

**Environmental Statement** 

Volume 2: Main Statement

**Chapter 4: Assessment Methodology and Consultation Process** 

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# 4 Assessment Methodology and Consultation Process

ES Chapter Number	Environmental Topic	Relevant Appendices
4	Assessment	Appendix 4.1: Consultation Statement
·	Methodology	Appendix III. Concentration Statement
	and	
	Consultation	
	Process	

## 4.1 Approach to Environmental Impact Assessment

- 4.1.1 This chapter sets out the approach for the assessment of environmental impacts adopted in preparing this Environmental Impact Assessment (EIA) under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations); it also follows the approach outlined in the Environmental Impact Assessment Planning Practice Guidance (MHCLG, 2017) (Paragraph: 001 Reference ID: 4-001-20170728).
- 4.1.2 For some of the EIA areas technical contributors may make use of the methodology contained within Design Manual for Roads and Bridges (DMRB). Such methodology, the over-arching principles and approach to the levels of environmental assessment under the EIA Directive, are set out in LA101 Introduction to Environmental Assessment.

#### 4.2 Assessment Criteria

4.2.1 The assessments presented in this Environmental Statement (the ES) have considered the potential for significant environmental impacts to affect the baseline conditions as a direct / indirect result of constructing and operating

- the Scheme. The baseline conditions are defined as the existing state of the environment and how it may develop in the future in the absence of the proposals.
- 4.2.2 Predictions are necessary when forecasting future impacts and, in order to ensure that predictions are as accurate as possible, assessments have been undertaken in accordance with best practice guidelines published by the relevant professional bodies.
- 4.2.3 As there is no universally recognised term of what constitutes 'significance', and to assist in the interpretation of this EIA, a common framework of assessment criteria and terminology has been developed for the presentation of predicted impacts where there is no specific guidance available. This is based on a widely used 'matrix approach' to environmental assessment which is based on the characteristics of the impact (magnitude or nature) and the value or sensitivity of the receptor, as described further below. This is known as a 'Type 3 assessment framework' by Wood (2008). It is recognised that the level of transparency in the approach is comparatively high, with the sensitivity framework incorporating useful examples and the descriptors serving to provide a fuller account of decision factors. Therefore, the approach does go some way to enhance the transparency of the assessment in the sense that the reader is potentially in a better position to calibrate the language terms used by experts.
- 4.2.4 In accordance with Part 1, Regulation 4 (1) and Schedule 4 of the EIA Regulations, the ES will identify and evaluate the likely significant environmental effects arising from the proposed development on the following:
  - (a) population and human health;
  - (b) biodiversity, with particular attention to species and habitats protected under any law that implemented Directive 92/43/EEC and Directive 2009/147/EC;
  - (c) land, soil, water, air and climate;

- (d) material assets, cultural heritage and the landscape;
- (e) the interaction between the factors referred to in sub-paragraphs a) to d).

## 4.3 Topics Studied

- 4.3.1 All of the environmental topics have identified and evaluated the likely significant environmental effects arising from the Scheme. Significant environmental effects have been identified for the construction and operational phases of the proposed development. Mitigation methods and residual effects have also been identified in the relevant chapters and Chapter 17 'Cumulative Impacts'.
- 4.3.2 The design process has been influenced by EIA such that mitigation measures have, where possible, been embedded into the Scheme design.

#### 4.4 Overview of the EIA Process

- 4.4.1 The purpose of the EIA is to provide information, advice and report to:
  - Facilitate the consideration of environmental effects and opportunities in the development;
  - Contribute to the public consultation; and,
  - Ensure that decision making about the project is based on sound environmental information and takes environmental effects into account.
- 4.4.2 The EIA process is best described in a diagram (see Figure 4.1 below).

#### Figure 4.1 Environmental Impact Assessment Process

#### Step 1

Identify receptors that could be affected by the development and their sensitivity as determined through baseline studies on the local environment.



#### Step 2

Impact Characterisation

Describe the potential changes brought about by the development on or nearby the sensitive receptors.



#### Step 3

Cumulative Impact Characterisation Identify the cumulative impacts due to past, present and future actions.



#### Step 4

Impact Significance Assessment

Consider the nature and scale of impact characteristics, combined with the sensitivity of receptors to produce a judgement of overall significance.



#### Step 5

Consider Need for Mitigation

If significant environmental impacts are deemed unacceptable, opportunities for reducing their nature, scale, duration or geographical extent may be available through re-design or alternative methods of development. These should be considered by the developer and committed to as appropriate to reduce the significance of environmental effects.



#### Step 6

Assess the Significance of Residual Impacts

Where the developer has committed to undertaking mitigation to reduce the predicted significance of environmental effects, the overall significance should be re-assessed to show the predicted change from baseline conditions with successful

mitigation in place.



#### Step 7

Monitoring and Management Strategies

The mitigation measures will need to be monitored in order to ensure that the impacts are not worse than predicted.

### 4.5 Study Area

- 4.5.1 Study areas have been individually defined for each environmental topic, according to the geographic scope of the potential impacts relevant to that subject or to capture the information required to assess those impacts. The individual study areas for each environmental topic are defined in Chapters 5 to 17.
- 4.5.2 All desk-based studies have covered an area extending to approximately 500m in all directions from the nearest point from the site unless the individual competent technical specialist has deemed a justifiable alternative.

#### 4.6 Baseline Conditions

4.6.1 The current condition of the environment has to be described in order to identify the impacts of the Scheme, it is important to understand the environment that would be affected by the proposed works (the 'baseline conditions'). The baseline conditions are the situation as it is now without the Scheme. Understanding the baseline allows the measurement of change that would be caused by the Scheme.

#### 4.7 Assessment Years and Scenarios

- 4.7.1 The ES chapters confirm the Do-Minimum (without the Scheme in place) or Do-Something (with the Scheme in place) analysis and appraise the various options connected to their impact on specific receptors.
- 4.7.2 Assessment years are the year 1 of the Scheme opening (2024) and year 15 of the Scheme opening (2039). In transport planning terms year 15 is considered to be the Design Year.

## 4.8 Data Gathering and Consultation

4.8.1 In order to enable the environmental assessment to be carried out, data has been gathered from a number of sources for each topic. These sources are stated in the relevant chapters. Various organisations have been contacted during the data gathering process, including those organisations defined as Statutory Consultation Bodies in the EIA Regulations.

## 4.9 Identifying Potential Impacts – Construction, Operation and Residual Impacts

- 4.9.1 The EIA considers potential environmental effects that have been identified through:
  - Specialist studies carried out by the EIA team; and,
  - Consultation with third parties.
- 4.9.2 It is recognised that this approach can give rise to the consideration of potential impacts that seem, to a specialist, unlikely to occur, but that are perceived by the public as being likely. Such impacts have been addressed in such a way as to test and demonstrate their probability of occurrence.
- 4.9.3 The EIA has considered both direct and indirect impacts. Indirect effects in this context can be 'those that alter the character, behaviour or functioning of the affected environment because of encroachment of the project impacts over a wider area; the effects related to pressure for project-induced change'.
- 4.9.4 The EIA has identified both potential impacts during construction and operational stages of the project and consideration of measures to mitigate these impacts.

- 4.9.5 Construction impacts relate to those caused through construction; while the operational impacts relate to those caused by the presence or operation of the scheme.
- 4.9.6 Construction impacts can include temporary impacts that would cease as soon as construction is finished (e.g. noise, emissions to air or water from the construction process). They can also include permanent impacts, such as the loss of semi-natural ecological habitat.
- 4.9.7 Operational impacts include odour emissions to air, land or water from the processes taking place at the plant, effects caused simply by the presence of the plant in the landscape (e.g. visual impacts), flood risk and the impact of any additional operational transport. Impacts following mitigation known as residual impacts have also been considered.
- 4.9.8 The cumulative impacts have been considered within the EIA through the following questions, which are discussed further in Chapter 17 Assessment of Cumulative Effects.
  - Will any individual receptor / receptor group experience multiple impacts of the same type from this and other construction-related projects?
  - Will any individual receptor / receptor group experience several different types of impacts from this project?
  - Will different types of impact occur that would interact in such a way as to alter their significance?
  - Will the impacts of this project on any individual receptor / receptor group compound similar impacts from another recent project, or would they be compounded by the impacts of a future project already planned?
  - Will the project interact with any planned development, or stimulate proposals for other developments, in ways that compound its impacts?

• Will any cumulative impacts that are identified be temporary or permanent?

## 4.10 Determining the Magnitude of Impact

- 4.10.1 The magnitude of impact depends on the degree and extent to which a project changes the environment and usually varies according to project phase. In general, most project impacts are associated with construction and operational activities.
- 4.10.2 Impact magnitude can be quantified on the basis of the following factors listed below:
  - Area of influence: the impact magnitude is often directly related to the size of the area affected;
  - Overlap between area of influence and receptor of interest: the impact magnitude is often directly related to the area of overlap between receptors and the overall area of influence for the project;
  - Project duration: magnitude is often directly proportional to the lifespan of the project;
  - Project timing: project activities that occur during periods of sensitivity;
  - Simple and detailed calculations or complex mathematical models;
  - Sensitivity of the receptors: some receptors may appear to be very sensitive to disturbance whereas others are fairly tolerant of disturbance; and,
  - Deviation from current or baseline conditions: for projects that affect air or water quality, how much would concentrations of contaminants increase.
- 4.10.3 Magnitude of impact is defined by the amount of change from the baseline, on a four-point scale of 'Major', 'Moderate', 'Minor' or 'Negligible'.

## 4.11 Determining the Significance of Impacts

4.11.1 For the purposes of this assessment the sensitivity of receptors is defined in five categories ('Very High', 'High', 'Medium', 'Low' or 'Negligible'). Significance of impact is defined in five categories ('Very Large', 'Large', 'Moderate', 'Slight', 'Negligible'/'Neutral'). With the addition of the terms 'Adverse' or 'Beneficial', the significance of any particular impact can typically be assessed through the use of the matrix set out in Table 4.1.

**Table 4.1 Typical Matrix for the Significance of Impacts** 

Magnitude of Impact									
		No Change	Negligible	Minor	Moderate	Major			
Value	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			

- 4.11.2 The 'significance' of an environmental effect is a function of the 'value' or 'sensitivity' of the receptor and the 'magnitude' or 'scale' of the impact.
- 4.11.3 It is important to note that in some cases the significance of impact identified using the matrix may be adjusted to take account of other qualitative criteria. Wherever this is done within the specific chapter a reasoned justification for the alteration would be given.

4.11.4 Certain topics do not use a matrix-based approach and these include noise, air quality, water environment (in particular assessment of flood risk and Water Environment Regulations Compliance Assessment), and traffic and transport. These topics are amenable to the calculation of impacts in terms of numerical values (i.e. absolute noise levels, and the amount of change in noise levels caused by the scheme). For these topics, where the impact has been based on numerical values, the level of significance has also been determined and the methodology for this is discussed further in the individual topic chapters.

## 4.12 Approach to Mitigation Measures

- 4.12.1 The development and inclusion of environmental mitigation measures occur throughout the assessment and design process. Successful mitigation is dependent upon a high level of interaction between the environmental assessment and the design process, and this has been achieved for this project through the close collaboration of the environmental and the design teams. The environmental mitigation measures have been developed and presented in three categories:
  - Prevention / avoidance;
  - Mitigation / reduction; and,
  - Compensation.
- 4.12.2 Prevention measures are those that are designed into the scheme in order to prevent, avoid or reduce potential impacts. These may relate to location or layout, or to the incorporation of pollution prevention measures, and would be most successful at reducing the significance of environmental impacts.
- 4.12.3 Mitigation measures are appropriate where an impact cannot be prevented or avoided. Mitigation seeks to minimise the magnitude of the potential impact, including, for example, landscape mitigation intended to reduce potential visual impact or pollution control measures to minimise effects of discharges to make the impact less significant.

4.12.4 Compensation measures would be used only as a last resort where it is not possible to prevent or minimise the potential impact. These measures are intended to provide compensation for unavoidable impacts. Compensation may be monetary (e.g. for impacts on humans) or in terms of natural resources (e.g. planting new trees off-site to compensate for any loss of trees).

## 4.13 Residual Impacts

- 4.13.1 Such impacts are those that would still occur after the implementation of the mitigation measures. These have been evaluated during assessment process. The impact significance table has been re-visited to assess the significance of impacts once mitigation has been accounted for. It is important to note that, in some cases, mitigation measures may lead to a residual impact that improves on the baseline situation (i.e. a beneficial effect).
- 4.13.2 Mitigation measures for one environmental impact can sometimes have adverse impacts in their own right. Mitigation measures have therefore been considered in an integrated way taking into account any such undesirable effects.
- 4.13.3 Any enhancements that have been proposed (i.e. measures to improve the environment, rather than mitigate adverse impacts) have also been taken into account, usually as positive impacts in their own right.

## 4.14 Assumptions, Uncertainties and Limitations

4.14.1 During the preparation of this ES there may be some instances where there are restrictions to the assessment process. Each chapter of this ES includes a description of the methods or evidence used to identify and assess the significant effects on the environment. The description also explains the specific difficulties encountered, the assumptions made, the limitations which may result as a consequence and confirms the main uncertainties involved.

- 4.14.2 The assumptions and limitations of carrying out the EIA could be site-specific limitations that apply to several, many or all topics; and/or, topic specific assumptions that apply to all site locations.
- 4.14.3 Topic specific limitations often arise owing to gaps in data sets or lack of survey information for example where access to land has not been possible. Such limitations would be explained in the relevant chapters.
- 4.14.4 There could be time-limitations, for instance ecological surveys are a snapshot of the current baseline biodiversity conditions on a site and may be the subject of change/evolution over a short time period.
  - 4.14.5 The topic-based assessments may have employed professional judgement to define the baseline where assessment of it is constrained by insufficient data. The use of professional judgement will be clearly explained in the relevant chapter and may set out an approach to minimise risk/adverse effects where possible.

#### 4.15 Consultation Process

- 4.15.1 Consultation is an integral part of the project, as it provides a means by which statutory and non-statutory consultees can be involved. The aims for consultation carried out were to:
  - understand the concerns, interests and priorities of statutory and nonstatutory consultees;
  - identify key environmental issues associated with the study area; and,
  - advance the project's knowledge of the area.
- 4.15.2 The purpose of this section is to provide details of the consultation process undertaken as part of the EIA and in the preparation of the ES in relation to the Scheme.

- 4.15.3 This section describes the general approach and methods used in the consultation process, and provide details about previous consultation undertaken, including:
  - During the EIA preparation; and,
  - A pre-application public consultation held between the 6 December 2021 and the 31 January 2022.
- 4.15.4 Further details of the consultation undertaken on the Scheme are provided in each individual specialist chapter of this ES and within Consultation Statement in Appendix 4.1 in volume 3 of this ES.
- 4.15.5 Consultation has taken place in various forms at different stages of the project. There has been communication and consultation between the applicant and Lancashire County Council in order to complete the environmental assessment process, as follows
  - Lancashire County Council Landscape Architect;
  - Lancashire County Council Ecologist;
  - Lancashire County Council Highway Development Service;
  - Lancashire County Council Rights of Way Officer; and
  - Lancashire County Council Flood Risk Officer.
- 4.15.6 Consultation has also been carried out with external organisations as follows:
  - The Environment Agency;
  - Network Rail;
  - Northern Railway (the Train Operating Company (TOC));
  - Lancashire Environment Record Network (LERN);
  - Natural England;

- Environmental Health Officer (EHO) (Preston City Council);
- Lancashire Fire and Rescue Service;
- Council for the Protection of Rural England (CPRE);
- Preston City Council;
- Fylde Council (Planning Service); and,
- Canal and River Trust (CRT).

#### 4.16 Public Information

- 4.16.1 A public consultation was undertaken from 6 December 2021 to 31 January 2022. The consultation focused on bringing the Scheme into the public domain as a near complete version and to generate comments through a series of questions. The questions asked to members of the public were related to landscape impact and urban realm. Questions were asked relating to sustainable travel options and general comments were also sought.
- 4.16.2 Notice for the consultation was made by letters, direct email and press notices together with emails to stakeholders. The consultation and the publicity material produced was presented online. Where individuals, landowners and representatives of organisations raised questions in their responses we responded to during the consultation period.
- 4.16.3 A total of 241 responses were received, Further details regarding the public pre-application consultation stage and our responses to comments generated from the consultation are provided in Consultation Statement in Appendix 4.1.

#### 4.17 References

Highways England, Transport for Scotland, Welsh Government and Department for Infrastructure (2020a). Design Manual for Roads and Bridges. Sustainability & Environment Appraisal. LA104 Environmental assessment and monitoring [online]

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Wood, G. (2008) Thresholds and criteria for evaluating and communicating impact significance in environmental statements: 'see no evil, hear no evil, speak no evil'? Environmental Impact Assessment Review Vol. 28 (1) pp. 22-38. 4-2.