

4 ENVIRONMENTAL ASSESSMENT METHODOLOGY

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APPENDICES

Presented in Volume 3 of this Environmental Statement:

Appendix 4.1 Informal EIA scoping consultation notes (Parts 1 – 5)

4.1 EIA requirement and scope

- 4.1.1 As set out in **ES Chapter 1 Introduction**, the Proposed Development falls within Part 4 of Schedule 2 to the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (the EIA Regulations), comprising 'production and processing of metals' over 1,000 square metres of new floorspace. As set out in **ES Chapter 1** the Applicant has elected to submit an Environmental Statement (ES) with the Planning Application without prior EIA screening.
- 4.1.2 As set out in Regulation 4(1) of the EIA Regulations *'The environmental impact assessment (EIA) is a process consisting of—*
- (a) the preparation of an environmental statement by the person seeking or initiating planning permission;*
 - (b) any consultation, publication and notification required by Parts 5, 9 and where relevant, Part 12 of these Regulations, the 2012 Order or the 2016 Order in respect of EIA development; and*
 - (c) the steps required under regulation 25(1).'*
- 4.1.3 Regulation 4(2) continues to require that:
- 'The environmental impact assessment must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of proposed development on the following—*
- (a) population and human health;*
 - (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(1) and Directive 2009/147/EC(2);*
 - (c) land, soil, water, air and climate;*
 - (d) material assets, cultural heritage and the landscape; and*
 - (e) the interaction between the factors listed in sub-paragraphs (a) to (d).'*
- 4.1.4 An underlying principle of the EIA is that it is a process of assessment of these environmental issues, where impacts associated with the Proposed Development are likely to result in significant effects.
- 4.1.5 The EIA Regulations also provide a mechanism whereby an applicant for planning permission can obtain the local planning authority's formal opinion on the scope and level of detail of the information to be provided in the environmental statement (known as a EIA scoping opinion). However, obtaining a scoping opinion is not mandatory, and some applicants choose instead to discuss these matters informally with the local planning authority and other stakeholders. In this case, informal pre-application consultation workshops have been held between the Applicant and Neath Port Talbot Council (NPTC) to informally discuss an appropriate scope of the EIA and the documents to be included in the wider planning application. In particular, the pre-application consultation workshops considered the following environmental issues, with the following informal EIA scoping consultation notes prepared to facilitate discussion:
- Acoustic assessment;
 - Air quality;
 - Archaeology and cultural heritage;
 - Coal mining risk;
 - Daylight, sunlight, overshadowing and light spill

- Ecology surveys and methodology;
- Flood risk and drainage;
- Human health;
- Landscape and visual impact assessment;
- Landscape strategy;
- Major accidents and disasters.
- Nighttime viewpoints;
- Socio-economics;
- Sustainability and greenhouse gasses; and
- Transport.

4.1.6 The full informal EIA scoping consultation notes are provided in **Appendix 4.1**.

4.1.7 Subsequent pre-application discussions were undertaken with NPTC to agree the approach to considering major accidents and disasters. As a result, an assessment chapter has been scoped in for this ES (refer to **ES Chapter 15 Major accidents and disasters**).

The following environmental issues were discussed at the pre-application consultation workshops, and have been scoped out of detailed EIA as standalone ES chapters for the following reasons:

- **Material assets and waste** – The Applicant has produced a separate Waste Management Plan to support the planning application, which forms part of the Environmental Management System (EMS) and the CEMP for the Proposed Development, and covers both the construction and operational phases.

During the construction phase: the Principal Contractor would be responsible for waste management in accordance with the Construction Environmental Management Plan (CEMP). An Outline CEMP has been provided in **Appendix 2.1**, which states they shall apply the principles of waste hierarchy (eliminate, reduce, reuse, recycle, dispose) to the waste management of the Site. The Outline CEMP stipulates measures to avoid waste issues that would be followed in full. The indirect impacts associated with materials consumption and waste disposal (e.g. release of greenhouse gas emissions, water consumption, amenity impacts, ecological impacts, etc) will be assessed elsewhere within the EIA. Similarly, the indirect impacts of any off-site waste management facilities and material production facilities are expected to be assessed (and where necessary, mitigated) under the planning and permitting regime for those sites. As part of the Detailed CEMP, prepared by the Principal Contractor prior to the commencement of construction works, there would be a requirement to develop and implement a Site Waste Management Plan and Materials Management Plan. In addition to this, the Detailed CEMP would set out how construction materials and waste would be managed and recycled on-site. An appropriate contractor would be appointed to segregate waste streams on-site, prior to them being taken to a licensed waste facility for recycling or disposal. All waste incapable of being re-used or recycled on site would be removed from the Site. This process would be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

During the operational phase: **Section 2.7 of ES Chapter 2 Project Description** includes a description of the main operational waste streams associated with the Proposed Development, which are EAF dust (also known as red dust) and EAF slag, and summarises how these would be managed. Operational waste management is also fully outlined within the Waste Management Plan submitted with the planning application. The proposed production, movement, transport,

processing use and disposal of waste would be managed in accordance with the waste hierarchy which aims to reduce waste at source and to reduce the quantity that requires final disposal to landfill.

Existing and established processes would inform the procurement and waste management systems put in place for the operational phase of the Proposed Development, and with regard to any factor specific waste management/pollution prevention requirements as set out in **Chapters 5 to 15**. Statutory waste management requirements, and any additional requirements relating to the operation of the proposed scrap facility, are intrinsic to the design and operation of the Proposed Development.

Once operational, the Proposed Development will play an important role in the decarbonisation of steelmaking and its circular economy and would improve recycling and reduce waste within UK steelmaking.

The Proposed Development would not give rise to any negative environmental impacts because of any waste generated, including on the capacity of waste management infrastructure (including hazardous waste), therefore material assets and waste is scoped out of the EIA.

- **Daylight, sunlight and overshadowing** – The Proposed Development is too distant from the nearest sensitive receptors to cause a material adverse impact in daylight, sunlight and overshadowing (DSO) terms (refer to the daylight, sunlight, overshadowing and light spill EIA Scoping note provided in **Appendix 4.1**). Given the distance of the Proposed Development from the nearest sensitive receptors, no further DSO analysis is required for the Proposed Development, and so this issue is scoped out of the EIA.

Similarly, residential properties are likely too distant from the Proposed Development to be materially impacted by light spill from the Proposed Development (refer to the daylight, sunlight, overshadowing and light spill EIA Scoping note provided in **Appendix 4.1**). Whilst light spill is scoped out of EIA as a standalone ES chapter, a lighting assessment has been prepared as part of the planning application and has been used to inform other EIA factors including Biodiversity and Landscape and Visual Impact Assessment.

4.1.8 Schedule 4(5)(c) requires a description of the likely significant effects of the development on the environment resulting from heat and radiation. There is no potential for significant sources of heat or radiation emissions during construction. Due to the characteristics of the Proposed Development during the operational phase, strict safety, health and environmental requirements and procedures are to be in place and enforced. These are outlined in **ES Chapter 2 Project Description Section 2.4**. It is concluded that, with these requirements and procedures in place, there is no potential for significant effects in relation to this topic, and it has therefore been scoped out of this assessment.

4.1.9 As well as informally consulting with NPTC on the scope of EIA, the Applicant has undertaken pre-application consultation with the following stakeholders, either through the pre-application process described above or by separate consultee-specific meetings:

- Welsh Government;
- Natural Resources Wales (NRW);
- Cadw;
- Glamorgan-Gwent Archaeological Trust (GGAT); and
- Public Health Wales.

4.2 EIA process

- 4.2.1 EIA is a multidisciplinary process, with input required from across a range of specialist expertise. As set out in **ES Chapter 1 Introduction** there has been specialist environmental, design and planning input to EIA from a range of competent experts in their field. Where relevant, specialist practice guidance has been relied upon to assist in the professional judgement of the competent experts, details are provided in **ES Chapters 5 to 15**.
- 4.2.2 Insofar as practical, a common approach has been adopted to the EIA in accordance with the guidance provided in IEMA (2011, 2015). This approach is summarised below. Where it has been necessary to deviate from a common approach to EIA, justification for this is provided in the relevant chapter.
- 4.2.3 With reference to IEMA (2011, 2015) the main steps involved in the process of undertaking EIA are summarised as follows:
1. Review proposals, policy/legislative context and identify aspects of environment likely to be significantly affected;
 2. Propose impact avoidance measures;
 3. Identify potential impacts, define impact assessment topics/methodologies and consult with key stakeholders;
 4. Collect/ model environmental baseline/data;
 5. Assess potential impacts and likely significance effects;
 6. Propose mitigation measures;
 7. Reassess impacts taking account of mitigation and report residual likely significant effects;
 8. Assess cumulative/in-combination effects;
 9. Identify any follow up measures/recommendations; and
 10. Conclude impact assessment and record outcomes as a summary ES chapter and Non-Technical Summary (NTS).
- 4.2.4 Further explanation of the different stages of the EIA process are provided in the following sections.

Establishment of baseline environment

- 4.2.5 The EIA regulations require an ES to provide “A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge” (Paragraph 3 of Schedule 4).
- 4.2.6 Baseline is established on the basis of review of available information relating to known, or the likely presence of, environmental receptors within a defined study area in order to determine their relative value, importance and/or sensitivity to change. Environmental receptors are defined as the aspects of the environment intrinsic to the operation of natural or manmade systems. This can include factors of the environment such as

populations, ecosystems, watercourses, air and climatic factors, landscape, and material assets. Environmental receptors are also defined as people (i.e. occupiers of dwellings and users of recreational areas, places of employment and community facilities) and elements within the environment (e.g. flora and fauna).

- 4.2.7 Baseline information or data is collated from either desk-based sources, or site survey/ investigations. Third party data sources may comprise published literature; databases, records and schedules relating to environmental designations; consultation responses; national, regional and local policy documentation; historic and current mapping; and aerial photography.

Study area

- 4.2.8 Study area extents vary in accordance with the environmental factor being considered, and is therefore defined separately within each of the technical **ES Chapters 5 to 15**. For some factors, a study area has been defined as being relatively localised to the Proposed Development, while for others it has extended outward to capture the surrounding road network, distant communities, and environmentally sensitive areas. The definition of each study area has been informed by a review of the relationship between the Proposed Development and the receiving environment, the outcomes of informal scoping, and reference to thresholds stipulated in factor-specific EIA guidance.

Baseline scenarios

- 4.2.9 The EIA baseline scenarios relevant to the Proposed Development are defined in **Table 4.1**. The baseline scenarios should be read in conjunction with **ES Chapter 2 Proposed Development**.

Table 4.1: EIA baseline scenarios for the Proposed Development

Baseline scenario	Description
Established baseline	The steelworks with 'heavy end' as operating in early 2024 and for the majority of the preceding 50+ years
Interim baseline	The steelworks as they will operate at the time of planning determination with closure of the 'heavy end'

- 4.2.10 The 'heavy end' is defined as the existing stockyard, sinter plant, coke ovens, blast furnaces and steel converter. Closure of the coke ovens has already taken place (March 2024), with the closure of the remainder of the 'heavy end' taking place between May – September 2024. These closures took place irrespective of the grant of planning permission for the Proposed Development, but the EAF application is ultimately driven by the Applicant's desire to replace these 'heavy end' processes with alternative, greener and more economic methods of steel manufacture.
- 4.2.11 The description of the established baseline makes use of data which spans the period during which the coke ovens have ceased operation. Baseline data collected pre-2024 includes the coke oven operation, and more recent data reflects the closure of the coke ovens. Where it is possible and necessary to define the specific contribution of the coke ovens to individual environmental factors, commentary has been provided in the respective ES chapters (**Chapters 5 to 15**).

- 4.2.12 The consideration of interim baseline conditions does not include the demolition of structures, buildings or plant and machinery in the 'heavy end'. The Applicant will close the 'heavy end', and in the process make all structures, buildings, plant and machinery safe but no demolition of this aspect will be carried out under the Proposed Development. The regeneration of the 'heavy end' will be subject to separate commercial and/or planning processes, at the appropriate time.
- 4.2.13 The 'established baseline' remains a relevant reference point to the ES because:
- It is the situation that has occurred in Port Talbot for the majority of the past 50+ years;
 - It has strongly influenced the 'current state of the environment' at the Site;
 - It is the prevailing position at the time that the majority of baseline surveys for the current ES were completed; and
 - It is the position reflected in the Environmental Permit issued by NRW, under which the Site currently operates. It is not intended to vary the permit prior to the planning application.
- 4.2.14 The 'interim baseline' requires consideration because the closure of the 'heavy end' infrastructure will happen regardless of whether the EAF is approved and constructed, and will pre-date the EAF commencing operations.
- 4.2.15 Each technical ES chapter (**ES Chapters 5 to 15**) has therefore considered the following:
- Established baseline; and
 - Interim baseline.
- 4.2.16 The majority of baseline monitoring and data collection reflected in the ES represents the established baseline as that is the position that has occurred through the majority of the EIA preparation. Isolating the specific effects attributable to the 'heavy end' from that established baseline is not readily achievable in relation to many environmental factors.
- 4.2.17 Accordingly, each technical chapter of the ES (**ES Chapters 5 to 15**) has assessed and reported the likely significant effects of the Proposed Development with primary reference to the established baseline. In addition, commentary is provided for context only, where relevant, on the interim baseline to take account of this emerging baseline scenario. Due to the difficulty of isolating the expected changes and subsequent environmental effects attributable the 'heavy end', not every ES chapter has needed, or been able, to fully quantify the effects of the Proposed Development relative to the interim baseline. However, a method of estimating background conditions minus the historic/existing effect of the steelworks is required for some EIA disciplines to avoid 'heavy end' emissions forming part of the baseline. Appropriate methods have been used to assess the interim baseline based on the specific considerations and professional judgement of each technical discipline.
- 4.2.18 Consideration of 'future baseline' is also required to take into account foreseeable future changes to environmental factors, due to, for example, climate change. This has been addressed by the inclusion of a 'future baseline' subsection in each relevant technical assessment chapter of the ES. Again, this required professional judgement and includes prediction of how the baseline is likely to evolve in the absence of the Proposed Development based on available environmental information and/or scientific knowledge. Further topic specific future baseline scenarios are reported in the technical chapters (**ES Chapters 5 to 15**).

Impact prediction and assessment

- 4.2.19 Environmental impacts are identifiable changes to the baseline environment. These can take the following forms:
- Positive/beneficial (e.g. introduction of planting to screen visually detracting elements);
 - Negative/adverse (e.g. loss of an attractive environmental component);
 - Direct/primary (e.g. loss of habitat to accommodate a development);
 - Indirect/secondary (e.g. pollution downstream arising from silt deposition during earthworks, or as a result of development required to support a development, e.g. nearby road improvements);
 - Transboundary (e.g. long-range effects of air pollution as a result of development within an area under the jurisdiction of another State);
 - Short-term/temporary (e.g. dust generated during construction);
 - Medium-term (e.g. cutting back of planting which is subsequently allowed to regenerate);
 - Long-term/permanent (e.g. improvement in air quality); and
 - Cumulative (e.g. incremental changes caused by other past, present or reasonably foreseeable actions together with those associated with the Proposed Development, or where a receptor is subject to a combination of individual impacts such as air pollution, noise and visual impact associated with the Proposed Development in isolation).
- 4.2.20 Impacts are defined in accordance with accepted terminology and standardised methodologies to predict the magnitude of impact (or change) resulting from the Proposed Development. Impact assessments can be both quantitative and qualitative in nature, and each assessment chapter of the ES describes the forecasting methods used in the EIA.
- 4.2.21 Each technical ES chapter (**ES Chapters 5 to 15**) has considered the following impact assessment scenarios:
- Construction of the Proposed Development (primarily with reference to the 'established baseline'); and
 - Operation of the Proposed Development (primarily with reference to the 'established baseline').
- 4.2.22 For further details of the construction and operation proposals refer to **ES Chapter 2 Proposed Development**.
- 4.2.23 As set out in **ES Chapter 2**, construction is considered a proxy of potential impacts considered likely during any future decommissioning stage. The permission being sought is not time-bound and whilst operational maintenance of assets to be constructed as part of the Proposed Development would be required, decommissioning of the assets is not envisaged until many years into the future. At that point in the future, any works will need to be undertaken in accordance with the legislation and guidance that applies at such time.

Assessment of likely significant effects

- 4.2.24 Effects are defined as the consequence of impacts. They are assessed as a function of the receptor value and sensitivity, and the predicted magnitude of impact. Likely

significant effects may be defined in terms of magnitude, intensity or irreversibility etc of impacts versus the value, sensitivity or importance of the affected environment.

- 4.2.25 The likely significance of each effect identified has been assessed in accordance with the EIA Regulations. As a general rule, this assessment is based on the magnitude of impact (change) due to the Proposed Development and the value (sensitivity) of the affected receptor to change, as well as a number of other factors that are outlined in more detail below.
- 4.2.26 A common approach taken in many EIAs is to use matrices for this, whereby a multiplication table is used to devise the significance score, by comparing a hierarchy of predefined impact scores against a hierarchy of predefined baseline scores. The matrix-based approach helps to increase consistency in the assessment of significance by predefining the relationship between criteria and reduces uncertainty by utilising comparable scoring terminology across the technical ES chapters.
- 4.2.27 Impact and baseline scoring terms may differ between the ES chapters depending on the technical EIA practice guidelines employed. Nevertheless, significance scoring terms are kept as consistent as possible throughout the ES, in order to assist the reader with a meaningful comparison between ES chapters. Significance scores can also fall between criteria when using matrices (i.e., Slight or Moderate, Moderate or Large, etc.) and so an element of professional judgement has been utilised where appropriate.
- 4.2.28 The assessment of likely significant effects presented in **ES Chapters 5 to 15** has taken into account the following to determine whether or not the likely effects are significant:
- Relevant legislation and planning policy;
 - Relevant chapter specific guidance and assessment criteria;
 - International, national, regional and local standards;
 - Likelihood of occurrence of the effect;
 - Geographical extent of effect;
 - Value (sensitivity) of the receptor;
 - Magnitude and complexity of impact (change);
 - Whether the effect is temporary or permanent;
 - Duration (short, medium or long-term), frequency and reversibility of effect;
 - Whether the effect is direct or indirect, secondary or transboundary; and
 - Inter-relationship between different effects (both cumulatively and in terms of likely effect interactions).
- 4.2.29 Good practice guidance, established criteria and standards, defined thresholds, and professional judgement have been used to report the likely significant environmental effects of the Proposed Development. Where factor-specific methodology deviates from this approach, for example as a result of following factor specific requirements, this is set out in the methodology section of the assessment chapter.

Environmental design and mitigation

- 4.2.30 EIA is an iterative process, closely aligned with the design process. To ensure that the EIA and design processes are coordinated, there are stages within the EIA process where measures are proposed to iterate the design. The stages at which mitigation is proposed relate to the nature of the measures in relation to the development of the design.

4.2.31 The hierarchy of the effectiveness of mitigation is utilised to propose measures to avoid, reduce, eliminate or offset likely significant effects in accordance with the EIA Regulations. Mitigation measures typically fall into one of three categories in order of preference:

- Primary or embedded mitigation measures refers to 'mitigation by design', which are intrinsic components of the evolution of design of the Proposed Development that are intended to avoid impacts on the environment;
- Secondary mitigation measures which have been formally identified through EIA, seek to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and may be secured by planning condition; and
- Tertiary mitigation measures which are best practice strategies or obligations for mitigation that are widely practiced and accepted within EIA. Where clear obligations on the installation or operation and maintenance of the Proposed Development are set out within regulation or statutory authority guidance documents, it is assumed that these will be adhered to as part of the Proposed Development design (refer to Environmental Design in **ES Chapter 2 Proposed Development**).

4.2.32 The design of the Proposed Development has been developed through an iterative process which has sought to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment. This represents the first opportunity to mitigate potential effects. The strategy for applying mitigation has followed the approach set out in **Table 4.2**.

Table 4.2: Strategy for applying mitigation

Avoid or Prevent	Where viable, the Proposed Development has been redesigned to avoid or prevent impacts. Avoidance has also been considered during the assessment of alternative sites.
Reduce	Reduction has been considered when all options for the avoidance of impacts has been exhausted or deemed to be impractical.
Offset	Where the potential for avoiding and reducing impacts has been exhausted, consideration has been given to providing compensation to make the Proposed Development more environmentally acceptable.

4.2.33 Appropriate secondary and tertiary mitigation is identified in **ES Chapters 5 to 15** to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment. The assessment chapters then assess the significance of the residual effects post implementation of secondary and tertiary mitigation.

4.2.34 The assessment chapters also identify whether monitoring of the effects of the Proposed Development is required. Monitoring is typically required to monitor significant adverse effects identified in the ES or for legal purposes.

4.2.35 Any secondary and tertiary mitigation commitments reported in the ES often require separate environmental management plans to ensure the desired outcome is carried through to the construction stage. An outline CEMP drafted on the basis of construction

4.2.36 Cumulative effects comprise the combined effects of reasonably foreseeable human induced changes within a specific geographical area over a certain period of time, which can be both direct and indirect.

4.2.37 For the purposes of this EIA, the following types of cumulative effects have been considered:

- **Intra-project combined effects** are the interaction and combination of residual (i.e. post-additional mitigation) effects for a number of different environmental factors from within the Proposed Development on a single receptor. The assessment of intra-project combined effects is presented in **ES Chapter 15 Cumulative Effects** of this ES; and
- **Inter-project cumulative effects** are the combined residual (i.e. post-additional mitigation) effects of the Proposed Development with other committed developments on a single receptor. The assessment of inter-project cumulative effects is presented in each assessment chapter and in **ES Chapter 15**.

4.2.38 The cumulative effects assessment will be based on the approach outlined in Planning Inspectorate (PINS) Advice Note 17¹, as this is considered to be the most relevant practice guidance given the scale and nature of the Proposed Development².

4.2.39 The proposed National Grid Margam substation extension and cable connection that are located outside of the Proposed Development will be included in the list of developments to be taken forward for the cumulative effects assessment. Although the Margam substation project is unlikely to be identified by the criteria in Advice Note 17 due to not being sufficiently advanced to meet the specified 'long listing' criteria, it has been included to ensure robust consideration of related development to the Proposed Development.

4.2.40 Following consideration of mitigation and cumulative effects, the likely significant residual effects of the Proposed Development on the environment, are reported in **ES Chapters 5 to 15**. The residual effects together with conclusions on the outcomes of the EIA are then summarised in a summary ES chapter and Non-Technical Summary (NTS). In line with best practice it is intended that the ES will be a proportionate, well-structured and concise document, aiming to make relevant environmental information and results of EIA as publicly accessible as possible.

² Advice Note 17 was the most up to date guidance at the time of preparing Chapter 15 of this ES. It was superseded by the Planning Inspectorate's 'Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment' on 20 September 2024, however this wasn't taken into consideration for Chapter 15 of this ES, as the cumulative effects assessment had been substantially completed at that time.

4.3 Assessment reporting

4.3.1 **ES Chapters 5 to 15** of the ES are presented in a comparable format to ensure consistency in reporting the existing environmental conditions and the potential effects on them arising from the construction and operation phases of the Proposed Development.

- **Introduction** introduces the assessment factor under consideration.
- **Statutory and planning context** outlines statutes, policies and plans relevant to the environmental interests forming the focus of the assessment.
- **Consultation undertaken** summarises the stakeholder engagement, including dialogue with statutory consultees and with other stakeholders and, where relevant, the influence on the EIA.
- **Approach to the assessment** identifies and describes the scope of the assessment, the methods and criteria adopted, relevant guidance followed, and any difficulties and uncertainties encountered.
- **Established, interim and future environmental baseline** describes the features and characteristics associated with the baseline environment. More details on the established, interim and future baselines can be found in **Section 4.2** above.
- **Project characteristics and embedded mitigation** details any primary mitigation measures that have been incorporated into the design of the Proposed Development to mitigate any identified significant adverse effects on the environment.
- **Assessment of potential effects**
 - o **Predicted effects** reports the predicted effects of the Proposed Development on the baseline environment during the construction and operational phases before the implementation of additional mitigation.
 - o **Proposed additional mitigation** details all appropriate secondary and tertiary mitigation measures to be adopted to mitigate any identified significant adverse effects on the environment that remain once primary mitigation has been taken into consideration and the mechanisms by which these mitigation measures will be secured.
 - o **Residual effects** summarises the nature and significance of residual environmental effects that are predicted to remain, post-implementation of additional mitigation measures.
- **Further survey and monitoring requirements** lists any further survey and/or monitoring requirements for identified significant adverse effects and the mechanism by which monitoring will be or has been secured.
- **Opportunities for enhancement** details possible enhancement measures as these have not been taken into consideration within the assessment of likely significant effects. The mechanism by which enhancement measures will be secured is also set out.
- **Cumulative effects** identifies any cumulative effects that the Proposed Development may have in combination with the short list of approved (committed) approved developments as presented in **ES Chapter 15**.
- **Summary of effects** summarises any residual significant adverse effects on the environment.
- **References** provides a list of the information sources relied upon in the ES chapter.

4.4 Difficulties and uncertainties

- 4.4.1 The EIA was undertaken and the resulting ES has been compiled using data and information available to the project team at the time of writing, together with other readily available and publicly accessible data and information including that published within literature and studies, as well as originating from personal communication with relevant stakeholders. To the best of the Applicant's knowledge, the information used as a basis for the assessment is accurate and up to date. The Applicant is not aware of any limitations of the underlying information or of any constraints that would materially affect the evaluations.
- 4.4.2 Site visits, surveys and investigations have been carried out at or in the vicinity of the site to provide more information for the assessments and to fill data gaps. This has resulted in a more complete and up-to-date set of baseline data to use as the basis for the EIA. Although the data have been collected over a period of time, the Applicant is of the opinion that the data is relevant and valid at the time of reporting.
- 4.4.3 Assumptions adopted in the evaluation of impacts are reported in each of the relevant technical ES chapters (**ES Chapters 5 to 15**). However, these assumptions are often implicit and rely on expert professional judgement. Any assumptions and known technical deficiencies have been documented in the relevant ES chapter.
- 4.4.4 The EIA has taken a precautionary approach to assumptions and scenarios assumed, so that a reasonable 'worst-case' was assessed in compliance with EIA case law. For elements of the Proposed Development for which outline planning permission is being sought, appropriate parameters have been devised in order to assess the likely worst case scenario. It is assumed that inherent uncertainties are accounted for and any subsequent modifications to the project will not fall outside of the assumed envelope of the assessment parameters.

4.5 References

Institute of Environmental Management and Assessment (IEMA) (2011). *The state of environmental impact assessment practice in the UK*. Special report.

Institute of Environmental Management and Assessment (IEMA) (2015). *IEMA environmental impact assessment guide to shaping quality development*.