

2.0 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

Introduction

- 2.1 This chapter explains the EIA methodology and describes the ES structure and content. In particular, it details the process of identifying and assessing the likely significant environmental effects of the Development.
- 2.2 The ES has been prepared in accordance with the 2017 EIA Regulations, as amended¹, and reference has also been made to currently available good practice guidance on EIA including the Planning Practice Guidance issued by the Ministry of Housing, Communities and Local Governmentⁱ.

Scoping

- 2.3 Scoping involves focusing the content of an ES on issues of significance. It is an important tool for identifying the likely significant effects of a proposed development through its design, construction and completed phases and ensures that appropriate mitigation options are considered where necessary. A Scoping Report (Appendix 2.1) was submitted to CDC in November 2020. The Scoping Report identified the topics to be scoped into and out of the ES and for those assessments to be included, details of the scope of the assessments. The topics scoped into the ES comprise:

- Transport and Access;
- Air Quality;
- Noise and Vibration;
- Landscape and Views;
- Biodiversity;
- Built Heritage;
- Population and Human Health;
- Water Resources and Flood Risk; and
- Climate Change.

- 2.4 A Scoping Opinion was adopted by CDC in December 2020 and is included within Appendix 2.2. The Scoping Opinion agreed with the topics to be scoped into and out of the ES and provided information on sub-sections of the assessments topics that needed to also be scoped into the ES. The key issues raised in the adopted Scoping Opinion and the location

¹ SI 2017/571 as amended by SI 2018/695 and SI 2020/505

where they are addressed in the ES are set out in Table 2.1 and within the technical assessments in Chapters 6-14 of this ES.

Table 2.1: Issues raised in the EIA Scoping Process

Issue Raised in Adopted Scoping Opinion	ES Chapter where addressed
<p>Oxfordshire County Council (OCC) advised that the methodology for assessing traffic impacts should mirror that of the TA, albeit the TA will deal with peak time impact compared to the ES which will take account of daily traffic flows. The Bicester Transport Model does not have daily flows modelled, so an appropriate factoring based on traffic survey data will need to be used to estimate daily flows. OCC advised that construction traffic must be assessed including its impacts upon existing residents. The internal roads and junctions that are to be used for construction access should be included in the list of highway links and highway junctions to be assessed. While the internal roads are not yet adopted, they are publicly accessible roads and should therefore be included.</p>	Chapter 6
<p>CDC's Environmental Protection Team have commented that noise from the railway line should also be included in the assessment. They also advised that if required, reference should be made to BS4142:2014 (Methods for rating and assessing industrial and commercial sound) should noise sources be found that require this type of assessment.</p>	Chapter 8
<p>CDC's Landscape Officer has advised that the LVIA should also include representative viewpoints in respect of residential receptors on Charlotte Avenue / private drives (for example those parcels to the east) and Braeburn Avenue (for example the west parcel).</p>	Chapter 9
<p>There is a more updated version of the CIEEMs guidelines which should be followed – CIEEM's Guidelines for Ecological Impact Assessment version 1.1 (updated September 2019). Ecological enhancements beyond mitigation should be included, particularly if compensatory habitats or contributions are likely to be required in order to achieve the required net gains for biodiversity. A Biodiversity Impact Assessment tool should be included and discussed. The cumulative impact assessment should include consideration of how the green infrastructure and any wildlife corridors will complement those of adjacent developments.</p>	Chapter 10
<p>The employment requirements of Policy Bicester 1 should be noted. Whilst the Masterplan does not require any significant employment generating activities on this particular part of the site, the opportunities should be considered (such as how home working could be accommodated, etc) so that it can be demonstrated that the Policy requirement around demonstrating how access to work will be achieved and to deliver a minimum of one employment opportunity per new dwelling that is easily reached by walking, cycling and/or public transport. As such, the operational phase impacts on employment should also be included.</p>	Chapter 12
<p>Thames Water advised that the following matters should be considered and covered:</p> <ul style="list-style-type: none"> · The development's demand for sewage treatment and network infrastructure, both on and off site and can it be met. · The surface water drainage requirements and flood risk of the development, both on and off site and can it be met. · The development's demand for water supply and network infrastructure, both on and off site and can it be met. · Build out / phasing details to ensure infrastructure can be delivered ahead of 	Chapter 13

Issue Raised in Adopted Scoping Opinion	ES Chapter where addressed
occupation. · Any piling methodology and whether this will adversely affect neighbouring utility services.	
Whilst reference is made to compliance with the Building Regulations in force at the time and reference is made to policy requirements, the specific requirement through Policy Bicester 1 is for a 'true zero carbon' development. It is expected that this requirement be included within the assessment of Climate Change.	Chapter 14
The cumulative effects assessment should include the following 14/01641/OUT and 14/01968/F. The reference number for the second record in table 12.1 should be 10/01780/HYBRID. In respect of the record 17/01090/OUT, this planning permission is not being implemented. The development is being implemented in accordance with 19/00347/OUT (which varied the original approval 14/01675/OUT) and reserved matters 19/00349/REM (completed) and 20/02454/REM (approved December 2020). The Council have also received a further S73 application to vary 19/00347/OUT – this is 20/03199/F.	Chapter 2 and Technical Chapters 6 to 14

Consultation Process

- 2.5 The planning application is the culmination of an extensive design process which has involved consultation with CDC, statutory consultees, the local community and other stakeholders. A virtual public consultation was held online from Friday 19th March to Friday 9th April. The exhibition boards available during the consultation can be viewed on a dedicated website for the Development which includes further information on the proposals: <https://landatnorthwestbicester.com/>. During the consultation feedback could be emailed to the team via a dedicated email address and freephone number as well as via traditional postal methods. An invitation newsletter advertising the virtual consultation was distributed to 691 residential properties and local businesses. Electronic copies of the newsletter were emailed to 38 stakeholders including local councillors, parish and town councils along with identified groups and individuals. The virtual consultation was also promoted in the media and online which included advertisements in the local newspaper, an online advertisement, a press article together with a dedicated Facebook advertisement to ensure as wide as demographic as possible were informed about the proposals and given the opportunity to visit the project website, view and comment on the Development.
- 2.6 A Statement of Community Involvement setting out the full background to the consultation undertaken as part of the Development has been submitted as part of this planning application.
- 2.7 In addition to the EIA Scoping exercise discussed above consultation has also been undertaken on a regular basis over the course of the preparation of the planning application with CDC and OCC as well as relevant statutory consultees including Natural England and

the Environment Agency among others.

Assessment Methodology

- 2.8 The EIA Regulations stipulate that an ES should identify, describe and assess the likely significant effects of a development on the environment. Therefore, this ES identifies and assesses the likely significant effects of the Development in relation to both the construction and the completed phases. Environmental effects have been evaluated with reference to definitive standards and legislation where available. Where it has not been possible to quantify effects, qualitative assessments have been carried out, based on available knowledge and professional judgement. Where uncertainty exists, this has been noted in the relevant assessment chapter.

Structure of Technical Chapters

- 2.9 Each technical chapter of the ES (Chapters 6-15) has been set out broadly in line with Table 2.2 below.

Table 2.2: Structure of the Technical Chapters

Heading	Content
Introduction	Each of the technical chapters begins with an introduction providing context to the EIA completed.
Policy Context	This section includes a summary of policies of relevance to the environmental discipline and explains its purpose in the context of the Development and the ES.
Assessment Methodology	This section describes the method and approach employed in the assessment of likely significant effects, the criteria against which the significance has been evaluated, the sources of information used and any technical difficulties encountered. Relevant legislation is also identified.
Baseline Conditions	This section describes and evaluates the baseline environmental conditions i.e. the current situation and anticipated changes over time assuming the Site remains undeveloped.
Likely Significant Effects	This section identifies the likely significant effects on the environment resulting from the Development during construction and operational phases. A description of the likely significant effects of the Development and an assessment of their predicted significance is provided.
Mitigation Measures	This section describes the measures which would be implemented to mitigate against potential adverse impacts. Where possible, enhancement measures have also been proposed.
Residual Effects	The residual effects, i.e. the remaining effects of the Development assuming implementation of the proposed mitigation measures, have been estimated and presented.
Cumulative Effects	This section considers the cumulative effects of the Development with committed developments identified within the vicinity of the Site. Any likely significant effects on the environment arising in this respect are set out in this section.
Summary	Each technical chapter concludes with a brief summary outlining the potential residual effects for the construction phase (short/medium) and operation (medium/long-term) phase of the Development.

Baseline Conditions

2.10 The ES includes a description of the prevailing environmental conditions, the 'Baseline Conditions', against which the likely significant environmental effects of the Development have been assessed. These are taken to be the conditions at the time or immediately prior to the submission of the planning application in 2020/2021. Each technical assessment has also identified the Future Baseline conditions in the absence of the Development.

Determining Significance

2.11 It is broadly accepted that significance reflects the relationship between two factors:

- The actual change taking place to the environment (i.e. the magnitude or severity of an effect); and
- The sensitivity, importance or value of the affected resource or receptor.

Magnitude

2.12 The magnitude of an effect is often quantifiable in terms of, for example, extent of land take, or predicted change in noise levels. A methodology for determining the scale, or magnitude, of effect is set out in Table 2.3 below.

Table 2.3: Methodology for Assessing Magnitude

Magnitude of Impact	Criteria for Assessing Effect
Major	Total loss or major/substantial alteration to key elements/features of the baseline 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.

Sensitivity

2.13 The sensitivity, importance or value of the resource or receptor is normally derived from:

- Legislative controls;
- Designated status within the land use planning system;

- The number of individual receptors such as residents;
- An empirical assessment on the basis of characteristics such as rarity or condition; and/or
- Ability of the receptor to absorb change.

2.14 The sensitivity of a receptor is based on the relative importance of the receptor using the scale in Table 2.4 below.

Table 2.4: Methodology for Assessing 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.

Significance

2.15 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be beneficial or adverse. Table 2.5 below shows how magnitude and sensitivity interact to derive effect significance.

Table 2.5: Methodology for Assessing Significance

Magnitude	Sensitivity		
	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 Adverse/Beneficial - Negligible
Negligible	Negligible	Negligible	Negligible

2.16 The above magnitude and significance criteria have been provided as a guide for technical specialists to assess impact significance. Where discipline specific methodology has been applied that differs from the generic criteria above, this has been clearly explained within the given chapter under the heading Assessment Methodology.

Mitigation

2.17 Any adverse environmental effects have been considered for mitigation at the design stage and, where practicable, specific measures have been put forward. Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, data and/or professional judgement has been

introduced to support these assumptions. Mitigation recommended during the demolition and construction phase would be set out in the Construction Environmental Management Plan (CEMP) to be agreed with CDC prior to the commencement of work and implemented throughout the duration of the works. Outline mitigation measures to be included in a future CEMP are set out in Chapter 5 of this ES: Construction Methodology. Mitigation to be implemented during the operational phase would be secured through planning conditions and obligations.

Cumulative and Interactive Effects

Cumulative Effects

- 2.18 A requirement of the EIA Regulations is to assess cumulative effects. Cumulative effects are generally considered to arise from the combination of effects from the Development and from other proposed or permitted schemes in the vicinity, acting together to generate elevated levels of effects. The assessment has been informed by Planning Practice Guidance², specifically the section: *'When should cumulative effects be assessed?'* which states:

"Each application ... should be considered on its own merits. There are occasions, however, when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development. The local planning authorities should always have regard to the possible cumulative effects arising from any existing or approved development."

- 2.19 The schemes that have been included as part of the cumulative effects assessment are those set out in Table 2.6. In addition to approved developments, one development has been included in the list below which is currently under consideration by CDC as this is likely to be determined in due course.

Table 2.6: Cumulative Schemes

Application Ref	Distance to Site	Description
14/01384/OUT Not Determined Bicester Eco Town Exemplar Site Banbury Road B4100 Caversfield	Adjacent	Development comprising redevelopment to provide up to 2600 residential dwellings (Class C3), commercial floorspace (Class A1 - A5, B1 and B2), social and community facilities (Class D1), land to accommodate one energy centre, land to accommodate one new primary school (Up to 2FE) (Class D1) and land to accommodate the extension of the primary school permitted pursuant to application (reference 10/01780/HYBRID). Such development to include provision of strategic landscape, provision of new

² Paragraph: 024 Reference ID: 4-024-20170728, Revision date: 28/07/2017

Application Ref	Distance to Site	Description
		vehicular, cycle and pedestrian access routes, infrastructure, ancillary engineering and other operations
10/01780/HYBRID Permission granted July 2012 Bicester Eco Town Exemplar Site Caversfield Oxfordshire	Adjacent	Development of Exemplar phase of NW Bicester Eco Town to secure full planning permission for 393 residential units and an energy centre (up to 400 square metres), means of access, car parking, landscape, amenity space and service infrastructure and outline permission for a nursery of up to 350 square metres (use class D2), a community centre of up to 350 square metres (sui generis), 3 retail units of up to 770 square metres (including but not exclusively a convenience store, a post office and a pharmacy (use class A1)), an Eco-Business Centre of up to 1,800 square metres (use class B1), office accommodation of up to 1,100 square metres (use class B1), an Eco-Pub of up to 190 square metres (use class A4), and a primary school site measuring up to 1.34 hectares with access and layout to be determined.
18/00484/OUT Not determined. Land North and Adjoining Home Farm Banbury Road B4100 Caversfield	Adjacent	Outline planning permission for up to 75 homes, pedestrian and cycle routes, creation of new access point from Charlotte Avenue, provision of open space, play space, allotments, orchard, parking and associated works.
14/02121/OUT Permission granted January 2020 Proposed Himley Village North West Bicester Middleton Stoney Road Bicester Oxfordshire	Approximately 2km to the south west of the site	OUTLINE - Development to provide up to 1,700 residential dwellings (Class C3), a retirement village (Class C2), flexible commercial floorspace (Classes A1, A2, A3, A4, A5, B1, C1 and D1), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2FE) (Class D1). Such development to include provision of strategic landscape, provision of new vehicular, cycle and pedestrian access routes, infrastructure and other operations (including demolition of farm buildings on Middleton Stoney Road)
15/00760/F Permitted North and South Arcade At Bicester Eco Town Exemplar Site Charlotte Avenue Bicester	Approximately 200m south at the closest point to the site.	Development of a new Local Centre comprising a Convenience Store (use class A1), Retail Units (flexible use class A1/A3/A5), Pub (use class A4), Community Hall (use class D1), Nursery (use class D1), Commercial Units (flexible use class A2/B1/D1) with associated Access, Servicing, Landscaping and Parking with a total GEA of 3,617 sqm
14/01675/OUT as varied by 19/00347/OUT Permitted. Applications pursuant to this: Reserved matters 19/00349/REM (completed) and 20/02454/REM (approved December 2020). S73 application 20/03199/F to vary 19/00347/OUT (under consultation).	Approximately 1.9km south east at the closest point to the site.	Minor material amendment to planning permission 14/01675/OUT to vary conditions 6, 7, 8, 9 and 10 to refer to updated parameter plans and temporary access plan; variation of condition 14 to enable delivery of employment development in full in advance of strategic link road; and deletion of condition 20 to reflect removal of temporary access onto Howes Lane (Outline reference number 14/01675/OUT, granted at Appeal - Ref: APP/C3105/W/16/3163551 for the erection of up to 53,000 sq m of floor space to be for B1, B2 and B8 (use classes) employment provision within two employment zones covering an area of 9.45 ha; parking and service areas to serve the employment zones; a new access off the Middleton Stoney Road (B4030); temporary access off Howes Lane pending the delivery of the realigned Howes Lane; 4.5 ha of residential land; internal roads, paths and cycleways; landscaping including strategic green infrastructure (GI); provision of sustainable urban

Application Ref	Distance to Site	Description
OS Parcel 4200 Adjoining And North East Of A4095 And Adjoining And South West Of Howes Lane Bicester		systems (SUDS) incorporating landscaped areas with balancing ponds and swales; associated utilities and infrastructure).
19/01036/HYBRID Under Consultation Validated 04/06/2019 Bicester Eco Town Exemplar Site Phase 2 Charlotte Avenue Bicester	Approximately 200m south at the closest point to the site.	Full permission is sought for Local Centre Community Floorspace (Use Class D1 with ancillary A1/A3), with a total GIA of 552 sqm, and 16 residential units (Use Class C3) with associated access, servicing, landscaping and parking. Outline consent is sought for Local Centre Retail, Community or Commercial Floorspace (flexible Use Class A1/A2/A3/A4/A5/B1/D1).
14/01641/OUT Under Consultation Validated 30/09/2014 Land Adj To Bicester Road And South West Of Avonbury Business Park Howes Lane Bicester	Approximately 1.5km to the south west of the site	Outline Application - To provide up to 900 residential dwellings (Class C3), commercial floor space (Class A1-A5, B1 and B2), leisure facilities (Class D2), social and community facilities (Class D1), land to accommodate one energy centre and land to accommodate one new primary school (up to 2 FE) (Class D1), secondary school up to 8 FE (Class D1). Such development to include provision of strategic landscape, provision of new vehicular, cycle and pedestrian access routes, infrastructure, ancillary engineering and other operations
14/01968/F Permission granted in August 2019. Proposal for New Highway Aligned With Howes Lane Bicester	To the south of the site	Construction of new road from Middleton Stoney Road roundabout to join Lord's Lane, east of Purslane Drive, to include the construction of a new crossing under the existing railway line north of the existing Avonbury Business Park, a bus only link east of the railway line, a new road around Hawkwell Farm to join Bucknell Road, retention of part of Old Howes Lane and Lord's Lane to provide access to and from existing residential areas and Bucknell Road to the south and associated infrastructure.

2.20 Each of the technical assessments considers the likely significant cumulative effects of the Development with the cumulative schemes set out in Table 2.7. The level of detail of assessment has been dependent on the information available for each scheme and has generally been undertaken in a qualitative manner. Where no cumulative effects are predicted, this has also been stated.

Assumptions and Limitations

2.21 The principal assumptions that have been made and any limitations that have been identified, in preparing this ES are set out below. Assumptions relevant to specific topics have been made in the appropriate chapter:

- All of the principal existing land uses adjoining the Site remain;
- Information received by third parties is complete and up to date;
- The design, construction and completed stages of the Development will satisfy minimum environmental standards, consistent with contemporary legislation, practice and

knowledge;

- Significant environmental effects have been assessed using the Development parameters;
- The assessment of the transport, air quality and noise assessments is based on 550 dwellings which presents a worst case assessment and is considered robust;
- Each chapter within the ES sets out the limitations and assumptions regarding any assessment scenarios that have been established in order to assess the Development;
- Conditions will be attached to the planning permission that will control disturbance during the construction works;
- Necessary off-site services infrastructure for the Development will be provided by statutory undertakers; and
- The planning permission, when granted, will contain conditions that will be sufficient to limit the Development to what has been assessed.

2.22 Assumptions and limitations resulting from the COVID-19 pandemic conditions have been set out in detail within the technical chapters, where relevant, but broadly include:

- The COVID-19 pandemic has resulted in unprecedented disruption to how people work and travel and the extent to which people will change their behaviour, in particular when it comes to how and when they travel. The traffic flows for the Transport Assessment, which have been provided from the Bicester Transport Model (BTM), do not account for the current pandemic. However, as the level of traffic on the local highway network during the COVID-19 pandemic is expected to be significantly lower than previously, it is assumed that the traffic flows from the BTM are robust and present the worst case;
- Any baseline air quality monitoring undertaken during 2020 would have been affected by the COVID-19 pandemic and therefore, the air quality monitoring undertaken by CDC in 2019 was determined to be the most recent, and representative monitoring data available; and
- Unemployment has increased as a result of the COVID-19 pandemic. Baseline conditions in relation to unemployment have been sourced for the month of February 2020 (to represent pre-Covid-19 pandemic) and January 2021 (to represent the latest data but which is within the Covid-19 pandemic).

Objectivity

2.23 The technical studies undertaken within the ES have been progressed in a transparent, impartial and unbiased way with equal weight attached, as appropriate, to beneficial and adverse effects. Where possible, this has been based upon quantitative and accepted

criteria together with the use of value judgments and expert interpretations.

- 2.24 The assessment has been explicit in recognising areas of limitation within the ES and any difficulties that have been encountered, including assumptions upon which the assessments are based. Where appropriate, the assessment of significance has been given confidence levels.

REFERENCES

ⁱ <https://www.gov.uk/guidance/environmental-impact-assessment>