, quantity and quality)	LA 113 *Road drainage and the water environment* [15]	Chapter 13 Road drainage and the water environment.
Air	LA 105 *Air quality*	Chapter 5 Air quality.

Aspects within the EIA Regulations	DMRB guidance	Topics in this PEI Report
Climate (for example greenhouse gas emissions, impacts relevant to adaptation)	LA 114 *Climate* [16]	Chapter 14 Climate change. Will also draw on information provided in: Chapter 13 Road drainage and the water environment.
Material assets	LA 110 *Material assets and waste* [17]	Chapter 10 Materials assets and waste.
Cultural heritage (including architectural and archaeological aspects)	LA 106 *Cultural heritage assessment* [18]	Chapter 6 Cultural heritage.
Landscape	LA 107 *Landscape and visual effects* [19]	Chapter 7 Landscape and visual effects. Will also draw on information provided in: Chapter 6 Cultural heritage.

4.2.8 The environmental effects associated with the construction and operation of the proposed scheme have been considered within each aspect chapter (5-14).

4.2.9 This PEI Report has also considered the vulnerability of the proposed scheme to major accidents or disasters that are relevant to the scheme. Further detail on this topic is detailed in section 4.9.

Aspects Scoped out

Decommissioning

4.2.10 The proposed scheme is unlikely to be decommissioned as it would be an integral part of the Strategic Road Network (SRN). As such, decommissioning was considered within the Scoping Report and was scoped out of the EIA and ES.

4.2.11 As stated in paragraph 2.3.3 of the EIA Scoping Opinion, PINS is content with this approach.

Heat and Radiation

4.2.12 Schedule 4 (Regulation 14(2)) of the EIA Regulations outlines a requirement to consider the emission of heat and radiation from a proposed development and the likely significant effects on the environment resulting from it.

4.2.13 The proposed scheme is a road improvement scheme, as such it would not generate any notable emission of heat and/or radiation from the proposed works, technology or operation that could result in likely significant effects on the environment. Therefore, further consideration or assessment of heat and radiation was scoped out of the EIA and ES.

4.2.14 As stated in paragraph 3.3.12 of the EIA Scoping Opinion, PINS is content with this approach.

Transboundary effects

4.2.15 Regulation 32 of the EIA Regulations outlines a requirement to consider the likely significant effects of a proposed development on the environment of another European Economic Area (EEA) State.

4.2.16 PINS's *Advice Note 12: Transboundary Impacts and Processes* [20] provides further guidance upon the consideration of transboundary effects in EIA.

4.2.17 A screening matrix, following the PINS long form transboundary screening proforma provided in Annex 1 [21] of PINS's *Advice Note 12: Transboundary Impacts and Processes*, was completed during the EIA scoping exercise and is reported in Appendix A of the Scoping Report. The screening matrix concluded that there were no likely significant transboundary effects. Therefore, further consideration or assessment of transboundary effects was scoped out of the EIA and ES.

4.2.18 As stated in paragraph 3.3.22 of the EIA Scoping Opinion, PINS is not aware that there are potential pathways of effect to any EEA States but recommends that, for the avoidance of doubt, the ES details any such consideration and assessment.

4.3 Surveys and predictive techniques and methods

Draft Development Consent Order (DCO) boundary and study area

4.3.1 The DCO boundary is based on the land anticipated to be potentially required temporarily and/or permanently for the construction, operation and maintenance of the proposed scheme. Plans to illustrate the draft DCO boundary will be developed and submitted as part of the DCO application.

4.3.2 Study areas have been defined individually for each environmental aspect and are outlined in the relevant technical chapter (Chapters 5-14). Study areas have been defined by taking account guidance within DMRB, the geographic scope/area of the potential impacts relevant to that aspect and of the information required to assess those impacts. The study area for the EIA for each environmental aspect incorporates the draft DCO boundary as a minimum.

4.3.3 The EIA and ES will be based on the DCO boundary presented in the DCO application.

Identification of the baseline and future baseline scenario

4.3.4 It is important to understand the environment that would be affected by the proposed scheme (the 'baseline conditions') to accurately identify the effects of the proposed scheme on the environment. Understanding the baseline allows the measurement of changes that would be caused by the proposed scheme.

4.3.5 To inform the assessment of impacts, a prediction of the future environmental conditions that would exist if the proposed scheme was not constructed is required, against which the impact of the proposed scheme can be assessed. Typically, this includes conditions at the:

- time construction of the proposed scheme is expected to start, for example, taking into account any other developments that are under construction or likely to be complete by this time
- time the proposed scheme is expected the be open to traffic, the opening year
- Design Year – 15 years after the proposed scheme opened to traffic

4.3.6 Therefore, the identification of the baseline and future conditions involves predicting changes that are likely to occur in the intervening period, for reasons unrelated to the proposed scheme. This would entail taking current conditions and committed development into consideration and using experience and professional

judgment to predict what the baseline and future conditions might look like prior to start of construction and operation of the proposed scheme.

4.3.7 It is essential for an EIA that sufficient data is obtained to form the basis of the assessment. Each of the technical assessment chapters (Chapters 5-14) includes a description of the current (baseline) environmental conditions and future baseline scenario based on the respective study area identified for each technical chapter.

4.3.8 This PEI Report presents baseline information representing the conditions of the environment at the time of writing. When describing the future baseline scenario for each environmental aspect within the respective technical chapters, readily available information such as local plans and climate change scenario data has been utilised to provide a description of the natural changes in the local environment over an appropriate timescale that the datasets support.

Surveys

4.3.9 Several surveys were undertaken during Highways England's Project Control Framework (PCF) stage 2 findings to inform the baseline for the EIA Scoping Report. These included:

- Site walkovers
- Phase 1 Habitats survey
- National Vegetation Classification (NVC) survey
- Hedgerow survey
- River habitat and river corridor survey (River Ding)
- Bat surveys (including tree and building roost potential inspections, aerial tree-climbing roost inspections, tree and building emergence/re-entry, activity transects, crossing points, static monitoring, hibernation checks, trapping and radio tracking)
- Dormouse surveys (habitat suitability and presence/absence)
- Badger survey (field signs and bait marking)
- Otter surveys (habitat suitability and presence/absence)
- Water vole surveys (habitat suitability and presence/absence)
- Breeding bird surveys
- Wintering bird surveys
- Barn owl surveys
- Great crested newt survey (Habitat suitability index assessment (HSI), eDNA, population size class surveys)
- Reptile survey (habitat suitability and population size surveys)
- White-clawed crayfish survey (habitat suitability and presence/absence survey)
- Aquatic invertebrates survey
- Terrestrial invertebrates survey (including brown hairstreak surveys)
- Fish surveys
- Visit to the site and the surrounding area by Chartered landscape architect

4.3.10 Further surveys were undertaken for PCF stage 3 to inform the baseline for this PEI Report. Surveys that have been undertaken and the results of which were used to inform this PEI Report include:

- Cultural heritage settings assessment
- Geology and soils – site walkover of potential land contamination sites

- Landscape photography for winter and summer in both day and night
- Visibility/viewpoint assessments
- Farm viability survey
- Farm Impact Assessments
- Public Rights of Way (PRoW) (level of use, condition and suitability)

4.3.11 Surveys that are yet to be completed and remain ongoing at the time of the submission of this PEI Report will be reported in the ES. Surveys to be completed include:

- Archaeological geophysical survey
- Archaeological trial trenching
- Archaeological buildings assessment
- Site investigation (combined Geotechnical and Contaminated Land survey)
- Detailed soil and agricultural land classification (ALC) surveys
- Further visibility/viewpoint assessments
- Noise and vibration monitoring
- Water quality survey (remaining)
- UK Habitats Classification (UKHab) surveys
- National Vegetation Classification (NVC) survey
- Hedgerow survey
- River corridor and macrophyte survey (all watercourses)
- Modular River (MoRPh) survey
- Bat surveys (including tree and building roost potential inspections, aerial tree-climbing roost inspections, tree and building emergence/re-entry, activity transects, crossing points, static monitoring, hibernation checks, trapping and radio tracking)
- Dormouse surveys
- Badger survey (field signs and bait marking)
- Otter surveys (habitat suitability and presence/absence)
- Water vole surveys (habitat suitability and presence/absence)
- Breeding bird surveys
- Wintering bird surveys
- Barn owl surveys
- Great crested newt survey (Habitat suitability index assessment (HSI), eDNA, population size class surveys)
- Reptile survey (habitat suitability and population size surveys)
- White-clawed crayfish survey (habitat suitability and presence/absence survey)
- Aquatic invertebrates survey
- Terrestrial invertebrates survey
- Fish surveys
- Tree survey

Approach to modelling

4.3.12 Predictive modelling following industry best practice has been used in the assessment of some environmental aspects. A brief summary of the modelling used is outlined in the sections below.

Air quality

4.3.13 A simple air quality model has been used to assess the potential effects of the proposed scheme on air quality within the study area. Details of the model used, and the results can be found in Chapter 5 Air quality.

Noise

4.3.14 Baseline and proposed scheme operational noise levels have been predicted at each noise sensitive receptor using a detailed noise model calculating in accordance with *Calculation of Road Traffic Noise* (CRTN) [22] and the updated methodology in DMRB LA 111 *Noise and vibration*.

4.3.15 Noise levels during typical road construction activities have been predicted in distance bands following the predictive methodology of BS 5228 [23].

Road drainage and the water environment

4.3.16 All the watercourse spanned or affected by the proposed scheme have been screened to determine the appropriate level of analysis required to inform the design and to ensure flood risk is adequately addressed. The screening process has been formulated to determine:

- Watercourses that will be analysed and assessed in detail (1D and 2D fluvial hydraulic modelling) due to an existing mapped flood zone, an existing model and the potential of the proposed scheme to impact on existing flood levels and extents.
- Watercourses that require analysis along a reach upstream and/or downstream of the proposed scheme to ensure that the impact to existing receptors is fully understood.
- Watercourses where manual calculations are appropriate.

4.3.17 The screening process takes account of the existence of existing mapped flood extent (based on Environment Agency Flood Zone mapping), potential for the scheme to affect hydraulic processes and the presence and type of receptors at risk of flooding (both upstream and downstream) as defined in Table 2 in the *National Planning Policy Framework* (NPPF) [24].

4.3.18 The detailed and intermediate analysis of watercourses will be undertaken and reported in the ES. In advance of this information the design of the proposed scheme has progressed based on assumed and estimated information related to flood levels, the capacity of existing and proposed bridges and culverts and areas of floodplain compensation required.

4.3.19 Flood levels have been derived along the entire route based on the intersection of Flood Zone 2 extents and topographical survey data. Where Flood Zone 2 data is not available, the Risk of Flooding from Surface Water (RoFSW) 1 in 1000 flood extent has been applied to topographical survey data.

Climate

4.3.20 Baseline GHG emissions for the construction and operational GHG emissions assessment have been determined by modelling of the ‘Do-Minimum’ traffic data for the opening year (2023) and the future year (2038).

Landscape and visual

4.3.21 The zone of theoretical visibility (ZTV) has been prepared using a digital surface model (DSM) at 2m spatial resolution. It is produced by the Department for Environment, Food and Rural Affairs (Defra) and includes heights of objects, such as vehicles, buildings and vegetation, as well as the terrain surface. The data has a vertical accuracy of +/-15cm (centimetre) Root Mean Square Error (RMSE). The ZTV is based upon the digitally calculated visibility of equally spaced 3D points located along the vertical alignment of the proposed scheme. The ZTV analysis is based on a 4.5m offset from the 3D points (to represent high-sided vehicles) and a 1.6m offset from the DSM (to represent eye height). The analysis provides a method for identifying potential visibility of the proposed scheme to inform viewpoint selection, site walkovers, and impact assessment.

Other

4.3.22 Further information on the modelling used to inform the environmental aspects is provided in the relevant technical aspect chapters of this PEI Report (5-14).

4.3.23 Several of the environmental aspects draw from modelling undertaken as part of the design process, such as traffic and transportation modelling. Air quality, noise and vibration, and population and health chapters draw from the outputs from this modelling undertaken.

Defining assessment years and scenarios

4.3.24 The assessment of effects in this PEI Report involves comparing a scenario without the proposed scheme referred to as the ‘do-minimum’ scenario and scenario with the proposed scheme referred to as the ‘do-something’ scenario.

4.3.25 The do-minimum scenario represents the future baseline with minimal interventions and without the proposed scheme infrastructure.

4.3.26 The likely significant environmental effects for do-something scenarios are assessed for the baseline year and future year, or series of future years, depending on the environmental aspect considered.

4.3.27 For assessing construction phase effects, the baseline year represents the conditions prior to construction starting. The proposed start year of construction is 2024.

4.3.28 The opening year is the year the proposed scheme is to become operational, i.e. open to traffic, is 2028. The future year scenario aligns with the design year defined in DMRB (15 years after opening), i.e. 2043.

4.3.29 For assessing operational phase effects (such as the effects of traffic on noise and air quality) the baseline year represents the situation prior to any effect, e.g. opening the proposed scheme to traffic. For this PEI Report, the traffic models are based on an opening year of 2023 and a design year of 2038 due to the available traffic forecast data at the time of writing this PEI Report.

4.3.30 However, for the purposes of the upcoming ES, new traffic data and modelling will be available and the traffic forecast data will be based on an opening year of 2028 and the design year of 2043.

4.3.31 Current scientific knowledge and methods of assessment have been used to identify foreseeable changes.

Cumulative effects assessment

4.3.32 Schedule 4 of the EIA Regulations (Regulation 14(2)) and the NPSNN (paragraph 4.16) state that consideration of how the effects of the proposed scheme would combine and interact with the effects of other developments should be included. Paragraph 4.17 of the NPSNN goes on to say that the interrelationship between effects should be considered.

4.3.33 Further advice in relation to cumulative effects is also outlined in PINS Advice note 17 *Cumulative Effects Assessment* [25] and the DMRB. DMRB LA 104 *Environmental assessment and monitoring* states that:

"…a cumulative impact can arise as the result of:

a. the combined impact of a number of different environmental factors-specific impacts from a single project on a single receptor/resource, and/or
b. the combined impact of a number of different projects within the vicinity (in combination with the environmental impact assessment project) on a single receptor/resource."

4.3.34 The methodology for the assessment of cumulative effects is outlined in Chapter 15 Assessment of cumulative effects of this PEI Report. The combined and cumulative effects of the proposed scheme in conjunction with other proposed developments will be assessed and the findings will be presented within the ES.

4.4 General assessment assumptions and limitations

Dealing with uncertainty

4.4.1 In assessing the environmental effects of the proposed scheme, the principle of the 'Rochdale Envelope' has be applied, in accordance with PINS *Advice Note Nine: Rochdale Envelope* [26], which states:

"The 'Rochdale Envelope' approach is employed where the nature of the Proposed Development means that some details of the whole project have not been confirmed (for instance the precise dimensions of structures) when the application is submitted, and flexibility is sought to address uncertainty."

4.4.2 At the current stage in the design process, absolute certainty about construction timing, phasing and methodology is not possible. It is anticipated that, as the design develops, greater certainty will be gained. This will be documented in the ES.

Limits of deviation

4.4.3 Limits of Deviation (LoD) are the limits within which the draft DCO will authorise the A358 to be constructed. Changes to the preliminary scheme design may occur typically as a result of ground conditions or environmental factors which it may not be possible to identify in the period prior to the DCO application. The LoD allow for a small tolerance with respect to any distances and points shown on the plans that will accompany the DCO application. All works would take place within the LoD, the extent of which will be subject to full consideration as part of the EIA for the proposed scheme.

4.4.4 The draft DCO will allow for the proposed scheme to be constructed anywhere within the maximum extent of the defined LoD. This would include a vertical

deviation and a lateral deviation. As a result, there is some necessary flexibility as to the exact scheme detail taken through to construction.

4.4.5 The LoD will be contained in the DCO and will be considered within the aspect chapters of the ES, having regard to the scope for change from the highway alignment. The assessment approach outlined here accords with the Rochdale Envelope approach outlined above.

Traffic modelling

4.4.6 Traffic data used in relevant assessments such as noise, air quality and climate was generated based on the preferred route design available at the start of this stage of works (i.e. PCF stage 3). The engineering design has been developed during this preliminary design stage and the latest design for the proposed scheme is described in Chapter 2 The project of this PEI Report and shown in PEI Figure 2.1 General arrangement. The traffic data on which dependent assessments have been based is therefore not based on the latest engineering design. However, the fundamental principles and highway alignment are consistent and allow the likely significant affects to be identified in this PEI Report. The design, traffic data and assessment will be finalised and reported in the ES. [It should be noted that traffic data does not include provision for decreased traffic flows due to COVID, and therefore the assessments will comprise worst case scenarios.]

4.5 Significance criteria

4.5.1 Significance criteria are identified based on the magnitude of the change and the sensitivity of the receptor. The magnitude and sensitivity criteria are described within each of the environmental aspect chapters (5-14) of this PEI Report.

4.5.2 The conclusions of this PEI Report the likely significance of environmental effects using established significance criteria, as presented within Section 3 of DMRB LA 104 *Environmental assessment and monitoring* to comply with EIA Regulations. Significance of effect is derived through a combination of the sensitivity of a receptor affected (value or importance) and the magnitude of the impact.

4.5.3 For each environmental aspect, the DMRB provides guidance for assigning magnitude of impact, receptor sensitivity, and significance of effect; however, the DMRB states that the approach to assigning significance of effect relies on reasoned argument, the professional judgement of competent experts, and taking on board the advice and views of appropriate stakeholders. For some aspect, predicted effects may be compared with quantitative thresholds and scales in determining significance.

4.5.4 The generic criteria for magnitude of impact, sensitivity/value of receptors and how they are combined to give the five proposed criteria for significance of effect, both adverse and beneficial, are replicated from DMRB LA 104 *Environmental assessment and monitoring* in Table 4-2 below for ease of reference. Where aspect specific criteria and descriptors are available, they are described in each technical chapter of this PEI Report. PEI Report Chapter 8 Biodiversity provides an aspect specific sensitivity ranking that differs from Table 4-2.

Table 4-2 Assessing significance of potential effects

Environmental value (sensitivity)	Magnitude of potential impact (degree of change)				
	No change	Negligible	Minor	Moderate	Major
Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

4.5.5 Generic descriptions for each category of significance and how they relate to the planning decision process are shown in Table 4-3. However, in all cases, professional judgement has been applied to the assessment to underpin the conclusion identified through the matrix or calculation assessments. Where professional judgement is used, this is accompanied by a reasoned justification. PEI Report Chapter 8 Biodiversity provides an aspect specific significance category that differs from Table 4-3.

Table 4-3 Descriptions of the significance of effect categories

Significance category	Typical description
Very Large	Effects at this level are material in the decision-making process.
Large	Effects at this level are likely to be material in the decision-making process.
Moderate	Effects at this level can be considered to be material decision-making factors.
Slight	Effects at this level are not material in the decision-making process.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

4.5.6 This description of effects suggest that those assessed as Moderate or above are considered to be material in the decision-making process. Therefore, those effects reported as Moderate, Large or Very Large will be considered significant as described under the EIA Regulations.

4.6 Duplication of assessment

4.6.1 In addition to the statutory EIA and ES required to support the application for DCO for the proposed scheme, several technical assessments undertaken in line with specific policy or legislation are required. These provide additional information to inform the design and ES and will be prepared separately to avoid duplication of assessment through appropriate cross-referencing.

4.6.2 The other relevant environmental assessments provided as preliminary assessments as part of this PEI Report, or proposed as part of the ES, are described below.

Habitat Regulations Assessment

4.6.3 Habitat Regulations Assessment (HRA) is a recognised step-by-step process to determine the likely significant effects and (where appropriate) assess adverse impacts on the integrity of European designated sites, such as Special Protection Areas (SPA) and Special Areas of Conservation (SAC). In the UK it is also applied to Ramsar sites. Where likely significant effects are identified, the assessment examines alternative solutions and provides justification for imperative reasons of over-riding public interest (IROPI).

4.6.4 HRA screening is being undertaken due to the presence of these internationally designated sites, in accordance with DMRB LA 115 *Habitats Regulations assessment*. The HRA screening report can be found in Appendix 8.1 Habitat Regulations Assessment screening of this PEI Report.

Water Framework Directive

4.6.5 The EU *Water Framework Directive (WFD) (2000/60/EC)* [27] was enacted into domestic law by the *Water Environment (Water Framework Directive) (England and Wales) Regulations 2003* [28]. It provides a framework for the protection and enhancement of surface fresh water, estuaries, coastal waters and groundwater.

4.6.6 The WFD aims to enhance the current status of all waterbodies (with a target to achieve Good Ecological Status by a stated date) and to prevent deterioration of waterbodies from their current status due to pollution. The requirements of the WFD will be taken into account when planning all activities that may impact the water environment.

4.6.7 The PEI Report WFD screening assessment is provided in Appendix 13.2 Water Framework Directive screening. This provides a list of WFD waterbodies in the study area and consideration of source protection zones (SPZ) identifies and identifies the surface- and ground-water bodies screened in for detailed assessment in the WFD Compliance Assessment (to be appended to the ES).

4.6.8 The WFD quality and quantity elements identified through scoping and the PEI Report WFD Screening assessment as being at potential risk of impact from the proposed scheme will be assessed in the WFD compliance assessment.

4.6.9 The WFD compliance assessment will identify how the proposed scheme has the potential to affect each of the water bodies' quality/quantity elements and if this results in non-compliance with the WFD. The results of the other assessments in ES Chapter 13 Road drainage and the water environment will be used to inform the WFD compliance assessment, where considered applicable.

4.6.10 For water bodies that have the potential to be impacted by the proposed scheme, the effect of the proposed scheme on any mitigation measures identified within the relevant River Basin Management Plan (RBMP) will be assessed.

Flood Risk Assessment

4.6.11 A preliminary Flood Risk Assessment (FRA) has been undertaken in accordance with the *NPPF* [24], and is provided as Appendix 13.1 PEIR Flood Risk Assessment. This considers flood risk both to and from the proposed scheme.

4.6.12 A standalone FRA for the proposed scheme will be undertaken and attached as an appendix to ES Chapter 13 Road drainage and the water environment. This will include the details of the methodology used to assess the risk of flooding from

pluvial, fluvial, groundwater and infrastructure failure (including existing drainage systems) both to and as a result of the proposed scheme. The FRA will use the latest published climate change allowances.

4.6.13 A key component of this will be an assessment of the watercourses crossed by the proposed scheme or in close proximity to the proposed scheme. This element of the assessment will be informed by fluvial hydraulic modelling at bridge and culvert crossings and watercourse realignment or diversions.

4.7 Design, mitigation and enhancement measures

4.7.1 One of the key requirements of an EIA is that measures are taken to avoid, reduce and, where possible, remedy significant adverse environmental effects. These are termed mitigation measures and their development is part of an iterative EIA process. This section follows DMRB LA 104 *Environmental assessment and monitoring.*

4.7.2 Environmental assessment and design shall incorporate mitigation measures using a hierarchical system as per Table 4-4.

Table 4-4 Mitigation hierarchy

Mitigation hierarchy	Description
1 avoidance and prevention	Design and mitigation measures to prevent the effect (e.g. alternative design options or avoidance of environmentally sensitive sites).
2 reduction	Where avoidance is not possible, then mitigation is used to lessen the magnitude or significance of effects.
3 remediation	Where it is not possible to avoid or reduce a significant adverse effect, these are measures to offset the effect.

4.7.3 Mitigation measures shall be developed in response to the findings of surveys, initial assessments and consultation. These mitigation measures shall be designed principally to address impacts whose occurrence, timing and location can be predicted in advance and are intrinsic to the design of the proposed scheme.

4.7.4 Environmental assessment shall report on the following categories of mitigation:

- **Embedded mitigation**: proposed scheme design principles adopted to avoid or prevent adverse environmental effects.
- **Essential mitigation**: measures required to reduce and if possible offset likely significant adverse environmental effects, further to the reported significance of effects in the environmental assessment.

Embedded mitigation

4.7.5 The first preference in mitigating any impact is to seek engineering design measures to entirely avoid or eliminate the impact. Where this is not possible, the mitigation should seek to reduce the magnitude of the impact. Impacts can be avoided or reduced, for instance, through changes to the horizontal or vertical alignment of the proposed scheme, junction strategy or other aspects of the proposed scheme layout; or through changes in the methods and/or materials to be used in construction.

4.7.6 The proposed scheme assessed within this PEI Report includes a number of engineering design measures that have been designed to avoid or reduce

significant adverse environmental effects arising, where practicable. Those measures forming part of the scheme design are summarised within Chapter 2 The project. Such measures are therefore not proposed or reported in this PEI Report as mitigation.

Essential mitigation

4.7.7 Where avoidance of an impact through engineering design measures is not possible, or is only partly effective, further mitigation measures may be required. Essential mitigation falls into three broad categories:

- Measures that do not remove an impact but make it less significant. A typical example on the proposed scheme includes planting trees to screen views of the road where it is visually intrusive.
- The like-for-like replacement of a feature that would be lost. For example, this includes the creation of hedgerows on the proposed scheme alignment to replace those that cannot be avoided.
- The provision of a beneficial effect that is related to the impact but is not a like-for-like replacement of the feature to be lost. A typical example would be the construction of a bridge to replace an existing culvert, allowing associated watercourse renaturalisation and improving the wildlife corridor function.

4.7.8 Mitigation measures can produce adverse as well as beneficial effects, e.g. an environmental noise barrier can increase visual intrusion.

4.7.9 Measures identified during the EIA process to further prevent, reduce and, where possible, offset any adverse effects on the environment will be described in the relevant aspect chapters and shown on the Environmental Master Plans as part of the DCO application.

4.7.10 The essential mitigation measures identified in the aspect chapters of the ES will be summarised in the Register of Environmental Actions and Commitments (REAC), contained within the Environmental Management Plan (EMP) as part of the DCO application.

4.7.11 The significance of an effect is reported after an assessment of the effectiveness of the design and mitigation measures (the residual effect). Assigning significance to an effect after an assessment of the effectiveness of the design allows for positive contribution of all mitigation that is effective, deliverable and committed.

Construction mitigation

4.7.12 There are potential impacts to the environment that could occur as a result of the construction process including incidents during construction. The timing and location of these impacts cannot be accurately predicted at this stage. An example would include spillages of fuels, oils or other chemicals.

4.7.13 The assessment considers reasonably foreseeable construction impacts. The likelihood of occurrence and the severity of any such incidents can be reduced through good construction site management practices. To help ensure adequate consideration of risks identified during the EIA which would relate to the construction period, an EMP will be prepared. This will set out how construction stage mitigation measures would be implemented to manage those risks and certain requirements for the contractors.

4.7.14 The EMP will detail the roles and responsibilities, control measures, training and briefing procedures, risk assessments and monitoring systems to be employed during planning and construction for all relevant environmental factor areas.

4.7.15 Each PEI Report aspect chapter describes measures identified to date to be adopted during construction to avoid and reduce environmental effects, such as pollution control measures.

Implementation and enforcement of mitigation

4.7.16 Mitigation will be secured by way of requirements in the DCO. The proposed scheme must comply with these requirements.

4.7.17 An EMP will be implemented and is secured through a requirement of the DCO. This will be approved in line with the EMP submitted with the DCO application as part of the ES.

4.7.18 Contractors at detailed design and construction will be obliged to comply with the Requirements of the DCO.

Environmental enhancement

4.7.19 Enhancement is a measure that is over and above what is required to mitigate the adverse effects of a scheme. Enhancement opportunities will be considered throughout the design development and shall be reported within the ES aspect chapters.

4.7.20 The following items may be relevant to the design and delivery of enhancement opportunities:

- national and local policy requirements
- policy and performance requirements of the overseeing organisation
- scheme-specific objectives

4.7.21 Where essential mitigation is being delivered for other purposes, this offers an enhancement opportunity where it does not compromise the original objective of that land.

4.8 Monitoring

4.8.1 Should the environmental assessment reported in the ES conclude that there are significant adverse environmental effects, in accordance with the requirements of the EIA Regulations, proportionate and appropriate monitoring of associated mitigation measures will be included in the DCO application ES.

4.8.2 The ES will document the mitigation and monitoring measures developed through the design and environmental assessment process and any agreements reached with statutory bodies, and how the programme of monitoring will be secured.

4.8.3 Monitoring measures should be undertaken as required during construction, handover and through the operation and maintenance periods. These measures will be secured by the EMP and submitted with the DCO application.

4.9 Major accidents and disasters

4.9.1 The EIA Regulations require the developer to assess the expected significant effects (on the environment) arising from the vulnerability of the proposed scheme to *"…major accidents or disasters that are relevant to that development"*.

4.9.2 There is no clear definition of the term 'major accident and/or disaster' in the Regulations therefore the following definitions from the Institute of Environmental Management and Assessment (IEMA) *Major Accidents and Disasters in EIA: A Primer* [29] (the 'IEMA Primer') were adopted. The primer states:

- Accident – something that happens by chance or without expectation.
- Disaster – a natural hazard (e.g. earthquake) or a man-made / external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident.
- Major Accident – events that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the client or its appointed representatives to manage.
- Risk – the likelihood of an impact occurring, combined with the effect or consequence(s) of the impact on a receptor if it does occur.
- Risk event – an identified, unplanned event, which is considered relevant to the proposed scheme and has the potential to result in a major accident and / or disaster, subject to its potential to result in a significant adverse effect on an environmental receptor.
- Vulnerability – describes the potential for harm as a result of an event, for example due to sensitivity or value of receptors. In the context of the EIA Regulations vulnerability refers to 'exposure and resilience' of the proposed development to the risk of a major accident and/or disaster. Vulnerability is influenced by sensitivity, adaptive capacity and magnitude of impact.
- Significant environmental effect (in relation to a major accident and/or disaster assessment) – includes the loss of life, permanent injury and temporary or permanent destruction of an environmental receptor which cannot be restored through minor clean-up and restoration.

4.9.3 A Risk Identification exercise was undertaken during scoping and the findings were presented in Appendix B of the Scoping Report. The exercise considered risk events identified in the Register of Civil Emergencies with respect to natural disasters, transport incidents, construction incidents, system failures and security [30]. A source-pathway-receptor model was employed in terms of risks to environmental designated sites, heritage assets and the local community during construction and operation of the proposed scheme. Finally, the Risk Identification considered the existing known mitigation measures and whether there is the potential for major accidents and disasters with the known mitigation in place.

4.9.4 A review of nearby sites listed by the Health and Safety Executive (HSE) under the *Control of Major Accident Hazards Regulations 2015 (COMAH)* [31] was undertaken to inform the EIA Scoping Report. This review confirmed that there were no COMAH sites within the HSE land use planning distances and therefore risks associated with COMAH sites were not considered further.

4.9.5 The following assumptions were applied to the Risk Identification exercise reported in Appendix B of the EIA Scoping Report when considering risk events:

- The Risk Identification exercise assumed all health and safety risks were adequately covered by the Contractor's health and safety documentation and risk assessments.
- The assessment only covered those risks associated with the infrastructure to be built and did not consider those risks associated with the operation and maintenance of a major highway project.
- Risks to road safety and users during construction and operation were assumed to be considered and assessed as part of the Road Safety Audit for this type of major highway project.
- The Risk Identification exercise did not consider risks where there was no 'source-pathway-receptor' linkage (e.g. an oil spill occurring at an oil depot that is not located near to a watercourse and for which there is no pathway from source to receptor).
- The Risk Identification exercise did not consider major accidents and disasters where risk events were not applicable to the geographic location of the proposed scheme (e.g. volcanic activity, earthquakes, etc).

4.9.6 The Risk Identification exercise considered the potential risk of major accidents and disasters in relation to the construction and operation of the proposed scheme, including:

- flooding
- severe weather
- poor air quality
- wildfires
- widespread electricity failure
- system failures
- pollution incidents
- unexploded ordnance (UXO) (construction stage only)
- attacks during operation

4.9.7 The Risk Identification exercise concluded that all relevant major accidents and disasters considered would be appropriately assessed and mitigated through other environmental aspects proposed in the EIA for the proposed scheme and reported in the ES. Appropriate risk and environmental mitigation measures would be considered, developed, and adopted through compliance with DMRB design standards, applicable legislation and best practice measures employed by Highways England.

4.9.8 Major accidents and disasters were scoped out of the EIA and ES as no risks of major accidents and disasters were anticipated. However, all relevant major accidents and disasters considered would be appropriately assessed and mitigated through other environmental aspects reported in the ES.

4.9.9 PINS specifically requested information on two potential areas of accidents:

- The potential for landslips to occur. This potential risk is covered in the Geotechnical reports (add reference) and will be summarised in the ES.
- The location of two high pressure gas mains near the southern end of the proposed scheme. Discussions are ongoing with the utilities owner at this stage to define and agree the design of mitigation measures to be embedded into the scheme design to avoid risks to these assets. A summary of these will be included in the scheme description in the ES.

4.9.10 As stated in paragraph 3.3.18 of the EIA Scoping Opinion, PINS agreed that major accidents and disasters could be scoped out of the ES as a discrete technical chapter in the ES on the basis that the matter will be considered within other ES aspect chapters.

4.10 Consideration of climate change

4.10.1 Chapter 14 Climate outlines a preliminary assessment of the effect of the proposed scheme on climate and the vulnerability of the proposed scheme to climate change, as required by the EIA Regulations. The combined effects of the proposed scheme and potential climate change on the receiving environment, resources, and community (the in-combination climate change (ICCC) impacts) are considered by each aspect chapter, and the findings are to be presented in the ES.

4.10.2 Climate change projections have been embedded into the future baseline of the technical assessments. Current and future climate baselines are outlined in Chapter 14 Climate for key climate parameters, including winter and summer temperature and precipitation. The projections have been obtained from the Meteorological Office (Met Office) UK Climate Projections 2018 (UKCP18) [32], which provides the most up-to date assessment of how the climate of the UK may change over the 21st century.

4.10.3 Climate change is considered in both the assessment of the proposed scheme effects and the design of mitigation and enhancement measures. The consideration of the proposed scheme's resilience to climate change has been assessed qualitatively, based on the future climate trends outlined in Chapter 14 Climate of this PEI Report. The assessment of the proposed scheme's contribution to climate change, through release of greenhouse gas emissions, is a quantitative assessment against the UK government's carbon budgets.

Abbreviations List

Please refer to PEI Report Chapter 17 Abbreviations.

Glossary

Please refer to PEI Report Chapter 18 Glossary.

References

[1] "The Infrastructure Planning (Environmental Impact Assessment) (EIA) Regulations 2017. SI 2017/572," HMSO, London, 2017.

[2] Department for Transport, "National Policy Statement for National Networks," HMSO, London, 2014.

[3] The Planning Inspectorate, "A358 Taunton Southfields," 26 March 2021. [Online]. Available: https://infrastructure.planninginspectorate.gov.uk/projects/south-west/a358-taunton-to-southfields/?ipcsection=docs&filter1=Environmental+Impact+Assessment+Scoping. [Accessed 18 May 2021].

[4] Highways England, "DMRB LA 103 - Scoping Projects for Environmental Assessment," HE, 2020a.

[5] Planning Inspectorate, "Planning Inspectorate (2020) Advice Note Seven Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping," PINS, 2020a.

[6] Department for Transport, "National Policy Statement for National Networks," DfT, 2014.

[7] The Planning Inspectorate, "Scoping Opinion: Proposed A358 Taunton to Southfields Dualling Scheme (Case Reference: TR010061)," 05 May 2021. [Online]. Available: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010061/TR010061-000001-T2SF%20-%20Scoping%20Opinion.pdf. [Accessed 06 May 2021].

[8] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, "Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 104 Environmental Assessment and Monitoring," August 2020. [Online]. Available: https://standardsforhighways.co.uk/dmrb/search/0f6e0b6a-d08e-4673-8691-cab564d4a60a. [Accessed 15 April 2021].

[9] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, "Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 112 Population and Human Health," January 2020. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/1e13d6ac-755e-4d60-9735-f976bf64580a?inline=true. [Accessed 15 April 2021].

[10] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, "Design Manual for Roads and Bridges. Sustainability and Environment Appraisal. LA 105 Air Quality," November 2019. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/10191621-07df-44a3-892e-c1d5c7a28d90?inline=true. [Accessed 15 April 2021].

[11] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, "Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 111 Noise and Vibration," May 2020. [Online]. Available:

https://www.standardsforhighways.co.uk/prod/attachments/cc8cfcf7-c235-4052-8d32-d5398796b364?inline=true. [Accessed 15 April 2021].

[12] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges. Sustainability and Environment Appraisal. LA 108 Biodiversity,” March 2020. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/af0517ba-14d2-4a52-aa6d-1b21ba05b465?inline=true. [Accessed 15 April 2021].

[13] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 115 Habitats Regulations Assessment,” 2020 January. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/e2fdab58-d293-4af7-b737-b55e08e045ae?inline=true. [Accessed 15 April 2021].

[14] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Envronment Appraisal. LA 109 Geology and Soils,” October 2019. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/adca4c7d-4037-4907-b633-76eaed30b9c0?inline=true. [Accessed 15 April 2021].

[15] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 113 Road Drainage and the Water Environment,” March 2020. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/d6388f5f-2694-4986-ac46-b17b62c21727?inline=true. [Accessed 15 April 2021].

[16] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 114 Climate,” October 2019. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/87f12e4f-70f8-4eed-8aed-9e9a42e24183?inline=true. [Accessed 15 April 2021].

[17] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 110 Material Assets and Waste,” August 2019. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/6a19a7d4-2596-490d-b17b-4c9e570339e9?inline=true. [Accessed 15 April 2021].

[18] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 106 Cultural Heritage Assessment,” January 2020. [Online]. Available: https://www.standardsforhighways.co.uk/prod/attachments/8c51c51b-579b-405b-b583-9b584e996c80?inline=true. [Accessed 15 April 2021].

[19] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 107 Landscape and Visual Effects,” February 2020. [Online]. Available:

https://www.standardsforhighways.co.uk/prod/attachments/bc8a371f-2443-4761-af5d-f37d632c5734?inline=true. [Accessed 15 April 2021].

[20] Planning Inspectorate, “Advice Note Twelve: Transboundary Impacts and Processes,” December 2020. [Online]. Available: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-twelve-transboundary-impacts-and-process/. [Accessed 16 April 2021].

[21] Planning Inspectorate, “Advice Note Twelve: Transboundary Impacts and Processes: Annex 1 - The Inspectorate's Long Form Transboundary Screening Proforma,” December 2020. [Online]. Available: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/. [Accessed 21 April 2021].

[22] Department of Transport and Welsh Office, “Calculation of Road Traffic Noise,” TSO, London, 1988.

[23] “BS 5228-1:2009+A1:2014, Code of practice for noise and vibration control on construction and open sites - Noise,” BSI, 2014.

[24] Ministry of Housing, Communities and Local Government, “National Planning Policy Framework,” February 2019. [Online]. Available: https://www.gov.uk/government/publications/national-planning-policy-framework--2. [Accessed 16 April 2021].

[25] Planning Inspectorate, “Advice Note Seventeen: Cumulative Effects Assessment,” August 2019. [Online]. Available: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/12/Advice-note-17V4.pdf. [Accessed 16 April 2021].

[26] Planning Inspectorate, “Advice Note Nine: Rochdale Envelope,” July 2018. [Online]. Available: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/05/Advice-note-9.-Rochdale-envelope-web.pdf. [Accessed 16 April 2021].

[27] European Commission, “Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy,” 22 December 2000. [Online]. Available: https://ec.europa.eu/environment/water/water-framework/index_en.html. [Accessed 16 April 2021].

[28] Secretary of State, “Water Environment (Water Framework Directive) (England and Wales) Regulations 2003,” HMSO, London, 2003.

[29] Institute of Environmental Management and Assessment, “Major Accidents and Disasters in EIA: A Primer,” 2020. [Online]. Available: https://www.iema.net/resources/blog/2020/09/23/iema-major-accidents-and-disasters-in-eia-primer. [Accessed 16 April 2021].

[30] Cabinet Office, “National Risk Register of Civil Emergencies,” 2017. [Online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attach

ment_data/file/644968/UK_National_Risk_Register_2017.pdf . [Accessed 16 April 2021].

[31] Health and Safety Executive, “Control of Major Accident Hazards Regulations 2015 (COMAH),” 2015. [Online]. Available: https://www.hse.gov.uk/comah/background/comah15.htm. [Accessed 16 April 2021].

[32] Met Office, “UK Climate Projections,” 2018. [Online]. Available: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index. [Accessed 16 April 2021].

[33] “The Infrastructure Planning (Environmental Impact Assessment) (EIA) Regulations 2017. SI 2017/572,” HMSO, London, 2017.

[34] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure, “Design Manual for Roads and Bridges (DMRB). Sustainability and Environment Appraisal. LA 120 Environmental Management Plans,” March 2020. [Online]. Available: https://www.standardsforhighways.co.uk/dmrb/search/a3a99422-41d4-4ca1-bd9e-eb89063c7134. [Accessed 16 April 2021].

[35] Institute of Environmental Management and Assessment, “The State of Environmental Impact Assessment Practice in the UK,” IEMA, Lincoln, 2011.

[36] Secretary of State, “The Control of Major Accident Hazards Regulations 2015,” HMSO, London, 2015.

[37] Highways England, “DMRB LA 115 – Habitats Regulations assessment,” HE, 2019.