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Blythe Business Park
Environmental Impact Assessment (EIA) Scoping Report

Deloitte Real Estate / January 2014

Contents

1 Introduction

Introduction

1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared by Deloitte LLP ("Deloitte") on behalf of Scentarea Limited (the "Applicant") in respect of a proposed development at Blythe Business Park, Cresswell (the "Site"). The Applicant intends to submit an outline planning application to Staffordshire Moorland District Council ("SMDC" / the "Council") during the first part of 2014.

1.2 The "Development" relates to the proposed partial site clearance and (re)development of the Site to provide up to 40,000 sq. metres of employment space (Use Classes B1, B2 and B8), up to 210 residential units and up to 250 sq. metres of ancillary uses to include a community centre and a small village shop (the "Development"). The term "Development" used within this report generally refers to the site clearance, earthworks, all stages of construction, and the operation of the Development.

1.3 This Scoping Report is submitted in order to assist the Local Planning Authority (LPA) with the adoption of a Scoping Opinion under Regulation 13 of the Town and Country Planning (EIA) Regulations 2011 (the "EIA Regulations").

1.4 As required by Regulation 13, paragraph 2, the remainder of this report provides a brief description of the nature and purpose of the Development and of its possible effects on the environment, together with a plan sufficient to identify the land, which is included at **Appendix 1**.

EIA Requirements

1.5 The EIA process is the mechanism by which development proposals are appraised in terms of environmental and socio-economic criteria, in addition to engineering and technical considerations. It defines the context of the Development and examines the issues considered pertinent.

1.6 The purpose of the EIA is to establish the nature of a development and its environmental context, during both its construction and operational phases, so as to identify likely significant effects on the environment that may arise. This is achieved by comparing the existing situation (baseline) with the situation during construction and once the proposals are in place.

1.7 The EIA Regulations require that any proposed development falling within the description of a Schedule 2 Development within the meaning of the EIA Regulations will be subject to an EIA where such development is likely to have 'significant' effects on the environment by virtue of such factors as its nature, size or location [Regulation 2(b)].

1.8 The Development falls under the category of "Urban Development Projects" [Schedule 2, 10, (b)] as described in the EIA Regulations. The applicable threshold above which EIA is more likely to be required is 0.5 hectare (ha). The indicative thresholds and criteria set out in the Regulations state that:

"In addition to the physical scale of such developments, consideration should be given to the potential increase in traffic, emissions and noise. EIA is unlikely to be required for the redevelopment of land unless the new development is on a significantly greater scale than the

previous use, or the types of impact are of a markedly different nature or there is a high level of contamination".

1.9 In relation to Urban Development Projects, further indicative thresholds and criteria to assess whether an EIA is likely to be required are set out at paragraphs A18 and A19 of Annex A to Circular 2/99 'Environmental Impact Assessment'. Paragraph A19 is similar to that set out in the Regulations as described above. Paragraph A19 goes on to state:

"A19. Development proposed for sites which have not previously been intensively developed are more likely to require EIA if:

- the site area of the scheme is more than 5 hectares; or

- it would provide a total of more than 10,000 m2 of new commercial floorspace; or

- the development would have significant urbanising effects in a previously non-urbanised area (e.g. a new development of more than 1,000 dwellings)."

1.10 Paragraph A17 of the Circular provides guidance on industrial estates. This states that in relation to such development:

"A17. EIA is more likely to be required if the site area of the new development is more than 20 hectares. In determining whether significant effects are likely, particular consideration should be given to the potential increase in traffic, emissions and noise."

1.11 In this case, the Development is approximately 14.6 hectares. Part of the Site comprises previously development land ("PDL") although a large proportion of the Site has not been intensively developed, being utilised for agricultural purposes. It is understood that parts of the Site have been affected by ground contamination. The Development is on a significantly greater scale than the current use of the Site and the types of impacts that would be created would be markedly different in nature. On this basis, the Applicant intends to undertake an EIA and prepare an Environmental Statement (ES) to accompany the outline planning application.

Purpose of the Scoping Report

1.12 The process of identifying any likely significant effects on the environment to be addressed by the EIA is termed 'Scoping'. The results of this process are presented as a Scoping Report.

1.13 Regulation 13 of the EIA Regulations sets out the requirements for obtaining a Scoping Opinion from the relevant Local Planning Authority.

1.14 This Scoping Report sets out the proposed framework of the Environmental Statement and the topic areas and information that will be contained within the document. It is issued to the Council as Local Planning Authority for its Scoping Opinion following circulation of the document to statutory consultees and other organisations who will be invited to express their views on the proposed scope of the EIA, or suggest additional issues which may be considered to be of significance.

1.15 The Local Planning Authority is required to respond to a formal request for a Scoping Opinion within five weeks of registering receipt.

The EIA Team

1.16 The EIA team as set out in **Table 1** will be co-ordinated and led by Deloitte LLP on behalf of the Applicant.

1.17 Waste, sustainability and climate change are issues that are an integral part of the design process and will also be considered throughout the EIA, intrinsically addressed within each of the technical ES chapters as appropriate. Further standalone reports explaining the approach to waste management and sustainability will also accompany the outline planning application.

Table 1: EIA Technical Team

Topic	Assessment Carried Out By
Landscape and Visual Impact	EDP
Ecology	Penny Anderson
Ground Conditions	Wardell Armstrong
Water Resources (including Flood Risk and Drainage)	SKM Enviros
Traffic and Transportation	Motion
Air Quality	SKM Enviros
Noise and Vibration	SKM Enviros
Socio-Economic Impact	Deloitte LLP

1.18 The remainder of this report is structured as follows:

- Section 2 provides a site description and outlines the nature of the proposals;
- Section 3 provides the scope and structure of the Environmental Statement (ES) which will set out the findings of the EIA, and details those to be consulted;
- Section 4 provides details of the proposed EIA methodology to be used in assessing the scheme;
- Section 5 sets out the key environmental and socio-economic issues that will be addressed by the EIA; and
- Section 6 outlines the issues to be scoped out of the EIA.

2 Site Description and Development Proposals

Site Context

2.1 The Site is located in Cresswell approximately 1.5 kilometres south east of Blythe Bridge and approximately 12 kilometres south east of Stoke-on-Trent town centre. The Site lies adjacent to Blythe Business Park ("BBP"), which accommodates a range of office, industrial and distribution premises. BBP comprises around 36,500 m^2 of existing employment space accommodating in excess of 50 companies and employing circa 300 people. This Site is also adjacent to residential properties within Cresswell. The Site is approximately one kilometre from Uttoxeter Road which connects to the A50 (and M6 motorway) and is circa 2.5 kilometres from Blythe Bridge railway station which is on the Derby to Crewe line.

Site Description

2.2 The Site is approximately 14.6 hectares and comprises two main parcels of land, located to the east and west of the existing Blythe Business Park in Cresswell. The western land parcel consists of unused agricultural land; the eastern land parcel is partly previously developed land, and partly agricultural land.

2.3 The Site has a relatively flat topography. The area to the East of BBP is relatively flat, gently sloping upwards to the south. The area to the west is also of a relatively flat gradient.

2.4 The River Blithe forms the north-western boundary of the Site and a small tributary also flows between the two land parcels comprising the Site.

Development Proposals

2.5 The applicant intends to submit an outline planning application (with all Matters Reserved save for Access) for the following main components of development:

- Up to a maximum of 40,000 sq. metres of employment use (B1, B2 and B8 uses);
- Up to 210 residential units; and
- Up to 250 sq. metres of ancillary uses (to include a community centre and a small village shop).

2.6 The primary vehicle access to the Site will be on the western boundary, off Sandon Road.

2.7 The currently anticipated red line boundary for the Development is illustrated on the Plan included at **Appendix 1**. The precise red line boundary could be subject to further refinement as the proposals progress towards design freeze and in the context of further detailed baseline work and other analysis completed as part of the EIA process. It is anticipated however that any modifications to the red line boundary would only likely be minimal and not increase the overall size of the Site / Development. As such, any change would not materially affect the content of this Scoping Report.

Parameter Plans

2.8 Parameter Plans will be used to set the minimum and maximum extent of the Development, covering matters including the broad location, nature and amount of built development and open space across the site, access and building heights.

3 Scope, Structure and Consultation

Scope

3.1 A scoping exercise has been carried out in order to determine the likely significant effects on the environment that may arise as a result of the Development. This process has enabled the team to determine which technical disciplines are pertinent to the proposals and the scope of assessment required, allowing any likely significant effects on the environment to be addressed as part of the EIA process.

3.2 The baseline position for each technical chapter is the Site in its existing condition taking into account any extant planning permissions within the Site or its immediate vicinity.

3.3 The scoping process has taken account of the proposed quantum and location of development, phasing, relevant policy and standards, initial appraisals, desk top assessment, knowledge of the Site, and the professional experience of the project team.

3.4 The information presented in the ES will be provided in accordance with Schedule 4 of the EIA Regulations and will include:

- a description of the Development;
- an outline of the main alternatives considered;
- a description of the aspects of the environment likely to be significantly affected by the Development;
- a description of the likely significant effects of the Development on the environment;
- a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment;
- an indication of any difficulties or limitations encountered by the Applicant in compiling the required information and any assumptions made in assessments; and
- a Non-Technical Summary.

3.5 The introductory chapters of the ES will provide the following information:

- an introduction to the ES in a legislative and site specific context;
- description of the Site and the Development;
- alternatives considered (e.g. location, design, construction phasing) and project design evolution;
- EIA methodology;
- Anticipated construction methodology, programme and phasing;
- details of pre-application consultation;

- ES structure; and
- details of the EIA project team.

3.6 The geographical coverage of the EIA will be determined by a number of factors including:

- the physical extent of work;
- the nature of the baseline environment, including the location of sensitive receptors;
- the distance over which effects will be significant; and
- the presence and type of "pathways" along which impacts may be spread.

Cumulative Effects Assessment

3.7 An assessment of the cumulative effect of the Development will be included within the ES. Relevant "Committed Developments"[1] (should any exist at the time of the assessment) will be agreed with the Local Planning Authority. Each chapter will provide an assessment of cumulative effects.

3.8 It is considered that any impacts associated with the Development itself will be mainly localised and that they can be managed through appropriate mitigation, for example through devising and implementing an appropriate Construction Environmental Management Plan.

Consultation

3.9 We consider that the key consultees are likely to include the following:

- The Environment Agency
- Staffordshire County Council (Highways)
- Staffordshire Police
- Natural England
- Highways Agency
- Staffordshire Moorlands District Council (various departments)

3.10 Additional stakeholders / consultees are also identified within the commentary on the various ES technical chapters included at Section 5 of this Scoping Report. Appropriate other stakeholders that the local planning authority nominates will also be consulted.

Community Engagement

3.11 A public consultation event is being held on 9th and 10th January 2014 to which Local Residents, the Parish Council and Local Members have been invited.

[1] "Committee Developments" comprise major schemes with extant planning permission which are yet to start or which are under construction within the general vicinity of the Site at the time of assessment.

3.12 This event will give members of the public the opportunity to express their views and contribute ideas to the Development prior to submission. Comments received will be considered as part of the further evolution and refinement of proposals.

3.13 A Statement of Community Involvement (SCI) will be submitted with the application and will provide further detail on the consultation undertaken.

4 EIA Methodology

4.1 The EIA will assess both the construction and operational phases of the Development.

4.2 The ES is anticipated to comprise three volumes, the first of which will set out the findings with respect to each of the environmental disciplines that have been examined as part of the EIA. Volume 2 will include the supporting documents and technical appendices relating to the chapters. Volume 3 will comprise the Transport Assessment, Travel Plan and their associated appendices. A Non-Technical Summary will be produced and will form a standalone document.

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

- Introduction;
- Planning Policy and Legislative Context;
- Assessment Methodology and Significance Criteria;
- Assumptions and Limitations;
- Baseline Conditions;
- Identification and Evaluation of Key Impacts;
- Mitigation Measures;
- Residual Effects;
- Cumulative Effects; and
- Summary.

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

Introduction

4.5 This section will introduce the assessment discipline and the purpose for which it is being undertaken.

Policy Context

4.6 This section will include a summary of National and Local policies of relevance to the environmental discipline and assessment. Where applicable, relevant legislation and best practise guidance will also be summarised.

Assessment Methodology and Significance Criteria

4.7 This section will provide an explanation of methods used in undertaking the technical study with reference to published standards, guidelines and best practice. The application of significance criteria will also be discussed.

Assumptions and Limitations

4.8 This sets out any assumptions made in the assessment including potential limitations to the information used, and any difficulties encountered in compiling the required information.

Baseline Conditions

4.9 This will include a description of the environment as it is currently and as it is expected to change if the project were not to proceed (i.e. the 'do nothing scenario'). The method used to obtain this information will be clearly identified. Baseline data will be 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.

Identification and Evaluation of Key Impacts

4.10 This section will identify the likely significant impacts on the environment resulting from the construction and operational phases of development.

4.11 The significance of an environmental impact is determined by a combination of its magnitude and the sensitivity of the environmental receptor. Impacts can be positive or negative and both will be tested in the ES. The criteria to be used in carrying out the assessment process are detailed below.

4.12 In some instances certain assessments apply their own distinct methodology in accordance with best practice or will be based on modified / bespoke criteria to those listed below to best reflect particular technical requirements. This will be clearly set out in individual chapters where this is the case.

4.13 Given the outline and parameters-based nature of the planning application to be prepared, for the purposes of identifying and assessing impacts, consideration will be given to what is often termed the 'worst case' development scenario in terms of impacts. This will often (but not always) equate to the maximum amount of development able to be provided within the context of the Parameter Plans to be submitted as part of the planning application. The proposed scenarios which will be tested within each of the technical disciplines to be covered by the ES are summarised in **Table 4.1**.

Table 4.1: 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 and Vibration	
Dust and Air Quality	
Ground Conditions	• Maximum floorspace/footprint and maximum depth of below-ground disturbance assessed.
Water Resources	
Ecology	• Maximum floorspace/footprint assessed.

Prediction of Impact Magnitude

4.14 The methodology for determining the scale or magnitude of impact is set out below in **Table 4.2**:

Table 4.2: Methodology for Assessing Magnitude

Magnitude of Impact	Criteria for Assessing Impact
Major	Total loss of 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.

Identification of Receptor Sensitivity

4.15 The sensitivity of a receptor is based on the relative importance of the receptor using the scale set out below in **Table 4.3**:

Table 4.3: 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 of local importance.

Assessment of Effect Significance

4.16 Effect significance will be calculated using the matrix in **Table 4.4**. This illustrates the interaction between impact magnitude and receptor sensitivity.

Table 4.4: Effect Significance Matrix

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

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

Mitigation Measures

4.17 Any adverse impacts will be considered for mitigation and specific mitigation measures put forward, where practicable. Mitigation measures considered may include modification of the project, compensation, and the provision of alternative solutions as well as pollution control, where appropriate. The extent of the mitigation measures and how these will be effective will be discussed. Where the effectiveness is uncertain or depends upon assumptions about operating procedures, data will, where available, be introduced to justify the acceptance of these assumptions.

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

4.19 The opportunity for enhancement measures will also be considered where appropriate.

Cumulative Effects

4.20 The EIA will assess the effects of the Development cumulatively with other developments where there are likely to be significant effects on the environment.

4.21 Two types of cumulative effects will be 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.

Residual Effects

4.22 The residual effects, i.e. the effects of the Development assuming implementation of proposed mitigation, will be determined. The residual effects represent the overall likely significant effect of the Development on the environment having taken account of practicable/available mitigation measures.

5 Environmental Statement Chapters

5.1 Under each section topic, a summary of the content of the section, the methodology and scope of assessment is given. Where relevant, the assumptions of the assessment are described. Current relevant legislation or recognised guidance for individual assessments will be adhered to as necessary.

Landscape and Visual Impact Assessment

Introduction

5.2 The Landscape and Visual Impact Assessment (LVIA) chapter of the Environmental Statement (ES) will evaluate the potential effects of the Development on the landscape and visual resources within a defined study area. In the context of physical changes to the landscape, the assessment will also consider the effects on the landscape fabric and trees using the findings of an Arboricultural Assessment of the Site. The assessment will also consider any significant effects of the Development both during construction and when completed.

5.3 The assessment will consider in broad terms, the potential effects of the Development on the landscape in terms of both the character and fabric of the landscape, and the views available within, from and towards it from a range of receptors. Cumulative effects, arising from the effect of the proposal in conjunction with other developments, will also be considered.

Baseline Conditions

5.4 An initial landscape report for the Site was prepared by EDP in August 2012, which was informed by a site visit and a series of photographic viewpoints. The report outlines the baseline landscape and visual character of the Site and its immediate surrounding area, which the LVIA will build upon. An additional site visit will be made and existing photographs and plans revised as necessary. The following paragraphs set out existing baseline conditions based on the findings of the initial landscape report.

Landscape Character

5.5 The Site is located within the 'Settled Plateau Farmlands' Landscape Character Type (LCT) as described within the Staffordshire Landscape Character Assessment. Its key characteristics are of a mixed agricultural landscape with a semi-regular pattern of hedged fields.

5.6 The local landscape character of the two parcels of land comprising the Site share some characteristics of the 'Settled Plateau Farmlands' LCT but are differentiated by their location adjacent to the light industrial estate, mainline railway and A50 trunk road which bring urbanising influences to their landscape character.

Designations

5.7 With regards to landscape designations, the Site is not within, or in close proximity to, any landscapes designated at a national level, such as AONBs or National Parks. In addition, the Site does not lie near to a Registered Park and Garden or Scheduled Monument.

5.8 The Site does fall within a Special Landscape Area (SLA) which covers a wide area of Staffordshire Moorlands district outside of the Peak District National Park. Within the emerging Staffordshire Moorlands Core Strategy it is proposed that the SLA designation is replaced in favour of a landscape character approach. However, the Core Strategy is yet to be adopted and is currently undergoing the process of Examination.

Approach

5.9 The methodology to be used for conducting the Landscape and Visual Impact Assessment is based around the guidance within the following best practice documents:

- Guidelines for Landscape and Visual Impact Assessment – Third Edition (LI/IEMA, 2013); and
- Landscape Character Assessment – Guidance for England and Scotland (Swanwick & LUC 2002) produced on behalf of the Countryside Agency and Scottish Natural Heritage;

5.10 The nature of landscape and visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the assessment would be based on the best practice guidance listed above, information and data analysis techniques; and would use quantifiable factors wherever possible and subjective professional judgement where necessary.

5.11 Other reference documents used to understand the baseline position in landscape terms will include the following:

- National Character Area descriptions;
- The Staffordshire Landscape Character Assessment – Planning for Landscape Change 2001; and
- Landscape and Settlement Character Assessment of Staffordshire Moorlands produced by Wardell Armstrong in 2008 as part of the evidence base of the emerging Core Strategy.

5.12 The landscape and visual assessment will be carried out in three stages:

1. **Baseline** (recording the existing situation – factual description; review of landscape character documentation; anticipated change within the landscape; review of relevant planning policies and designations; review of visual amenity of the study area and general visibility of the site). A computer generated Zone of Theoretical Visibility (ZTV) map will be produced using GIS software in order to show the broad area of visibility of the proposed scheme. This will be used to select a series of locations around the site from where photo viewpoints will be collected and assessed. A ZTV represents a bare model showing the potential area over which a proposed scheme would be visible. It does not take into account the screening effect of vegetation and built structures, which need to be elucidated during the site visit.

2. **Project Description and Design** (describes the development with reference to those elements likely to result in potential landscape and/or visual effects); and

3. **Assessment of Effects** (the principal section of the Chapter and will describe and evaluate the potential effects in order to determine the actual effects of the proposal on the landscape and visual resource). Potential effects will be divided into two broad categories: effects on the landscape resource; and effects on the visual amenity. These are assessed through the combination of an assessment of a number of representative viewpoints, to be agreed with the Council, desk based research and fieldwork.

5.13 Although the scheme is a combined application for both business and residential land use, due to their different locations, landscape character and visual characteristics, it is proposed that the assessment draws out the different effects which would arise from the development of each parcel of land. The approach would therefore be a combined assessment but with the effects separated and differentiated where necessary.

5.14 The study area for the landscape assessment will extend to 5km radius around the Site within which it is considered that any significant effects would be confined. Due to the relatively low height and extent of the proposals, and the presence of the railway and A50 trunk road to the north, it is expected that the Site would be visually well-contained and that the zone of actual visibility would be relatively small.

5.15 As noted, the photographic viewpoints would be selected, based on a Zone of Theoretical Visibility (ZTV) model, to illustrate indicative views of the site from a range of representative locations and receptors. The viewpoint locations and general methodology would be agreed in consultation with the Council.

5.16 Provisionally it is proposed use the potential viewpoints (PVP) outlined in the table below:

PVP no.	Location	Grid ref	Distance and direction to site	Reason for selection
Near Distance Views				
1	Public footpath near 'Countryview' and 'The Bungalow' residential properties	SJ 97510 38780	Approx. 300m to Northeast	Representative of residential views from access drive approach only and views from public footpath to south of site
2	Public footpath in front of Leese House Farm	SJ 97770 38508	Approx. 300m to North	Representative of views from properties (partially restricted) and footpath on raised ground to south of site
Medium Distance Views				
3	Public footpath near West Paynsley	SJ 98286 38114	Approx. 650m to northwest	Representative of views from public footpath to southeast
5	Public footpath between Cresswell Old Lane and Upper Newton Farm	SJ 98510 39234	Approx. 400m to the south	Representative of views from public footpath to the northeast of the site
6	Public footpath adjacent to Lower Newton Farm	SJ 98678 38878	Approx. 450m to the southwest.	Representative of views from public footpath and residential property
Long Distance Views				
4	Public footpath above of Draycott-in-the Moors	SJ 98679 40372	Approx. 1.5km to the south	Representative of views from footpath on raised ground to the north
7	Sandon Road adjacent to 'The Limes'	SJ 96679 37868	Approx. 1.5km to the northeast	Representative of views from residential properties along public road on raised ground to the south
8	Long distance footpath adjacent to 'New Buildings'	SJ 96566 36499	Approx. 2.5km to the northeast	Representative of views from the long distance footpath on high ground to the south

Anticipated Impacts and Scope of Assessment

5.17 In accordance with best practice guidance, the activities likely to cause significant effects will be identified, the resultant changes to the landscape and visual baseline described and the effect on landscape and visual resources assessed. Effects will be described and evaluated during construction, at Year 1 (completion of construction activities) and Year 15 (following maturation of the landscape proposals).

5.18 Effects will be assessed in the context of the baseline conditions within the zone of influence during the lifetime of the project. The assessment will consider the likelihood that a change/activity will occur as

predicted, and also the degree of confidence in the assessment of the effect on the identified resource.

5.19 The following table provides a summary of the scoping process, identifying the landscape and visual effects to be considered as part of the assessment, during both the construction and completed development phases.

Receptor	Impacts
Effects on landscape features	Construction impacts arising from the potential loss of tree and other vegetation within areas proposed for development.
Change to landscape character	Construction and operation impacts on landscape fabric and the character of the Site through changes in land use, including the change if use from agricultural to residential and employment together with associated construction of new buildings and infrastructure, and the introduction of new features in the landscape.
Indirect effects on landscape character	Construction and operation impacts arising where inter-visibility results in changes which affect the character and qualities of adjacent landscape character areas.
Effects on visual receptors	Construction and operation impacts on visual receptors to include, inter alia, nearby occupiers such as those in residential properties, people using recreational facilities and users of the local public right of way and highway networks (the scope of visual receptors and the effects on them will be identified fully tested within the visual assessment of the ES).

Mitigation

5.20 The assessment will describe and evaluate mitigation measures required to prevent, reduce or offset any significant adverse effects. In term of the outline landscape and visual strategy, including strategic landscape and open space areas, this will form an integral part of the Development. In other words, the Development will be planned to effectively include a number of inherent landscape measures which seek to minimise landscape and visual impacts.

5.21 Any mitigation measures proposed will therefore be in addition to those included as part of the outline landscape and visual strategy, designed specifically for the mitigation of remaining adverse effects that have been identified with respect to landscape resources, landscape character and visual amenity.

Ecology

Introduction

5.22 The Ecology Chapter of the ES will assess the likely significant effects of the Development with respect to ecology. It describes the methods used to assess the effects, the baseline ecological conditions at the Site and in the surrounding area, and the mitigation measures required to prevent, reduce or offset any significant negative effects. Finally, it evaluates the likely residual effects after these mitigation measures have been adopted.

Baseline Conditions

5.23 An Extended Phase 1 Habitat Survey (JNCC 2010[2]) was undertaken in May 2012 to establish the types and distribution of habitats and plant communities on the site, and to assess its potential to support noteworthy and/or protected species. A wider area was also surveyed in addition to the Site to assess the context of the Site and associated protected species issues. This also allows for an assessment of the potential for compensation measures (if needed) adjacent to the Site.

5.24 The initial field survey was supplemented with a desk based study to obtain details of statutory and non-statutory sites and noteworthy/protected species within a 2km search radius. Sources of data consulted comprised internet based sources (e.g. NBN Gateway and MAGIC), the Staffordshire Ecological Record Centre and other relevant local groups e.g. badger group.

5.25 Based on the initial field survey results and desk based studies, the following detailed species surveys were undertaken in 2013.

- Great crested newt;
- Otter;
- Assessment for bats;
    - roosting potential
    - foraging function of the site
- Water vole;
- Breeding birds; and
- Badger.

5.26 The detailed species surveys confirm that the site and surrounding area supports foraging/commuting otters, badger setts, foraging and roosting bats, breeding birds and great crested newt. Key habitats include the River Blithe, hedgerows, scrub, mature trees, amenity grassland and arable fields.

5.27 All surveys were conducted in accordance with the relevant best practice guidelines and there were no significant survey limitations.

Approach

5.28 This Ecological Impact Assessment (EcIA) is based on the frameworks presented in the Chartered Institute for Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment (IEEM 2006[3]) (hereafter referred to as 'the IEEM Guidelines'). The general approach involves the following:

- Identifying the baseline conditions on site and within the zone of influence of the proposals through a series of desk based assessments and surveys.
- Identifying ecological features present, and determining their biodiversity[4] value.
- Considering any change in the baseline condition between the time of the assessment and the likely commencement of the development, to identify any future baseline issues.
- Assessing how the Development is likely to affect the ecological features identified, both during the construction and operational phases of the proposed development.

2 JNCC, 2010. Handbook for Phase 1 Habitat Survey - a technique for environmental audit. JNCC.

3 Institute of Ecology and Environmental Management, 2006. Guidelines for Ecological Impact Assessment. IEEM.

4 There are no earth heritage issues associated with the proposals, so this assessment solely addresses biodiversity issues.

- Evaluating the impact of the effect on each ecological feature, without mitigation or compensation measures.
- Presenting appropriate mitigation and compensation measures for each feature.
- Evaluating the impact of the effect of development on each ecological feature with mitigation or compensation measures.
- Identifying any residual impact that cannot be adequately mitigated or compensated for by the proposed measures.
- Assessing the overall significance of ecological effects arising from the Development.

Anticipated Impacts and Scope of Assessment

5.29 Potential ecological effects of the Development will be largely focused on the Site itself, but some will extend to its immediate surroundings. The following table provides a summary of the scoping process, identifying the ecological receptors and impacts to be considered as part of the assessment, during both the construction and completed development phases.

Receptor	Impacts
Effects on statutory and non-statutory nature conservation sites	Impacts on these are considered unlikely at this given that none are present within or adjacent to the Site. They will however be included in the assessment.
Impacts on habitats within and adjacent to the Site (including bat roosts and bat commuting routes, River Blithe, badger commuting routes and breeding / wintering birds foraging habitats)	Construction and operational impacts, including disturbance to / loss of habitats within walking distance during the completed phase (by humans, dogs etc)
Impacts on protected and notable species within and adjacent to the Site (including badgers, bats, birds, Great Crested Newts and otters)	Construction and operational impacts, including disturbance to species within the Site, within walking distance of the Site during the completed phase, pollution to the hydrological systems during the construction and operation phases, and disturbance to populations within hearing range and dust receiving range during the construction phase.

Mitigation

5.30 Where any habitats of nature conservation value or protected species may be affected by the Development, suitable mitigation measures will be implemented where necessary to off-set or reduce such impacts. In addition, enhancements will be put forward where appropriate in order to further the aims of the national and local Biodiversity Action Plans benefit priority habitats and species.

5.31 Any habitat creation for the benefit of nature conservation will be subject to periodic monitoring and management as necessary. This will ensure that the ecological gains and mitigation strategy set in place can be managed appropriately.

5.32 Based upon the findings of the Extended Phase 1 Habitat Survey and subsequent protected species surveys, the following mitigation/compensation measures are considered to be potentially required and will be expanded on in the ES:

- Retention of key habitats within the layout of the Development;
- Scheduling of works to minimise impacts on protected species;

- Preparation of prescriptive working method statements;
- Potential replacement bat roost;
- Potential amendment of site layout to retain badger sett/s, or relocation of badger sett under licence;
- Measures to minimise indirect disturbance to the river, such as a planted buffer and sensitively designed lighting scheme;
- Strategic fencing design to minimise risk of road mortalities; and
- Native planting to enhance habitats for foraging and commuting wildlife, to include bats, birds and badgers.

Ground Conditions

Introduction

5.33 The Ground Conditions chapter of the ES will identify and assess the potential impacts with land quality in the context of the construction and operation of the Development. The current regulatory framework for contaminated land is outlined by Part IIA of the Environmental Protection Act (EPA) 1990. This is implemented by the Contaminated Land (England) Regulations 2006 (which consolidate the provisions of the Contaminated Land (England) Regulations 2000 and subsequent amendments), as amended by the Contaminated Land (England) (Amendment) Regulations 2012.

Baseline Conditions

5.34 The adjacent Blythe Colours site is known to have been affected by ground contamination and Wardell Armstrong has access to numerous reports that may be of relevance and will be considered as appropriate in relation to migratory contamination (e.g. groundwater).

Approach

5.35 A Tier 1 risk assessment (desk study and site walkover) will be undertaken to establish baseline conditions at the Site. This will include the consultation of published geological and historical mapping, environmental sensitivity information, and any additional information available from Local Authority contaminated land searches. It will also consider data from the adjacent Blythe Colours site.

5.36 The baseline study will identify potential pollutant linkages in the form of a preliminary conceptual site model (CSM). An assessment of the level of risk associated with each linkage will be made. This will be used to inform future site investigations to further refine the CSM prior to remediation (mitigation). The requirement for any such future site investigation could be appropriately achieved through the imposition of planning condition(s) attached to a planning permission for the Development.

5.37 The assessment of contamination risks is based on the source-pathway-receptor concept (referred to as a significant pollutant linkage). These terms are defined as follows:

- **Source**: A substance that is in, on, or under the land and that has the potential to cause harm or to cause pollution of Controlled Waters;
- **Pathway**: A route or means by which a receptor could be, or is, exposed to or affected by a contaminant; and
- **Receptor**: In general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property or a water body.

5.38 If one of these elements is absent then there can be no significant risk. If all three are present, then the level of the risk depends upon the nature and magnitude of the contamination source, the migration / exposure pathway, and the sensitivity of the receptor.

5.39 Impacts associated with land contamination will be assessed in accordance with relevant national and local planning policy and relevant contaminated land guidance, including the over-arching framework provided in Contaminated Land Report 11 "*Model Procedures for the Management of Land Contamination*" (Environment Agency, 2004). Receptor sensitivity criteria will be determined in general accordance with CIRIA report C552 "*Contaminated Land Risk Assessment*".

5.40 The significance of an effect on a given receptor (e.g. future site users, a surface watercourse, an aquifer etc.) is a product of the sensitivity of that receptor and the potential magnitude of the effect.

5.41 Receptor sensitivity criteria have been determined in general accordance with CIRIA report C552 "*Contaminated Land Risk Assessment*" and are detailed in the table below.

Receptor Sensitivity Criteria	
High	Human health, where receptor characteristics promote the likelihood of a significant contaminant linkage (e.g. due to high levels of exposure to soil / dust and / or prolonged exposure). For example, children using residential gardens or public recreation areas, construction workers routinely exposed to soils. Controlled Waters receptors of national and / or strategic importance for the purposes of potable water supplies and / or ecosystems (e.g. Principal Aquifers, Source Protection Zones). High sensitivity ecological receptors, where the sensitivity is directly related to soil, surface water or groundwater conditions e.g. Ramsar site.
Medium	Human health risk, where receptor characteristics provide limited potential for a significant contaminant linkage. For example, workers in commercial premises. Controlled Waters receptors of local importance for the purposes of potable water supplies and / or ecosystems (e.g. Secondary (A) Aquifer). Medium sensitivity ecological receptors (e.g. non statutory local designations, such as Sites of Biological Importance) and other fauna (e.g. livestock).
Low	Human health risk, where receptor characteristics significantly minimise the likelihood of a significant contaminant linkage. For example, users of car parks. Controlled Waters receptors of low importance for the purposes of potable water supplies and / or ecosystems. Buildings or structures prone to long term damage from the chemical ground conditions.

5.42 The magnitude of an impact can vary considerably and should consider the timescale over which the impact occurs, amongst other factors. With reference to CIRIA report C552, the potential risks are considered in terms of both short term (acute) and long term (chronic) risks, and are detailed in the Table below. Nevertheless, it is considered important to exercise professional judgement at this stage of the assessment. For example, a severe chronic risk with a high probability of occurring would warrant classification as a "severe" magnitude of effects (rather than a classification of "medium", as indicated in the Table below). Therefore, the below Table will be used only as a general framework for assessing the magnitude of any identified potential adverse effects, rather than as a restrictive system.

Criteria for Magnitude of Effects	
Severe	Construction / development activities result in a short term (acute) risk to human health. Examples include soil displaying highly elevated cyanide concentrations. Short term risk of significant gross pollution of a watercourse or aquifer e.g. major spillage of oil from activities associated with the development. Of particular relevance is the potential release of Priority Substances and Priority Hazardous Substances.
Medium	Exposure to contamination (soil and / or Controlled Waters) that, by way of its characteristics and extent, may result in long term (chronic) risk to human health. Long term risk from leaching of contaminants to water resources or ecological receptors.

Criteria for Magnitude of Effects	
Mild	Exposure to contamination (soil and / or Controlled Waters) that, by way of its characteristics and extent, may result in pollution of low value water resources or ecological receptors. Soil contamination at concentrations above that which might be considered 'normal background' (e.g. presence of Made Ground, low risk historical industrial / commercial use). Concentrations are such that a potential risk to human health is unlikely. Damage / compromise to underground structures.
Minor	No significant harm to sensitive receptors, including no significant potential for adverse long term human health effects to future site users. Any non-permanent human health risks to construction workers can be fully prevented by means of personal protective equipment. Easily repairable damage to buildings, structures and services. No observable effect on the use or function of water resources.

5.43 The criteria in the above tables will be combined to determine an overall assessment criterion for each potential impact, as shown below.

Impact Assessment Matrix			
Magnitude of Effect	**Receptor Sensitivity**		
	High	**Medium**	**Low**
Severe	Substantial	Moderate - substantial	Moderate
Medium	Moderate - substantial	Moderate	Slight
Mild	Moderate	Slight	Negligible
Minor	Slight	Negligible	Negligible

5.44 Impacts identified as moderate, moderate - substantial or substantial will be considered significant for Environmental Impact Assessment purposes (i.e. mitigation required). Impacts assessed as slight will not necessarily be considered significant. Nevertheless, measures to reduce these to negligible should be considered where practically and economically feasible.

Anticipated Impacts and Scope of Assessment

5.45 The following table provides a summary of the scoping process, identifying the receptors and impacts to be considered as part of the assessment of ground condition impacts, during both the construction and completed phases. This table aims to summarise details included in the above tables setting out criteria in relation to receptor sensitivity and magnitude of effects.

Receptor	Impacts
Human Health	Construction / development Impacts on residents and other occupiers arising from the contamination of soil and / or controlled waters.
Controlled Waters	Construction / development impacts on water resources and ecological receptors such as through spillage of oil, and leaching of contaminants
Ecological receptors	
Buildings and Structures	Impacts on buildings and below ground structures associated with ground contamination.

Mitigation

5.46 The EIA will provide a preliminary appraisal of potential mitigation options associated with each pollutant linkage, based on the desk study information, which will be confirmed / amended as necessary following intrusive investigations.

5.47 Mitigation will be considered for impacts identified as moderate, moderate - major or major. Measures to address other impacts will also be considered where practically and economically feasible to do so.

5.48 Following the assessment of mitigation options, potential residual impacts will be considered. To ensure that adverse residual effects are avoided / minimised, the residual impacts assessment will be subject to re-appraisal as part of the detailed design process, following intrusive investigations.

Water Resources (Flood Risk and Drainage)

Introduction

5.49 This section identifies the potential impacts on water resources, water quality and flood risk that may occur as a result of the construction and operation of the Development. A Flood Risk Assessment (FRA) will be prepared as an appendix to the ES. This will be undertaken in accordance with the National Planning Policy Framework (NPPF) and accompanying technical guidance (PPS 25 Practice Guide, DCLG, 2009).

Baseline Conditions

5.50 The River Blithe forms the north-western boundary for both areas of the proposed new development and a small tributary also flows between the two areas along the northern boundary of one of the two plots.

5.51 A review of the Environment Agency (EA) flood map indicates that while both plots are predominantly designated as flood zone 1 (low flood probability) the eastern corner of the western plot (residential and ancillary uses) and the northern parts of the eastern plot (employment use) are situated across flood zones 2 and 3 (medium to high flood probability).

Approach

5.52 The NPPF indicates that the primary tools for managing flood risk with respect to new development should be the sequential test (as set out in Tables 1 and 2 of Technical Guidance to the NPPF) and the exception test. These tools are however framed around the EA's flood zones which indicate risks associated with tidal and fluvial sources but not the full range of flooding sources identified in the Technical Guidance to the NPPF. In addition to this, the NPPF does not provide any guidance for assessing the impact of mitigation and residual risk subsequent to development, as required within the technical guidance.

5.53 Therefore, in order to allow for the wider assessment of flood risk a more generalised assessment methodology has been developed. It should be noted that where applied to fluvial and tidal sources the results of the assessment should be cross checked against the results of the sequential and exception test.

5.54 In line with the risk based approach detailed by the EA and recommended elsewhere in industry guidance[5], the key to the classification is that the designation of significance (or risk) is based upon the consideration of:

- The sensitivity of the receptor – takes into account the nature of the development or receptor and its likely response to increased risk.
- The severity of the potential hazard – takes into account the potential nature of the flooding.

[5] Development and flood risk - guidance for the construction industry, FR/CP/102, CIRIA, 2004

- The probability of occurrence (i.e. likelihood) – takes into account both the presence of the hazard and receptor, and the integrity of the pathway.

5.55 Specific tasks that would be undertaken are as follows;

- Consultation with the Environment Agency and other relevant third parties (Severn Trent Water, Staffordshire County Council, Staffordshire Moorlands District Council) to obtain data and any other relevant information pertaining to flooding on and around the site;
- Baseline assessment involving a review of data provided by consultees, the client / project team and publically available data. The baseline assessment would also involve a site walkover to review site conditions and the nature and form of the known flood sources on and adjacent to the Site;
- Presentation of detailed flood extent / flood depth maps showing the nature of the known risks on and around the site which have the potential to constrain development;
- Input into the masterplanning / design process to ensure that the scheme layout appropriately reflects the risks posed and the potential for off-site flood impacts; and
- Preparation of a Flood Risk Assessment.

5.56 The Flood Risk Assessment will consider the adequacy of the proposals for managing runoff from the development areas, ensuring that these do not exacerbate flood risk and that they meet the likely requirements of the Environment Agency. This design process would involve the following tasks;

- Assessing the likely permissible discharge rates for the site (will almost certainly be greenfield);
- Reviewing the topography and shallow geology / soil cover at the site to determine appropriate drainage options and, based on this, develop high level conceptual strategies for each of the two plots;
- Engage in discussions with the wider design team to determine how drainage features as indicated in the conceptual strategies could be incorporated into the development layout; and
- Undertake calculation to size any storm water storage features and prepare drawing showing the outline strategy for both plots in the context of the wider development proposals.

Anticipated Impacts and Scope of Assessment

5.57 The following table provides a summary of the scoping process, identifying the receptors and impacts to be considered as part of the assessment of water resources and flood risk, during both the construction and completed phases.

Receptor	Impacts
Site Users and Properties	Impacts on residents, other occupiers and properties in the Development arising from the risk of flooding from the River Blithe and its tributary.
Surface Water / downstream property (flood risk)	Increase in hardstanding areas and the provision of a (extended) formal drainage network will change surface run-off / overland flow and pathways which could increase the risk of flooding elsewhere
Flood Plain	Impacts on the flood plain associated with works in the flood storage and conveyance for the Development

Mitigation

5.58 Typically flood risks assessed as low, or less are considered acceptable. If the assessment results in moderate or high risk this is considered to be significant (i.e. equivalent to a significant impact under the EIA regulations) and additional mitigation measures will be proposed where possible. This could include temporary and permanent measures to mitigate risks and impacts for both the construction and operational phases of the Development.

5.59 In some situations the risk assessment procedure will result in an artificially low assessment of risk. This is particularly the case in situations where consequences of very rare flooding (i.e. breach scenarios) are so extreme that any residual risk however low should not be allowed. In such instances the assessed risk should be elevated. Such decisions must always be accompanied by detailed justification.

Traffic and Transportation

Introduction

5.60 This chapter of the ES will be informed by a Transport Assessment (TA) which will consider the potential impacts and likely effects of the Development on the surrounding network and accessibility by sustainable modes of travel. The TA will form a technical appendix to the ES. A draft Travel Plan will also be produced to accompany the planning application and will outline ways in which the transport implications of the Development can be further managed.

Approach

5.61 The assessment will be undertaken through a combination of desk studies, site visits and traffic surveys. The assessment will report on the accessibility of the Site and change in vehicular flows on the local roads as a result of the proposed development.

5.62 The approach to the Transport Assessment will follow the recommendations and guidance set out in the Guidance on Transport Assessments published March 2007 by DfT. The assessment will define baseline transport conditions which will include:

- Site description, including regional and local plans;
- Information on the surrounding areas including land uses and any Development Plan allocations;
- Cycle routes, pedestrian routes and public transport provision available at and within the vicinity of the site;
- Commentary upon the local highway network, including road widths, footway widths, speed limits, street lighting provision and waiting restrictions;
- Identification of committed developments in the area;
- An analysis of road accident records on the local highway network; and
- Existing traffic conditions including vehicles using the site and flow data for the existing road network.

5.63 The transport work will assess the likely construction traffic as well as the traffic generation from the development and where necessary mitigation measures will be suggested.

5.64 The traffic considerations will feed into the noise and air quality work undertaken as part of the Environmental Statement.

5.65 The impacts of the Development will be assessed having regard to the guidance that is contained within the Institute of Environmental Assessment (IEMA) publication entitled *'Guidelines for the Environmental Assessment of Road Traffic'*. In this regard, those roads that are anticipated to experience increases in traffic of more than 30% will be subject to an evaluation of the potential effects upon the following areas:

- Severance;
- Driver delay;
- Pedestrian delay;
- Pedestrian amenity;
- Fear and intimidation;
- Accidents and Safety; and
- Hazardous Loads.

5.66 If it is established that the proposal will lead to a severe impact then potential mitigation measures will be proposed.

Anticipated Impacts and Scope of Assessment

5.67 The following table provides a summary of the scoping process, identifying the receptors and impacts to be considered as part of the assessment of transport and traffic issues, during both the construction and completed development phases.

Receptor	Impacts
Local Highways Network	Construction and operational phase impacts on traffic flows, junction capacity and road safety in local highways network.
Strategic Highways Network	Operational and Construction Phase impacts arising from increases in traffic.
Footways and cycle routes	Construction and operational phase impacts on pedestrians, disabled users and cyclists within the Site and also connectivity and accessibility to areas outside of the Site.
Public Transport	Construction and operational phase impacts on bus and rail services..

Mitigation

5.68 Appropriate mitigation measures will be proposed in the ES (and within the TA and TP) to address any significant adverse traffic and transportation effects arising from the Development. .

Dust and Air Quality

Introduction

5.69 This chapter of the ES will outline the key issues which will need to be assessed and addressed with respect to Dust and Air Quality throughout the construction phase of the development as well as when the scheme is occupied.

Baseline Conditions

5.70 The Site lies in an area which would not be described as being extensively and heavily urbanised, albeit that the Site is located approximately 400 metres to the south of the A50 and to the east of Cresswell Road. The air quality levels will be relatively good and it is not expected that there are any exceedences of the UK air quality objectives. SMDC has not declared any air quality management areas (AQMA) within its jurisdiction. Whilst air pollutants may be at elevated levels close to the busy A50, it is most likely, therefore, that there will be no air quality constraints upon the Development.

5.71 A brief examination of the Defra background air quality maps reveals that, for the mapped grid square in which the site lies, concentrations of the main air pollutants of concern are well within the UK air quality objectives, as follows:

- nitrogen dioxide (NO_2) annual average 11 µg/m^3 (UK air quality objective 40 µg/m^3);
- PM_{10} annual average 15 µg/m^3 (UK air quality objective 40 µg/m^3);
- $PM_{2.5}$ annual average 10 µg/m^3 (UK air quality objective 25 µg/m^3).

Approach

5.72 The proposed approach to the assessment would be as follows:

- Identification of the likely increases in road vehicle movements associated with the proposed development and comparison to thresholds for triggering an air quality assessment;
- Consultation with SMDC as to the exact form and content of the air quality assessment;
- Assess the likely air quality effects of road traffic movements resulting from the proposed development;
- Assess the likely dust effects arising during construction of the proposed development;
- Compare forecast effects with air quality objectives and assess magnitude and significance of effects;
- Formulate appropriate and proportionate mitigation measures, where necessary; and
- Provide an ES chapter and background Technical Appendix.

5.73 Following consultation with SMDC, utilising traffic data produced by the transport consultants for the Development, a DMRB Screening Assessment of the likely effects of emissions from operational traffic accessing the Development would be undertaken. This would involve identifying existing and future (residential) sensitive receptors and calculating levels of air pollutants now (baseline) and in the future (opening year with and also without the Development) and comparing levels with the air quality objectives. The modelling exercise will utilise Annual Average Daily Traffic (AADT) data for all affected roads in line with the Transport Assessment prepared for the Development.

5.74 The magnitude and significance of the forecast effects would be categorised in accordance with guidance developed by Environmental Protection UK[6].

5.75 The construction assessment would be carried out using the Institute of Air Quality Management's Construction Dust Risk Assessment procedure[7] (which is currently under revision, the latest available version will be applied). The focus will be on mitigation measures which could be included in a Construction Environmental Management Plan (CEMP). Suitable guidance will be used for the assessment of the risk of emissions of dust during construction activities giving rise to annoyance based on distance over which impacts may occur.

5.76 A qualitative exercise in respect of possible operational on-Site activities on dust and air quality will also be undertaken as required.

[6] EPUK (2010) Development Control: Planning for Air Quality, 2010 Update.
[7] IAQM (2012) Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance.

Anticipated Impacts and Scope of Assessment

5.77 The following table provides a summary of the scoping process, identifying the receptors and impacts to be considered as part of the assessment of dust and air quality, during both the construction and operational phases of the Development.

Receptor	Impacts
Existing Residential and Business Park Properties	Construction impacts arising from emissions from construction vehicles and plant during the Development and access works and dust from construction activities. Operational impacts from emissions from additional vehicles associated with the Development, including road traffic accessing the residential development and movements into and out of the revised business park access route to the north-east of the proposed residential development and along Cresswell Road, potentially affecting the existing residential areas.
Proposed Residential and Business Park Properties	Construction impacts on existing business park users and adjacent residential properties arising from emissions from construction vehicles and plant for the Development and access works and dust from construction activities. Impacts from emissions from additional vehicles associated with the operation of the Development, including road traffic accessing the proposed residential development and movements into and out of the revised business park access route to the north-east of the proposed residential development and along Cresswell Road, potentially affecting the proposed residential areas.

Mitigation

5.78 Appropriate mitigation measures will be proposed during the construction assessment once the scale of dust generating activities and the sensitivity of the area has been identified and assessed. Mitigation measures will promote the use of best practice, including through the use of a Construction Environmental Management Plan.

Noise and Vibration

Introduction

5.79 This chapter of the ES will consider the noise and vibration impacts of the construction and operation phases of the Development on surrounding sensitive receptors together with the impacts of the existing and future noise environment on future residents of the Development.

Approach

5.80 National planning guidance states that where new developments are noise sensitive or may generate noise, the potential impact must be assessed and, where appropriate, mitigated. Opportunities should also be taken, where possible, to achieve improvements to the acoustic environment.

5.81 The following scope of works is proposed in order to assess noise and vibration impacts:

- Consult with the Council to confirm acceptance of the proposed assessment methodology and to determine any relevant local policies relating to noise.

- Conduct baseline noise measurements at locations representative of the proposed noise sensitive receptors. For the purpose of this scope it is assumed that short sample attended noise measurements would be required. If suitably secure locations can be provided then longer term unattended monitoring may be practical.
- Derive appropriate noise limits for fixed plant and equipment associated with the operation of the proposed Blythe Business Park.
- Predict noise levels at the nearby noise sensitive receptors as a result of vehicle movements on the access road to Blythe Business Park.
- Predict the change in noise level at nearby noise sensitive receptors as a result of changes in traffic flows on the local road network (outside the site red-line).
- Assess the suitability of the existing noise climate for residential occupation at the proposed residential land uses, and assess the potential operational noise impact of the proposed employment land uses on existing and proposed noise sensitive receptors.
- Prepare a noise impact assessment report for submission in support of the planning application.

5.82 Noise limits for fixed plant and equipment associated with the operation of the proposed Blythe Business Park, will be based on the application of British Standard 'BS4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas' and with reference to World Health Guidelines on Community Noise

5.83 Noise prediction will be undertaken using the appropriate methods from British Standard 5228-1: 2009: 'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise' or International Standard: ISO 9613-2: 1996(E): 'Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation' as appropriate.

5.84 Road traffic noise calculations will be based on the methodology contained in the Calculation of Road Traffic Noise (CRTN) document issued by the Department of Transport, Welsh Office.

5.85 The assessment of the suitability of the Site for residential development will consider the guidance in the National Planning Policy Framework, the Noise Policy Statement for England, emerging guidance on noise in the National Planning Practice Guidance and the recommendations on road traffic noise assessment set out in the Design Manual for Roads and Bridges (DMRB).

Anticipated Impacts and Scope of Assessment

5.86 The following table provides a summary of the scoping process, identifying the receptors and impacts to be considered as part of the assessment of noise and vibration issues, during both the construction and operational phases of the Development.

Receptor	Impacts
Nearby existing Residential Properties	Construction and operational impacts from proposed industrial uses (deliveries / traffic noise, industrial activities / plant and machinery) on existing nearby existing residential properties. This will include traffic noise noting the routing of the access track past the residential area.
Noise Sensitive Employment Uses	Impacts from existing industrial activities and associated traffic movements on any proposed noise sensitive employment activities.
Residents of Proposed New Dwellings	Impacts from existing industrial activities and associated traffic movements on new residential properties proposed as part of the Development. Impacts from construction of new employment and operational impacts arising from

Receptor	Impacts
	proposed new industrial uses on new residential properties proposed as part of the Development, noting the routing of the access track past the residential area.

Mitigation

5.87 As part of the noise and vibration assessment, measures to control any significant adverse impacts will be identified, including the adoption of an appropriate Construction Environmental Management Plan. If appropriate, mitigation would be recommended in outline to demonstrate how significant noise effects could be eliminated or minimised.

Socio-economic Assessment

Introduction

5.88 An assessment of potential social and economic effects of the Development on the local and wider area will be undertaken. This will include construction phase (temporary) and operational phase (permanent) effects. The socio-economic issues are anticipated to include:

- Population;
- Employment – direct and indirect job creation through supply chain multiplier effects;
- Local expenditure;
- Education;
- Primary healthcare infrastructure;
- Crime; and
- Open space and recreation.

Approach

5.89 The assessment would be undertaken using the following methodology:

- Review of the relevant policy context at the local, regional (if applicable) and national level;
- Baseline review using accepted Government sources such as the Census and Office of National Statistics (ONS) data;
- Identification of potential effects using quantitative methods from published sources and qualitative methods based on professional judgment;
- Assessment of the likely significant effects with reference to significance criteria;
- Recommendation of mitigation and enhancement measures, where appropriate;
- Assessment of residual (post-mitigation) effects; and
- Identification of likely significant cumulative effects with respect to other schemes in the local area.

5.90 As the planning application will be outline based on a series of parameter plans, the assessment of likely significant effects would be undertaken for the "worst case" development scenario that could be built out within the parameter envelope, for each socio-economic topic. For employment and expenditure effects, this would be the minimum floorspace proposed. For other impacts, this would normally be the maximum amount of development proposed. This is to ensure that the effects of any scheme coming forward at the detailed design stage would result in equal or better effects with respect to socio-economic issues.

Anticipated Impacts and Scope of Assessment

5.91 The following table summarises the socio-economic effects to be included ('scoped in') for detailed assessment in the Environmental Statement.

Receptor	Impacts
Housing and Population	Operational impact on meeting future housing requirements, including those arising from the existing population and predicted future changes in the level and demographic of the population
Employment	Increase in short term construction employment and increase in permanent employment associated with new employment development
Local Expenditure	Increase in local expenditure due to construction workforce spend and also occupational expenditure (residents and workers)
Primary Healthcare	Operational impact arising from demand for primary healthcare services by future residents and other occupiers of the Development
Education	Operational impact arising from demand for education services by future residents of the Development
Open space and recreation	Operational impact arising from demand for formal and informal open space and other recreational facilities by future residents and other occupiers of the Development
Crime	Safer spaces and secure design

Mitigation

5.92 Where mitigation measures are required, or where enhancement measures are available that would increase positive socio-economic effects, they will be stated. The residual effects will be assessed assuming implementation of the mitigation or enhancement measures.

6 Issues to be Scoped out of the EIA

6.1 The following section details those technical areas that the Applicant proposes are not covered in the ES.

Microclimate (Wind)

6.2 Microclimate effects normally occur in heavily urbanised environments, particularly town and city centres where the scale of development, notably tall buildings, can create locations where trapped vortices (i.e. wind tunnelling) can occur under certain wind directions. In such circumstances, the Lawson criteria is the most common set of guidelines applied to consider the effect of different pedestrian activities on their susceptibility to be impacted upon by wind effects.

6.3 The Development is located in an area where existing nearby development is generally relatively low in height when compared to a city centre where, for example, tall buildings are in close proximity to one another. The surrounding topography and landform is also unlikely to give rise to any microclimate effects. Given these circumstances, the scheme is likely to be satisfactory from the point of view of the wind environment and it is proposed that wind microclimate is scoped out of the ES.

Daylight, Sunlight and Overshadowing

6.4 As with microclimate effects, daylight, sunlight and overshadowing impacts are most commonly associated with high rise town and city centre schemes in existing heavily urbanised environments. Such developments can impact upon existing residential receptors adjacent to them as well as be impacted upon by surrounding development, particularly where these comprise of tall buildings in close proximity. In such cases, Building Research Establishment (BRE) guidelines are normally applied to assess the significance of impacts.

6.5 The Development is not located in what would be described as a heavily urbanised environment and any existing nearby development is generally relatively low in height. The Development is also unlikely to include any 'tall buildings' as described above. As a result the Development is unlikely to give rise to any significant daylight, sunlight or overshadowing effects and it is proposed to scope these issues out of the ES.

Telecommunications

6.6 Due to the relatively limited height of the buildings coupled with the advent of digital communications it is not anticipated that there will be adverse impacts on telecommunications in the area as a result of the Development. For these reasons it is proposed that a telecommunications assessment is scoped out of the ES.

Solar Glare

6.7 The Building Research Establishment has defined solar glare as follows:

> "Glare or solar dazzle can occur when sunlight is reflected from a glazed façade. This can affect road users outside and the occupants of adjoining buildings. The problem can occur either when there are large areas of reflective tinted glass on the façade, or when there are areas of glass, which slope back at up to 35 degrees from the vertical, so that high altitude sunlight can be reflected along

the ground. Solar dazzle is a long term problem only for some heavily glazed (or mirror clad) non-domestic buildings. A glazed façade also needs to face within 90 degrees of due south for significant amounts of sunlight to be reflected."

6.8 Solar glare is only likely to be a significant issue in the context of major buildings which include large amounts of reflective glass within their facades. In this case, given the nature of the proposals, and the orientation of the site in relation to the railway (i.e. the railway is located to the north / north-west of the Site), it is considered that the Development is unlikely to give rise to major adverse solar glare impacts.

Light Spillage

6.9 The Site is undeveloped and the Development will introduce an additional light source in the local area. However, it should be noted that any potential impacts arising from lighting from the Development will be in the context of the Site's adjacency to the existing settlement of Cresswell and the established Blythe Business Park. Given this position, together with the limited nature conservation value of the Site and its immediate environs, it is not considered that the Development will lead to significant adverse impacts in respect of light spillage.

6.10 Notwithstanding this, the following paragraphs set out the policy and guidance which applies to assess, mitigate and control 'light pollution' or 'light trespass'.

Planning Policy

6.11 The National Planning Policy Framework (NPPF) recognises Light Pollution as a potential impact and confirms that impacts can be limited through good design. Paragraph 125 of the NPPF states:

"By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."

Other Guidance

Guidance Notes for the Reduction of Obtrusive Light

6.12 The Institute of Lighting Engineers (ILE) guidelines quantify the levels of Light Trespass[8] seen as acceptable for varying environmental zones (Table 6.1). The Site would be classified as falling within Environmental Zone 2 (E2).

- E1: Intrinsically dark landscapes National Parks, Areas of Outstanding Natural Beauty, etc;
- E2: Low district brightness areas Rural, small village, or relatively dark urban locations;
- E3: Medium district brightness areas Small town centres or urban locations; and
- E4: High district brightness areas Town/city centres with high levels of night time activity

[8] Light trespass is the spilling of light beyond the boundary of the development. This is assessed using vertical illminance in lux (Ev) measured flat on the glazing at the centre of the window. A sensitive receptor, for example, would be the window of a residential property in proximity of the Development.

Table 6.1: Obtrusive Light Limitations for exterior light installations

Environmental Zone	Light Trespass (into Windows) EV [Lux] (2)	
	Pre-Curfew	Post-Curfew
E1	**2**	**1** (1)
E2	**5**	**1**
E3	**10**	**2**
E4	**25**	**5**

Definitions:

EV = Vertical illuminance

Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of the use of lighting applied by the local planning authority. If not otherwise stated, 23:00 hrs is suggested.

(1) = from public road lighting installations only.

Significance Criteria

Light Pollution

6.13 The levels of potential light pollution would be assessed using the methodologies set out in the ILE guidelines and the following significance criteria would be applied to any future assessment:

Table 6.2: Significance Criteria for Light Pollution

Significance	Parameters
Negligible	A small alteration from the existing scenario which is unlikely to be noticeable to the receptor. This may involve a small number of technical infringements of the numerical levels suggested in the ILE guidelines which should also be viewed in context. No mitigation would be necessary.
Minor adverse	An alteration from the existing scenario which may be marginally noticeable to the sensitive receptor. This may include a number of marginal infringements of the numerical levels suggested in the ILE guidelines which should be viewed in context. No mitigation would be necessary.
Moderate adverse	An alteration from the existing scenario which may cause a moderate noticeable change to the sensitive receptor. This may consist of a large proportion of marginal infringements of the numerical values suggested in the ILE Guidelines and/or a small percentage of significant infringements. Mitigation may be necessary.
Major adverse	An alteration from the existing scenario which may cause a major noticeable change to the sensitive receptor. This may consist of a large proportion of significant infringements of the numerical values suggested within the BRE Guidelines. Mitigation would be necessary.

Mitigation Measures

Light Pollution

6.14 As noted, it is not considered that the Development will have significant adverse impacts in relation to light spillage. This said, measures to limit or mitigate against any light pollution might include:

- Keeping glare to a minimum by ensuring that the main beam angle of all lights directed towards any potential observer is not more than 70°;
- Higher mounting heights which allow lower main beam angles that can assist in reducing glare;

- In areas with low ambient lighting levels, consideration of the positioning and aiming of lighting equipment will be required; and
- The use of specifically designed lighting equipment that minimises the upward spread of light near to and above the horizontal.

Cultural Heritage (Archaeology and Built Heritage)

6.15 An assessment of the National Heritage List website [which is curated by English Heritage, and the Staffordshire Historic Environment Record (HER) and maintained by Staffordshire County Council] has been undertaken to inform the baseline assessment of the Site and its environs in terms of the potential for the Development to cause significant effects on archaeological and built heritage resources.

6.16 The Site does not contain any designated heritage assets including scheduled monuments and listed buildings. The closest designated heritage assets in the wider landscape around the Site area is St. Mary's House, a Grade II listed building located c. 220m north east.

6.17 The Site does contain a single 'non-designated' heritage asset within its boundary. This comprises an area of post-medieval water meadow earthworks, which extend beyond the Site boundary and cover a more substantial area within the adjacent Blithe River Valley. Within the wider landscape around the Site, only limited evidence of Roman and Medieval activity has been noted.

6.18 It is noted that there is a low potential for the Site (or immediately surrounding area) to include previously unrecorded or unrecognised significant below ground archaeological remains.

6.19 Therefore, whilst the Development has the potential to impact upon the preservation of the post-medieval water meadow earthworks identified within the Site boundary, it is considered that there is a low potential for it to generate a significant effect in terms of its predicted impact upon the historic environment, as they are unlikely to be assessed as being of greater than low or local importance.

6.20 It is recommended that the Site should be subject to the completion of a desk-based assessment of the archaeological and heritage-related assets located within its boundary, as well as within its wider zone of influence. This should be submitted alongside and in support of the outline planning application for the Site. Further consultation should be carried out with the local authority's archaeological curator to establish the need for, and scope of, any additional information required to add to the desk-based assessment and inform the decision-making process.

6.21 Due consideration should be given to the potential for the Development to have indirect impacts on archaeological and heritage receptors located in the wider area. However, it is concluded that the nature of the existing built environment adjoining the site, in tandem with the lack of designated heritage assets in the wider area, makes it unlikely that the Development will generate a significant effect in terms of the 'setting' of those designated heritage assets.

6.22 Therefore, it is recommended that archaeological and heritage issues be scoped out of the Environmental Statement on the basis that the Development is unlikely to have a significant effect in this regard. However, it is recommended that the application is supported by a standalone assessment of archaeological and heritage issues, which is prepared in consultation with the local authority's specialist advisor.

Appendix A: Site Location Plan