2. EIA Methodology and Significance Criteria

Introduction

2.1 This chapter of the ES provides a detailed breakdown of the EIA methodology. The following key information is included:

- The Consultant Team, their individual responsibilities and how the EIA process, leading to preparation of the ES, has been co-ordinated;
- Details of technical studies undertaken;
- The approach to determining scale and significance of effects, and the basis upon which predictions were made (e.g. professional knowledge and judgment, initial studies, desktop exercises, preliminary survey work); and
- What guidelines, methods and techniques have been used in the process of determining significance of effects.

2.2 Subject-specific methodology is outlined in each of the technical chapters.

Consultant Team

2.3 The EIA studies have been co-ordinated by Turley. The individual technical studies have been undertaken by specialists and consultants who have been involved in the design and EIA of the Development as set out in **Table 2.1** below:

Table 2.1: EIA Consultants

Discipline	Consultant
EIA Project Manager	Turley
Scheme Plans, Urban Design and Architecture	Glenn Howells/ Scentarea /Turley
EIA Scoping	Turley
Proposed Development and Format of Planning Application	Turley
Consideration of Alternatives	Turley
Demolition and Construction Methodology and Programme	Turley
Landscape & Visual Impact Assessment	EDP
Socio-Economic Impact Assessment	Turley
Traffic and Transportation	Motion
Flood Risk and Drainage	Jacobs
Ground Conditions	Wardell Armstrong
Air Quality	Jacobs
Noise and Vibration	Jacobs
Ecology	Penny Anderson

Approach to Technical Studies Undertaken

2.4 The EIA studies commenced at an early stage in the evolution of the proposals, when the application proposals had not yet been fully developed. The findings of these baseline environmental studies have played an important role in the design evolution of the Development. These studies defined the environmental sensitivities and constraints associated with the development of the site at the outset to avoid or minimise potential impacts by design. The process has been necessarily iterative to reflect this.

2.5 Design and Project Team Meetings, attended by key members of the project and client team, have been held at regular intervals throughout the EIA process. These meetings provided a valuable forum for the exchange of information and ensured that the design team were fully aware of the environmental constraints and opportunities within the site.

2.6 The technical EIA studies have been undertaken in accordance with relevant guides and procedures. The majority of this guidance is specific to the various EIA key issues and is therefore referenced within the individual assessment chapters.

2.7 The majority of assessments involved consultations with statutory and non-statutory bodies, desk-based research, site inspections and surveys, impact prediction and input of mitigation to the design, where appropriate.

2.8 The content of the ES is based on the fullest assessment that could be made, given the information available at the time of writing. The main objective of the ES is to present a clear, reasoned description of the beneficial and adverse impacts of the Development.

Planning Policy

2.9 Each ES chapter has its own section on relevant policy where appropriate. A detailed Supporting Planning Statement has been prepared as a separate document by Turley. This forms part of the planning application package.

Assessment of Impacts

2.10 Each key EIA topic set out in **Table 1.2** in Chapter 1 has been given a separate chapter in the ES. This section sets out the way in which the assessment of impacts for each of the technical studies is presented within this document. Each of these technical chapters has been generally constructed as set out below. The EIA assesses both the construction (including demolition) and operational phases of the Development.

2.11 The exception to this is the Construction Methodology and Programme chapter (Chapter 6). This sets out the general approach to construction and project programme which has been used to inform specific assessment, as relevant, within each technical chapter.

2.12 A set of Parameter Plans are submitted with the planning application for formal approval and are included in ES Volume 2 at **Appendix 1.2**. The Development which has been assessed is described in full in Chapter 4. The Parameter Plans are provided to establish the minimum and maximum parameters of the proposed development to allow an EIA to be carried out in an accurate and robust manner.

2.13 In order to ensure a robust approach to the assessment of impacts, it is necessary to assess what is often termed the 'worst case' scenario of environmental effects. This most often equates to maximum development parameters. **Table 2.2** below summarises the development parameters which have been assessed in respect of the different technical chapters included in this ES. Further detail in relation to the impacts assessed arising from the construction phases of the Development are set out in Chapter 6 of this ES.

Table 2.2: Approach to Assessing 'Worst Case' Impacts

EIA Topic	Summary of Worst Case Scenario Assessed
Socio-Economic Impact Assessment	• Maximum residential development in terms of the impact on local services and amenities (i.e. primary health care and education provision). • Minimum net employment generation in terms of job creation arising from demolition, construction and operational phases.
Landscape & Visual Impact Assessment	• Maximum building envelopes, also including worst case impacts on key views and assets within the defined area of study.
Traffic and Transportation	• Maximum traffic generating assessed for operational phase. All construction and demolition traffic considered for demolition and construction phase.
Noise	
Air Quality	
Ground Conditions	• Maximum floorspace/footprint and maximum depth of below-ground disturbance assessed.
Water Resources	
Ecology	• Maximum floorspace/footprint assessed.

Structure of Environmental Statement Chapters

2.14 Each ES chapter will follow the headings set out below to ensure the final document is transparent, consistent and accessible.

- Introduction;
- Planning Policy Context;
- Assessment Methodology and Significance Criteria;
- Baseline Conditions;
- Predicted Significant Effects;
- Mitigation Measures;
- Cumulative Effects;
- Residual Effects; and
- Summary.

2.15 Each chapter sub-heading is explained in further detail below.

Introduction

2.16 This section introduces the assessment discipline and explains its purpose in the context of the Development and ES.

Planning Policy Context

2.17 This section sets out a summary of national and local policies of relevance to the environmental discipline and assessment. Where applicable, relevant legislation will also be summarised.

Assessment Methodology and Significance Criteria

2.18 This section provides an explanation of methods used in undertaking the technical study with reference to published standards, guidelines and best practice. Where appropriate, further information of methodology will be produced as a technical appendix.

2.19 The application of significance criteria used by each respective technical consultant is discussed within this section. Generic Significance criteria are identified in **Tables 2.3 to 2.5** below.

2.20 Any difficulties (technical deficiencies or lack of data) encountered in compiling the required information are also set out in this section.

Baseline Conditions

2.21 This section describes the baseline environmental conditions as it is currently. This is a critical part of the EIA process as it provides a measure against which potential environmental effects can be assessed.

2.22 The method used to obtain this information will be clearly identified. Baseline data has been collected in such a way that the importance of the particular subject area to be affected can be placed in its context and surroundings so that the effects of the proposed changes can be predicted.

Predicted Significant Effects

2.23 This section describes the impacts of the Development on the environment and assesses the likely significance of these impacts on the environment resulting from the demolition, construction and operational phases of Development. The evaluation will necessarily incorporate consideration of climate change where of relevance to the technical assessment area.

2.24 The assessment of impact significance has been undertaken using appropriate national and international quality standards. Where no such standards exist, the judgements that underpin the attribution of significance are described. The assessment of impact significance is determined by its **magnitude** (i.e. how far the impact deviates from the established baseline conditions) and **receptor sensitivity**.

2.25 The following factors are also of relevance:

- Whether the impact is direct or indirect;
- The value of the resource (international, national, regional and local level importance);
- The magnitude of the impact;
- The duration involved (short, medium or long-term);
- The reversibility of the effect; and
- The number and sensitivity of receptors including whether the impact occurs in isolation or is cumulative or interactive.

Prediction of Impact Magnitude and Significance

2.26 The impacts of the proposed development have been assessed, using a range of subjective and objective measures by which the significance of the impacts can be identified. Given the wide ranging types of effects being considered within each chapter, and the chapter specific policy and standards, it has not been possible or desirable to apply a consistent terminology across the chapters. Instead each chapter sets out the terminology used, together with an explanation of each term used to describe the key attributes listed as follows:

- Magnitude of impact upon the identified environmental receptor
- Sensitivity of the identified environmental receptor
- Significance of effect on the identified environmental receptor
- The level of effect considered 'significant' in EIA terms
- Methodology used for the identification of mitigation measures

2.27 An example is provided below in **Tables 2.3 – 2.5**.

Table 2.3: Methodology for Determining Impact Magnitude

Magnitude of Impact	Criteria for assessing impact
Major	Total loss or major/substantial alteration to key elements/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a "no change" situation.

Table 2.4: Methodology for Determining Sensitivity

Sensitivity	Examples of receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance.

Table 2.5: Impact Significance Matrix

	Sensitivity		
Magnitude	**High**	**Moderate**	**Low**
Major	Major Adverse/Beneficial	Major - Moderate Adverse/Beneficial	Moderate – Minor Adverse/Beneficial
Moderate	Major - Moderate Adverse/Beneficial	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor – Negligible
Negligible	Negligible	Negligible	Negligible

Mitigation Measures

2.28 One of the main aims of the EIA process is to develop mitigation measures to avoid, reduce or compensate for any significant adverse effects of a project. These measures can relate to demolition, site construction or the completed development. This section of the ES chapter describes the measures that would be implemented to avoid or ameliorate potential adverse impacts and enhance the potential beneficial impacts of the development.

2.29 In many cases, mitigation measures are inherent within the Development (either through design or operation) whereby potentially significant adverse impacts are avoided, although not all impacts can be avoided and there are some measures proposed to reduce or compensate for these.

2.30 Any adverse impact has been considered for mitigation and specific mitigation measures put forward, where practicable. Mitigation measures considered include modification of the project, compensation and the provision of alternative solutions, as well as pollution control where appropriate.

2.31 The extent of the mitigation measures and how these will be effective is identified. Where the effectiveness is uncertain or depends upon assumptions about operating procedures, data is provided to justify the acceptance of these assumptions.

2.32 Details of when and how the mitigation measures will be carried out are given. When uncertainty of impact magnitude and/or effectiveness of mitigation over time exist, monitoring programmes are proposed to enable subsequent adjustment of mitigation measures, as necessary.

2.33 The opportunity for enhancement measures is also considered where appropriate.

Cumulative Effects

2.34 This section considers the cumulative impacts and the interaction of effects.

2.35 Cumulative impacts are those that arise from incremental changes caused by other past, present or reasonably foreseeable actions together with the project.

2.36 Interactive effects are the reactions between impacts, whether between impacts of just one project or between the impacts of other projects in the area.

2.37 The EIA assesses the effects of the Development cumulatively with other committed developments (i.e. those that have already begun or constructed or those that have not been commenced but have an extant planning permission), where there are likely to be significant effects. For completeness, for certain technical chapters within this ES, regard has also been had to certain other planned (but not committed) developments in the area.

2.38 Two types of cumulative effects are assessed:

- Type 1 Effects: The combination of individual effects (for example noise, dust and visual effects) from a development on a particular receptor; and

- Type 2 Effects: Effects from several developments, which individually might be insignificant, but when considered together could create a significant cumulative effect.

2.39 Staffordshire Moorlands District Council have identified one 'committed development' to be considered within this assessment. The details of this development are as follows:

Table 2.6: Committed Developments to be considered

Committed Development	Key Development Components	Site Area (Hectares)	Number of residential units
Former Indesit Works Grindley Lane, Blythe Bridge	Change of use from B2 Use Class (General Industrial) to B1, B2 and B8 Use Class.	Unknown (a maximum of 71,918 square metres of B1(c)/B2/B8 + a maximum of 8,742 square metres of office use (B1))	n/a

2.40 The majority of the technical assessments consider a scenario whereby the Development is implemented against the baseline (i.e. in the absence of any committed developments). This allows an assessment of the impact of the Development on the existing baseline position. The technical assessments then consider the impact of the development combined with the 'committed development' as outlined above. This committed development has been considered only in relation to the combined impact on Highways.

Residual Effects

2.41 This section considers the residual impacts on the environment once the proposed mitigation measures have been implemented.

2.42 Each of the sections conclude with a brief summary outlining the potential impacts, proposed mitigation measures and residual impacts of the Development and where relevant includes an overall summary in tabular form.

Table 2.7: Residual Impact Table

	Description	Pre-mitigation Significance	Post-Mitigation Significance
Construction (including demolition)			
Operational			

Summary

2.43 A summary outlining the main conclusions of the assessment undertaken is provided. This contains a brief description of the findings and an account of the main mitigation measures that shall be undertaken as part of the Development to offset any adverse effects.

References

2.44 References for all documents referred to in each chapter are provided within the main text, as footnotes to that chapter or as a list of key references at the end of the chapter.

Abbreviations/Glossary

2.45 A list of abbreviations used within the chapters is set out where necessary as a glossary to the respective chapter to facilitate the understanding of the ES.

Figures

2.46 Figures referenced within each chapter are provided within the chapter or at the end of Volume 1 of the ES.

Technical Appendices

2.47 Chapters which draw on a large body of evidence are accompanied by technical appendices which include such evidence.

Limitations and Assumptions

2.48 A number of assumptions have been made in the preparation of this ES. These include reliance on data which is in the public domain, baseline conditions as existing at the time of assessments, and reasonable assumptions made with respect to the construction programme and phasing as discussed in Chapter 6 of this ES. Specific limitations and assumptions are detailed in the relevant technical chapters of this ES.

Issues Scoped out of the Environmental Impact Assessment

2.49 The following issues have been scoped out of the EIA:

- Archaeology and Cultural Heritage;
- Microclimate and Wind;
- Light Spillage and Solar Glare;
- Telecommunications; and
- Sunlight, Daylight and Overshadowing

2.50 Details of the reasoning of why these issues have been scoped out were set out in the EIA Scoping Report included at **Appendix 1.3** of Volume 2 of the ES.