3 EIA Methodology

3.1 Introduction

3.1.1 As set out in Chapter 1: Introduction, the EIA process has been undertaken to provide a thorough and robust assessment of the Proposed Development given that it exceeds the thresholds set out in the EIA Regulations for EIA development.

3.1.2 This chapter sets out the scope and methodology adopted in the EIA process. It explains how the scope of the EIA was defined, the baseline assumptions, methods used to assess the environmental effects and the general criteria used to evaluate their significance. The methodology applied to each of the environmental topics is provided in Chapters 7 to 16 and Volume II.

3.1.3 This chapter is accompanied by the following Appendices:

- Appendix 3.1: Location of Specified Information in the ES;
- Appendix 3.2: EIA Scoping Report (December 2022);
- Appendix 3.3: CDC Scoping Opinion (January 2023) and scoping consultation responses;
- Appendix 3.4: Cumulative Scheme Information; and
- Appendix 3.5: General EIA Assessment Criteria.

3.2 Regulatory Requirements and Good Practice

3.2.1 This ES was prepared to comply with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017[1] (as amended)[2] ('EIA Regulations'). Appendix 3.1 sets out where the information legally required by the EIA Regulations to be included in the ES can be found.

3.2.2 Some of the good practice guidance documents considered in the preparation of the ES include:

- Planning Practice Guidance ('PPG') – Environmental Impact Assessment[3];
- Guidelines for Environmental Impact Assessment: Institute of Environmental Management and Assessment ('IEMA')[4];
- Special Report: The State of Environmental Impact Assessment Practice in the UK (IEMA)[5];
- EIA – Shaping and Delivering Quality Development (IEMA)[6]; and
- Delivering Proportionate EIA (IEMA)[7].

3.2.3 Environmental topic assessments (Chapters 7 to 16 and ES Volume II) were undertaken in line with relevant policy and guidance:

- National Planning Policy Framework (NPPF)[8];

- Draft Levelling-up and Regeneration Bill[9];
- Planning Practice Guidance[10];
- Cherwell's Development Plan, comprising:
  - Cherwell Local Plan 2011 - 2031 (Part 1)[11];
  - Cherwell Local Plan 1996 (Saved Policies)[12] – a number of the policies from the 1996 Local Plan are retained ('saved') and therefore part of the current Development Plan;
  - Cherwell Local Plan 2011 – 2031 (Part 1) Partial Review – Oxford's Unmet Housing Need[13].

3.2.4 CDC's Scoping Opinion (Appendix 3.3) provides more information on the policies which form part of the Development Plan and local guidance.

3.3 Design and EIA Interface

3.3.1 The EIA process was undertaken in parallel with the masterplan design process. Baseline studies identified key features and environmental sensitivities which informed the layout of the Proposed Development. An iterative approach was taken to environmental assessments with initial testing and analysis used to identify measures to avoid, mitigate or compensate adverse environmental effects. The EIA process was also used to enhance beneficial effects.

3.3.2 Examples of how the EIA process informed the Proposed Development include:

- Initial transport studies were conducted very early in the masterplanning process. These informed design measures to minimise the need to travel and associated vehicle journeys through the mix of uses, accessibility and the internal layout of the masterplan;
- Visual and heritage analysis was used to inform maximum building heights;
- Flood and noise modelling was used to inform the location of sensitive uses and development layout, including the location of schools;
- Ecological baseline studies were used to inform the landscape and green infrastructure strategy and enhance the biodiversity benefits of the Proposed Development;
- Ground condition assessments of the historic landfill site were used to inform the decision that the location was viable to become a public park and was not suitable for development;
- Soil studies informed the decision to move the proposed location of the allotments from the south to the north of the Site; and
- Development Area Briefs and RMAs will be prepared with particular regard for the enhancement or preservation of the significance of the setting of the Grade II Listed Begbroke Hill Farmhouse, where possible. No works to the Listed Farmhouse itself are proposed through this application.

3.3.3 Where embedded design mitigation was identified by the EIA team as being necessary to mitigate potential for significant adverse effects, these were incorporated into the Parameter Plans, Development Specification and/or Strategic Design Guide to ensure that these

controls are secured through the outline planning permission and subsequent stages of consent.

3.3.4 Further information on how environmental issues have influenced the Proposed Development design is provided in Chapter 4: Alternatives and the technical topic chapters (7 – 16).

3.4 Consultation Process

3.4.1 The community and stakeholder consultation and engagement process was carried out in four distinct stages across July 2022, October - November 2022, March 2023 and July 2023. The time between each stage was used to progress the draft masterplan proposals in response to the public engagement, as well as other site survey work and specialist research. There was also ongoing discussions and negotiations with the District, City and County Council officers and councillors, and specialist groups such as Network Rail, The Environment Agency and Thames Water.

3.4.2 Figure 3.1 shows the stages of the engagement process:

Figure 3.1: Stages of the engagement process

3.4.3 Stages 0 and 1 were early, introductory meetings and workshops, and included an invitation stakeholder workshop and drop-in exhibitions for the wider community. Stage 2 included the first iteration of the masterplan which took on board feedback received from the community and stakeholder engagement of Stage 1. Stage 3, in March 2023, provided more detail through the emerging illustrative masterplan which showed progression as result of further technical work and feedback from the community and other stakeholders. Stage 4, the Pre-Application Masterplan Exhibition was held in July 2023. This provided an opportunity for attendees to see the parameter plans. All the material from the exhibitions was made available at on the OUD website (www.oud.co.uk).

3.4.4 Consultation was undertaken as part of the Scoping Opinion process (discussed below) and the ongoing design and EIA process, with a wide range of consultation bodies and other stakeholders including:

- Canal and Rivers Trust;

- CDC;
- OCC;
- Environment Agency;
- Thames Water;
- National Highways;
- Network Rail;
- Natural England;
- Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT); and
- Oxford Airport.

3.4.5 Each technical chapter of the ES involves a section on 'Consultation' where further information can be found on consultation of relevance to the technical topic.

3.5 Scope of the EIA

3.5.1 A request for a scoping opinion was submitted under the EIA Regulations by the Applicant to CDC in December 2022 (Ref: 22/03763/SCOP). An EIA Scoping Report (the 'Scoping Report') accompanied the request and identified the proposed topics to be included in the ES, the topics to be 'scoped out' and the approach to the assessments. The Scoping Report is provided as Appendix 3.2.

3.5.2 Following a consultation period with other statutory authorities and consultation bodies, CDC issued a Scoping Opinion (the 'Scoping Opinion') on 27th January 2023 (Appendix 3.3). Members of the public also had the opportunity to comment on the Scoping Report. The Scoping Opinion, set out CDC's opinion on extent of issues to be considered in the assessment and reported in the ES.

3.5.3 Under regulation 18(4)(a) of the EIA Regulations, the ES is required to be *"based on the most recent scoping opinion…. (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion or direction)"*.

3.5.4 The Scoping Opinion confirmed that CDC were in agreement with the proposed scope of environmental topics to be included in the ES and those to be scoped out, as set out by the EIA Scoping Report. In relation to the non-significant topics, or those to be scoped out the Scoping Opinion stated: *"The list of non-significant topics is agreed with the exception of where they form part of the consideration inter-related to a matter of significance and appropriate mitigation is necessary (e.g., biodiversity and lighting)."* Where additional information is required to support the assessments within the ES, this is included as appendices. For example, a Lighting Statement, which incorporate and outline lighting strategy has been included at Appendix 5.5.

3.5.5 The environmental topics which are included as separate chapters within the ES in accordance with the Scoping Opinion are as follows, alongside a summary of approach.

Topic	Approach
Chapter 7: Socio-economics	Assessment of potential construction and operational effects on a range of socio-economic factors.

Chapter 8: Cultural Heritage (including archaeology & built heritage)	Assessment of potential construction and operational effects on archaeological and built heritage assets.
Chapter 9: Transport and Access	Assessment of potential construction and operational effects on a range of transport factors.
Chapter 10: Noise and Vibration	Assessment of potential construction and operational effects on sensitive receptors to noise and vibration. An outline site suitability is also provided as Appendix 10.3.
Chapter 11: Air Quality	Assessment of potential construction and operational effects on sensitive (human and ecological) receptors to air quality.
Chapter 12: Climate Change and Greenhouse Gases	Assessment of greenhouse gas emissions from construction and operation of the Proposed Development, and climate change resilience of the Proposed Development.
Chapter 13: Ecology	Assessment of potential construction and operational effects on a range of ecological receptors, including designated sites and habitats and species. A Habitats Regulations Assessment report is provided as Appendix 13.3.
Chapter 14: Agricultural Land and Soil Resources	Assessment of potential construction and operational effects on agricultural land, tenancies and soil as a resource.
Chapter 15: Ground Conditions and Contamination	Assessment of potential construction and operational effects on potential ground conditions, groundwater and contamination, including potential impacts from the historical landfill on-site.
Chapter 16: Water Resources and Flood Risk	Assessment of potential construction and operational effects on surface water bodies and flood risk. An outline surface water drainage strategy is provided as part of the Flood Risk Assessment as Appendix 16.1.
Volume II: Landscape and Visual Impact Assessment	Assessment of potential construction and operational effects on landscape and visual receptors, including wireline views from designated viewpoints.

3.5.6 Specific comments were raised in the Scoping Opinion in relation to certain topic chapters. An explanation of how these comments were addressed is provided in the 'Consultation' section of Chapters 7 to 16 and Volume II, under the sub-heading 'Assessment Methodology'.

3.5.7 The following topics were scoped out of the EIA, with agreement from CDC. A brief summary is set out below, with further rationale is set out in Appendices 3.2 and 3.3.

- Light Pollution – the Site has a prevailing suburban level of lighting across the Site and the Proposed Development will apply an outline lighting strategy that would minimise the potential for light pollution;
- Wind Microclimate – the majority of the Proposed Development comprises low-rise buildings, with areas of taller development to be located and designed to minimise significant adverse effects on residential receptors and public footpaths;

- Waste and Materials – the Proposed Development will seek to minimise waste, with adherence to a Site Waste Management Plan (during construction) and an Operational Waste Management Plan;
- Vulnerability to Major Accidents and Disasters – the Proposed Development would not introduce hazardous uses and any risks (e.g. release of ground gas, flood risk) would be mitigated through the design and planning process;
- Human Health - this is indirectly assessed through other technical assessments of the ES and a Health Impact Assessment is submitted with the planning application;
- Energy and Sustainability – not required for assessment under the EIA Regulations, however facets have inherently been incorporated into technical assessments of this ES (e.g. Climate Change and Greenhouse Gases);
- Utilities – a preliminary utilities assessment identified that significant effects on utilities was not likely. Consideration is provided in relevant topic chapters, where applicable;
- Daylight, Sunlight, Overshadowing and Solar Glare – the scale and massing of the Proposed Development is not considered likely to give risk to significant daylight and sunlight effects. The integration of buffer zones also minimises the potential for significant overshadowing effects on nearby receptors (e.g. Oxford Canal, Rushy Meadows SSSI) and it is not anticipated that the Proposed Development would incorporate significantly reflective components that could lead to incidences of solar glare;
- Telecommunications and Aviation – the height of proposed buildings is not considered to have significant effects on Oxford Airport to the north; and
- Electromagnetic Fields (EM) – any sources of EM field which may be delivered as part of the Proposed Development would be designed in accordance with all the relevant health, safety and engineering standards.

3.6 Defining the Baseline

Study Area

3.6.1 The study area for each topic is based on the geographical scope of the potential impacts relevant to the topic as well as topic specific guidance and consultation with stakeholders. The study area is defined in each technical ES chapter as they vary from topic to topic and between the demolition and construction and operational phases in some cases. A summary of the study areas applied to the topics is provided in Table 3.2

Table 3.2: Study Areas of Assessment

Topic	Construction	Completed Development
Socio-Economics	The Site, local area, district (CDC) and regional level (south east England).	
Cultural Heritage	A 2km study area around the Site for the archaeological resource. A 3km study area around the Site for built heritage, especially to identify designated heritage assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Registered Battlefields) which could be indirectly affected by the Proposed Development.	

Topic	Construction	Completed Development
Transport and Access	The study area has been defined based on the number and locations of roads and streets that are likely to be affected by the Proposed Development, and where there is potential for relevant receptors to be affected. The study area covers the highway network to the north of Oxford including the A44, A4260, A34 and A40 corridors. The geographic extent of the traffic model to be used as the basis of the assessment has been agreed with OCC.	
Noise and Vibration	On or within close proximity to the Site (see Figure 10.1). For road traffic noise, the study area comprises the extent of the road network covered by the Transport Assessment where increases of road traffic noise of more than 1 dB are anticipated.	
Air Quality	Up to 350m from the Site boundary and within 50m of roads used by construction traffic up to 500m from the Site access.	Assessed in proximity to any road links on which there is an increase in traffic volume resulting from the Development that exceeds the criteria outlined in Institute for Air Quality Management (IAQM) guidance.
Climate Change	Climate change is a global environmental effect and as such the study area for the assessment is not limited by any specific geographical scope. The assessment considers the release of greenhouse gases from activities associated with the Development which the Applicant has some ability to control or influence.	
Ecology	Site itself and immediate surrounding area. Consideration of international statutorily protected sites at up to 10km from the Site and national statutorily and non-statutorily protected sites up to 2km.	
Agricultural Land and Soil Resources	The Site extent.	
Ground Conditions and Contamination	The Site and land within close proximity to, or bordering the relevant part of the Site (i.e. less than 250m from the Site) and which has the potential to be a contaminant source or receptor and there is a potential pathway for contaminant migration.	
Water Resources and Flood Risk	All water bodies present on the Site, as well as other natural water bodies hydrologically connected to the Site through surface run-off or connections through sewer infrastructure.	
Landscape and Visual Impact	3km from Site boundary as agreed with the LPA.	

Baseline Conditions and Future Baseline

Existing Baseline

3.6.2 Baseline environmental conditions have been established so that changes and potentially significant effects as a result of the Proposed Development can be understood. Baseline

studies have also informed the development of appropriate mitigation strategies to avoid or minimise significant effects and enhance beneficial effects.

3.6.3 Baseline information was gathered by the EIA team through a range of site visits and surveys, analysis, and desk-based research, to define the existing environmental characteristics and receptors relevant to each environmental topic. The majority of existing baseline information was collected over 2021 through to June 2023 and assessments are based on the Site in its current condition. 2023 is therefore taken as the existing baseline assessment year unless otherwise stated.

3.6.4 Baseline information is reported in each topic chapter and technical survey or analysis is provided in supporting appendices. Where uncertainties or limitations are identified in the baseline information these are set out in the assessment chapter under 'Assessment Methodology - Assumptions and Limitations'.

Future Baseline

3.6.5 The EIA Regulations requires the ES to include a description of the future baseline, i.e. the baseline conditions without implementation of the Development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge. This is required as conditions may change in the future, which could affect the outcome of environmental assessments. The Proposed Development is expected to be delivered over eight years, commencing in 2025. A description of 'Future Baseline Conditions' is provided within the 'Baseline Conditions' section of each topic chapter (Chapters 7 to 16 and Volume II).

3.6.6 The future baseline scenario is based on the reasonable assumption that planning permissions for consented development within the Begbroke Science Park (which is within the Site boundary) are delivered by 2025. These development proposals comprise:

- Expansion of Science Park (ref: 18/00803/OUT, as amended); and
- Creation of a car park (ref: 21/03195/F).

3.6.7 Further details of the above schemes are provided at Paragraph 2.3.24 in Chapter 2: Site and Setting.

3.6.8 A number of committed developments that have been granted planning permission in the wider area are also expected to be completed and operational by 2033. These schemes are assumed as part of the Future Baseline scenario for the completed Proposed Development cross all technical topic assessments:

- Land East of Woodstock, Oxford Road (ref: 18/02574/RES); and
- Wolvercote Paper Mill, Mill Road, OX2 8PR (ref: 13/01861/OUT).

3.6.9 These schemes will not be assessed in the cumulative assessment of the ES. Where relevant, other site allocations and/or cumulative schemes may be incorporated into the future baseline scenario for topic-specific assessments however this will be made clear in the relevant ES technical chapters.

3.7 Basis of Assessment and Rochdale Envelope

3.7.1 The planning application is submitted entirely in outline with all matters reserved. Following relevant case law, it is standard practice for EIAs of outline planning applications to be based a series of development principles and parameters known as a 'Rochdale Envelope'. The purpose of the Rochdale Envelope is to balance the need for flexibility for a development which is not fully defined at the outline stage with the ability to assess the likely significant environmental effects of the project.

3.7.2 The EIA is based on clearly defined parameters within which the framework of the Proposed Development will take place within. These parameters include cautious, but realistic worst case scenarios which form the Rochdale Envelope. The parameters have been defined to ensure that sufficient information is included in the planning application (Tier 1) to enable the 'likely significant' effects on the environment to be assessed, and the mitigation measures to be described.

3.7.3 The following documents form the basis of the assessments included within the ES:

- **Parameter Plans** – these plans for planning approval define the key design parameters which control the future Proposed Development which will come forward under Tier 2 and Tier 3 (see Paragraph 1.3.1 of Chapter 1: Introduction) for further Details). These are provided in Appendix 5.1. The Parameter Plans define the spatial extent of development areas, key uses, and maximum building heights. The plans also define principles of access and movement as well as landscaping and green infrastructure.
- **Development Specification** – this document includes the planning description of the Proposed Development and describes the development floorspace and use parameters. The Development Specification also includes key Design Principles which will control the detailed design of future development (Tier 2 and Tier 3) and ensure that mitigation measures required to avoid likely significant effects are inherent. This document is provided in Appendix 5.2.
- **Strategic Design Guide** – this sets out design principles and rules that will control the detailed design of the future development (Tier 2 and Tier 3) and provides guidance on aspects of the intended form, scale and character of the buildings and spaces proposed. This document is provided in Appendix 5.3.

3.7.4 In addition to the above, the following documents are also to be submitted as control documents that establish a framework within which future Development Area Briefs and Reserved Matters Applications would be prepared:

- Outline Landscape and Ecological Management Plan (Appendix 5.5);
- Framework Lighting Strategy (Appendix 5.6);
- Operational Waste Management Plan (Appendix 5.7);
- Site Waste Management Plan (Appendix 5.8);
- Framework Energy and Sustainability Strategy (Appendix 5.9);
- Outline Construction Environmental Management Plan (Appendix 6.1);
- Framework Site Wide Travel Plan (Appendix 9.2);
- Framework Construction Traffic Management Plan (Appendix 9.3);
- Framework Delivery and Servicing Management Plan (Appendix 9.4); and

- Outline Drainage Strategy (Appendix 16.1).

3.7.5 Due to the level of necessary flexibility which is inherent within the development floorspace areas and uses, different worst-case assumptions need to be applied depending on the specific topic and receptors being assessed. For example, what may be worst case assumptions for employment generation are not the same as those for transport impacts. The basis of the worst-case approach is clearly defined in each topic chapter although for ease of reference.

3.8 Assessment of Effects

Construction

3.8.1 The ES consider the effects of the Proposed Development throughout the construction period. The Proposed Development will be built out in phases. Technical assessments recognise that works will be temporary, localised and intermittent and will not occur in a single location for the duration of this delivery programme. The potential duration of the construction period is presented in Chapter 6: Construction. Subject to planning permission, construction of the Proposed Development could commence in 2025 with full completion anticipated in 2033 which represents an indicative delivery period of six years. Adjustments to the construction programme start/end dates and duration are unlikely to materially alter the findings of the ES, subject to adequate mitigation measures being secured.

3.8.2 Chapters 7-16 and Volume II assume 'likely-worst case' scenarios with respect to the envisaged construction methods, location (proximity to sensitive receptors) and timing based on Chapter 6: Construction. These assumptions vary between the topic specific assessments, and therefore the representative 'worst-case' scenario for any given set of receptors is set out in each technical assessment. For example, the assessment of construction effects is based on an assumed 'peak year' of construction activity (assumed as 2028) as a reasonable worst case scenario, when volumes of construction vehicles and on-site activities are likely to be at their highest.

3.8.3 Where technical chapters assess the potential for demolition effects, the worst-case approach is adopted for the Indicative Demolition Plan, assuming all identified buildings would be demolished, unless otherwise stated.

3.8.4 The ES is accompanied by an Outline Construction Environmental Management Plan (CEMP) (Appendix 6.1). It is assumed that CEMPs will be secured via a suitable worded planning condition and would be required to follow the Outline CEMP as appropriate for the given phase/stage of the construction works. Detailed CEMP(s) would be prepared for specific phases in-line with the outline CEMP and submitted to CDC for approval once contractors are appointed.

3.8.5 In judging the significance of effects, topic assessments assume that CEMPs will be secured and that they are inherent to the Proposed Development as 'tertiary' mitigation. This approach is in line with IEMA good practice[6] which refers to tertiary mitigation as that which *"will be required regardless of any EIA assessment, as it is imposed, for example, as a result of legislative requirements and/or standard sectoral practices. For example, considerate contractors' practices that manage activities which have potential nuisance effects"*.

Completed Development

3.8.6 The assessment of potential effects of the operational Development considers the effects that could arise as a result of the operational use of the Development. This assumes that the Development is fully occupied.

3.8.7 The Development is assumed to be completed and fully occupied in 2033; this is taken as the year of assessment. This year may be subject to change however this is unlikely to materially alter the findings related to the assessment of likely significant effects or mitigation.

3.8.8 Table 3.3 outlines scenarios which have been assessed in the EIA.

Table 3.3: Future Baseline and Assessment Scenarios

Assessment Year	Scenario	Scenario Description
2028	Peak Construction Scenario	Peak construction year, unless otherwise stated in technical chapters.
2033	Future Baseline	The future baseline conditions includes committed schemes at Begbroke Science Park (defined at Paragraph 3.6.6) and in the local area in the absence of the Development.
2033	Completed Development	The completed operational Proposed Development. For certain topics, this is assessed against the Future Baseline (e.g. noise, air quality, transport and access).

3.8.9 There are instances where some topics assess additional assessment scenarios. These are clearly defined in the topic chapters. Chapter 8: Transport and Access and the associated Transport Assessment (and transport modelling) has applied a slightly different Future Baseline scenario to that set out in Table 3.5, with different committed development. This was requested and agreed with OCC. This modelling has also informed the assessments provided in Chapter 10: Noise and Vibration, Chapter 11: Air Quality and Chapter 12: Climate Change and Greenhouses Gases. Details of this Future Baseline scenario are clearly defined in ES Chapter 8 and Appendix 8.1.

3.8.10 As discussed in Chapter 2: Site and Setting of this ES (Paragraph 2.3.25), Network Rail are developing detailed proposals to close two level crossings and provide two new pedestrian / cycle bridges across the railway. The proposals are not yet at planning stage (i.e. an application has not been submitted) however the proposals are assessed within the cumulative assessment the majority of technical ES chapters with the exception of Chapter 8: Transport and access. This chapter considers additional future baseline scenarios for the Sandy Lane Crossing within the appended Transport Assessment (Appendix 8.1).

3.8.11 OCC have identified a package of off-site transport network improvements to support the planned development across the 'PR' sites, including the Proposed Development, to be secured via respective Section 106 Agreements. Further details are set out in Chapter 5: Description of the Proposed Development. The potential effects of these off-site design measures only have potential implications for the transport modelling and topics indirectly linked to this data, i.e. Chapter 9: Transport and Access, 10: Noise and Vibration, 11: Air

Quality and 12: Climate Change and Greenhouse Gases. These works are screened out of consideration for all other technical chapters of the ES as no impacts would be expected.

3.9 Assessing the Environmental Effects of the Proposed Development

General Approach

3.9.1 Appendix 3.5 provides information on the general approach to defining the significance of environmental effects which has been applied. This includes criteria for identifying the sensitivity of receptors, magnitude of impacts and significance of environmental effects for the ES.

Mitigation, Monitoring and Residual Effects

3.9.2 The design and development of mitigation measures is an integral part of the EIA process. Measures to mitigate potentially significant environmental effects are inherent in the Proposed Development and secured through the Parameter Plans, Development Specification and Strategic Design Guide. These inherent measures are referred to throughout the ES as 'embedded mitigation' and are assessed as part of the Proposed Development under the main 'Assessment of Effects' section of each topic chapter. Embedded mitigation measures are also described under the section titled 'Embedded Mitigation' of each topic chapter.

3.9.3 In some cases, assessments identify a requirement for 'additional' mitigation measures and potential enhancement opportunities. These are identified under the 'Mitigation, Monitoring and Residual Effects' section of each topic chapter. Where a need for monitoring of adverse effects has been identified, this is also set out in this section together with appropriate monitoring arrangements.

3.9.4 A schedule of mitigation and monitoring measures and how they are expected to be secured through the planning permission and future stages of consent is provided in Chapter 18: Summary of Mitigation, Monitoring and Residual Effects of the ES.

3.9.5 Residual effects are those that remain following the consideration of mitigation within the assessment. When applying the matrix approach set out in Appendix 3.5, these are defined as either 'significant' (i.e. major or moderate residual effect) or 'not significant' (i.e. minor residual effect or negligible).

3.10 Assessment of Cumulative Effects

3.10.1 The EIA Regulations require that, in assessing the effects of a particular development proposal, consideration should also be given to cumulative effects of the Proposed Development. Potential cumulative effects are categorised into two types:

- **Effect interactions** - occur when two or more different environmental effects from the Proposed Development (e.g. dust, noise, traffic) act together to produce a different level of effect/ impact experienced by a particular receptor. These combined effects (or 'Intra-Project') can be additive or synergistic such that the sum of the impacts can be less or more than the individual impacts (i.e. because they may exacerbate or neutralise one another).

- **Cumulative effects** - are those that accrue over time and space from a number of different existing or approved development activities and projects in geographical proximity to one another, which individually might be insignificant, but when considered together, could create a significant cumulative effect (also referred to as 'Inter-project' effects).

3.10.2 The full list of cumulative schemes considered in this ES and is provided in Appendix 3.4. Figure 3.2 illustrates the location of the cumulative schemes in relation to the Site. Details of the methodology and approach of the cumulative effects assessment for intra-project effects and inter-project effects of the Development are provided below.

Effect Interactions (Intra-Project Effects) Methodology

3.10.3 Intra-project effects from multiple topics are assessed within Chapter 17: Effect Interactions. The effect interactions assessment focuses on receptor groups that have the potential to be affected by multiple effects from more than one specialist topic in the EIA, as a result of the Development. Further details of the methodology used for the assessment of effect interactions as well as the results of the assessment are provided in Chapter 17: Effect Interactions. Certain topic chapters include an assessment of effect interactions, including Ecology and Cultural Heritage.

Cumulative Effects (Inter-Project Effects) Methodology

3.10.4 An assessment of the likely significant effects of the Proposed Development in cumulation with other existing or approved developments is included in each technical chapter of the ES. A set of screening criteria has been developed to identify which reasonably foreseeable developments in the vicinity of the Site should be subject to assessment. This screening criteria was informed by the Planning Practice Guidance and Planning Inspectorate Advice Note 17[14]. Schemes to be considered were identified based on the following criteria:

- Existing and/or approved development projects that are expected to be built-out at the same time as the Proposed Development and with a defined planning and construction programme;
- Within the ZoI of the Proposed Development (up to 5km of the Site boundary, dependent on technical topic);
- Submitted EIA development planning applications;
- Other developments which introduce sensitive receptors near to the Site (but are not EIA development);
- Other developments which have received planning consent from the relevant planning authority (granted or resolution to grant); and
- Relevant allocated sites, identified in the Local Plan, where sufficient certainty and information is available.

Scoping Opinion Considerations

3.10.5 The Scoping Report included a list of cumulative schemes to be considered as part of the cumulative assessment within the ES.

3.10.6 The Scoping Opinion recommended consideration of additional cumulative schemes. Of these proposals, ten were already included within the cumulative scheme schedule presented in the Scoping Report (and included at Appendix 3.5). One planning permission

(ref: 22/02372/NMA) has been added to the schedule. One application recommended in the Scoping Opinion (ref: 22/01789/NMA) has not taken forward for consideration as this application was refused planning permission in June 2022. In addition to the extant planning applications/permissions on the Begbroke Science Park, the Scoping Opinion requested the following aspects/developments be *"monitored and assessed"* as to whether they are committed developments under EIA Regulations.

- The remaining parcels of the PR8 Site Allocation;
- Oxford United Football Club potential re-location;
- Oxford Airport travel hub (being developed by Oxfordshire County Council);
- Oxford Technology Park (Technology Drive, Kidlington); and
- The operations of London Oxford Airport.

3.10.7 Table 3.4 provides commentary on whether these additional schemes have been assessed as part of the cumulative assessment.

Table 3.4: Aspects/Developments raised in CDC Scoping Opinion

Cumulative Scheme	Commentary
The remaining parcels of the PR8 allocation	Included as part of the cumulative assessment (included in Appendix 3.4).
Oxford United Football Club potential re-location	Not considered within cumulative assessment. As of July 2023, no planning application has been submitted as such sufficient information is not available to undertake an assessment of likely cumulative effects.
Oxford Airport Travel Hub (being developed by OCC)	Not considered within cumulative assessment as no planning application has been submitted for this potential scheme. However, this planned development is inherently considered in the transport modelling.
Oxford Technology Park (Technology Drive, Kidlington)	Not considered within cumulative assessment. This scheme is already constructed and operational. Therefore, it forms part of the baseline scenario of the technical assessments.
The operations of London Oxford Airport.	Included as part of the cumulative assessment (included in Appendix 3.4) and assessed in the ES where applicable. An Aviation Safeguarding Report has been provided at Appendix 3.6.

3.10.8 In addition to those schemes raised by CDC's Scoping Opinion, OCC's scoping response requested consideration of the following approved planning applications:

- **Neilsen House** (Ref: 17/02969/B56) - Change of use of Nielsen House and annex from office (Use Class B1(a)) to residential (Use Class C3) to provide 114 x 1-bed flats and 20 x 2-bed flats.
- **Thornhill Park** (Ref: 21/01695/FUL) - Demolition of The Cottage building. Partial demolition and alterations to Forest Lodge building. Erection of 402 apartments (Class C3), a 133 bed hotel (Class C1), employment provision in the form of offices, with additional mixed use accommodation to include gym, café and restaurant (all within

Class E), public open space, associated landscape, bicycle and car parking and the provision of a new vehicular access onto the A40 (amended plans, description and supporting information).

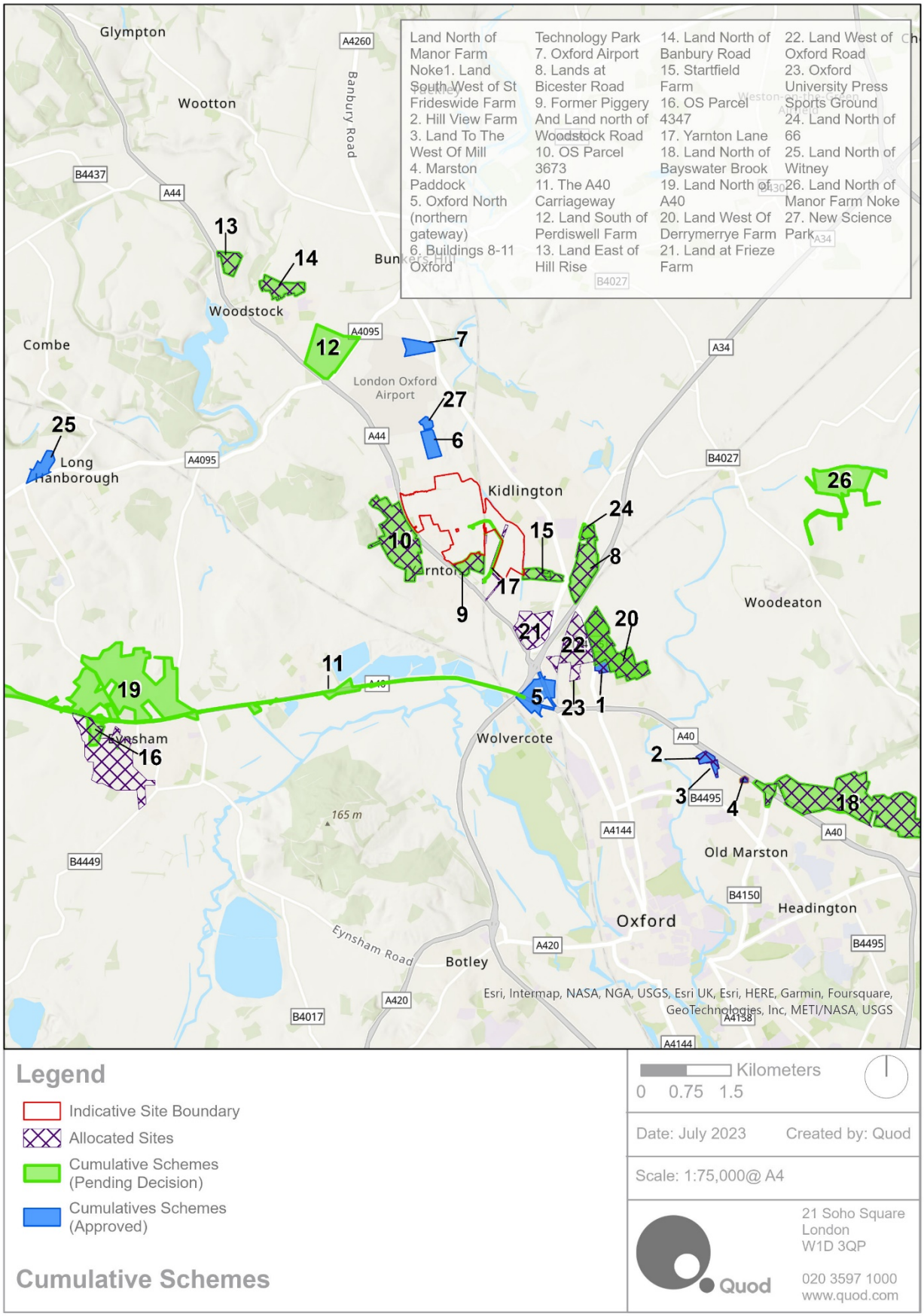
3.10.9 Both schemes are included as committed developments in the baseline transport modelling.

3.10.10 The schedule of cumulative schemes has been kept under review throughout the EIA process and is considered to be up-to-date as of July 2023. Cumulative scheme No. 12 (in Appendix 3.4, application ref: 22/01715/OUT) was withdrawn by the applicant in late July, the week before planning submission. Given the proximity from the Site, this was only applicable to the study area of the transport assessment (and indirectly the air quality, noise and vibration, and climate change and greenhouse gas assessments). At the time of the preparation of the traffic modelling it was included within the Reference Case based on the Scoping Opinion. As this was completed before the withdrawal of this application, these assessments have been completed on the assumption that this application would come forward. Although it has now been withdrawn, it is considered that a worst-case approach is still provided through the transport modelling that has informed this EIA.

3.10.11 Consideration has also been given to the programme of these schemes and some, which are expected to be complete and operational by 2033, are considered in the Future Baseline scenario in the ES (see Section 3.6 of this chapter).

3.10.12 The development schemes which meet the above criteria, and which were considered in the context of the potential for cumulative effects are identified in Figure 3.2. The proposed scope and schedule of cumulative schemes was agreed with CDC (as discussed in section 3.5 above). Appendix 3.4 provides further detail of each cumulative scheme and its status in July 2023.

Figure 3.2: Cumulative Schemes



3.11 Assessment Assumptions and Limitations

3.11.1 The EIA is defined by a suite of Parameter Plans and core design principles set out in a Development Specification and Strategic Design Guide that identify the key design controls for the detailed design of the Proposed Development. Given the outline nature of this assessment, there is not a significant level of detail available to provide definitive assessment conclusions on all matters at this stage of the process. As detailed design progresses, the assessments will be revisited and updated to check they are aligned to the outcomes stated and closer reflect the final development that is constructed and occupied.

3.11.2 Each technical topic chapter in the ES clearly sets out the assumptions and limitations that apply to the respective assessments.

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