

## 2 EIA Methodology

### 2.1 Introduction

2.1.1 This chapter sets out the scope and methodology adopted in the EIA. 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.

2.1.2 This chapter is accompanied by the following Appendices:

- Appendix 2.1: Location of Specified Information in the ES;
- Appendix 2.2: Meeting Note on ES Content and Scope to LB Barnet (October 2017) and email correspondence with the Planning Officer (November 2017);
- Appendix 2.3: EIA Scoping Report for the 2016 Detailed Application (April 2016);
- Appendix 2.4: EIA Scoping Opinion (July 2016);
- Appendix 2.5: 2016 Detailed Application ES Technical Chapters and Assessments:
  - Chapter 11: Water Recourses and Flood Risk;
  - Chapter 12: Ground Conditions and Contamination; and,
  - Chapter 14: Daylight, Sunlight and Overshadowing and Solar Glare.
- Appendix 2.6: EIA Scoping Note to GLA Officers (Ferbaruy 2019) and email correspondence with Officers (February 2019); and
- Appendix 2.7: Cumulative schemes considered within the EIA.

### 2.2 Regulatory Requirements and Good Practice

2.2.1 Given the nature and scale of the Development, the sensitivities of the surrounding environment, and the potential for significant effects, the Applicant voluntarily committed to undertaking an EIA and preparing an ES. The ES was prepared to comply with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017<sup>1</sup> (as amended)<sup>2</sup> (the 'EIA Regulations'). The structure and content of an ES is defined by Regulation 18(3)/(4)/(5) and Schedule 4 of the EIA Regulations, including the information for inclusion in an ES and requirements to ensure completeness and quality. Appendix 2.1 sets out these requirements together with their location within the ES.

2.2.2 Good practice guidance documents have also been considered when undertaking this EIA, including:

- Planning Practice Guidance – Environmental Impact Assessment<sup>3</sup>;
- Special Report: The State of Environmental Impact Assessment Practice in the UK<sup>4</sup>;
- European Commission – Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment Report<sup>5</sup>;
- EIA – Shaping and Delivering Quality Development (IEMA)<sup>6</sup>;
- Delivering Proportionate EIA (IEMA)<sup>7</sup>; and
- Guidelines for Environmental Impact Assessment: Institute of Environmental Management and Assessment<sup>8</sup>; and

- Topic specific guidance referred to in each technical chapter of this ES where appropriate.

2.2.3 Each technical assessment has followed respective European, national and local planning policy and guidance, as appropriate to their discipline.

## 2.3 EIA and Design

2.3.1 The EIA process was undertaken in parallel with the design process and as a result, specialist consultants have worked with the project design team through an iterative design process to reduce, or eliminate where possible, adverse environmental effects through the scheme design. An extensive programme of consultation was undertaken with key stakeholders (e.g. statutory consultees, non-statutory consultees and the public), which has also informed the EIA and design process. As a consequence, the Development was informed by environmental and sustainability considerations. Further information is provided in Chapter 3: Alternatives.

## 2.4 Scope of the EIA

2.4.1 A formal request for a Scoping Opinion under Regulation 15 of the EIA Regulations was not sought from LB Barnet or the GLA due to project time constraints. This would typically involve submission of an EIA Scoping Report which identifies the topics that would be assessed during the EIA process and the proposed approach to their assessment. Seeking a Scoping Opinion is not mandatory under the EIA Regulations and previous scoping studies and ESs undertaken for earlier iterations of the scheme have resulted in a good understanding of the prevailing environmental issues for the Site.

2.4.2 The EIA Regulations require the ES to consider only the ‘likely significant environmental effects’ of a development, which is reiterated in the PPG and highlights the expectation that the ES should focus on the ‘main’ or ‘significant’ environmental effects only. The PPG states:

*“The Environmental Statement should be proportionate and not be any longer than is necessary to assess properly those effects. Where, for example, only one environmental factor is likely to be significantly affected, the assessment should focus on that issue only. Impacts which have little or no significance for the particular development in question will need only very brief treatment to indicate that their possible relevance has been considered.”*

2.4.3 A scoping study was undertaken by Quod for the 2017 Detailed Application to identify the issues which will be significant. An informal meeting was held with the LB Barnet Planning Case Officer to present the findings of the scoping study, invite any comments, and agree the scope of the EIA. The meeting minutes, along with all subsequent correspondence on EIA scope with the LB Barnet Planning Case Office, are provided in Appendix 2.2. This scoping study was informed by an EIA Scoping Report (Appendix 2.3), an EIA Scoping Opinion provided by LB Barnet on 28<sup>th</sup> July 2016 (Appendix 2.4) and subsequent 2016 ES (as amended) in relation to the emerging proposals at that time (i.e. the 2016 Detailed Application).

2.4.4 Following the decision by the Mayor of London to call in the application and the subsequent Amendments, an informal scoping note was submitted to the GLA on 12<sup>th</sup> February 2019 (Appendix 2.6). The scoping note confirmed the topics that would be assessed during the EIA process, as well as, which topics would be ‘scope out’ of the EIA, because the Development would have either no influence on these environmental aspects or is unlikely to give rise to significant effects. In addition, an updated planning search was undertaken to update the list of committed developments to be included within the assessment of cumulative effects (See Section 2.9 for further details). The topics that form the technical chapters of this ES are listed in Table 2.1.

Table 2.1: ES Technical Chapters

Topics	
Socio-Economics (Chapter 6)	Air Quality (Chapter 9)
Traffic and Transport (Chapter 7)	Noise and Vibration (Chapter 10)
Townscape and Visual Assessment (Chapter 8)	Wind Microclimate (Chapter 11)

2.4.5 Cumulative effects are considered in each technical chapter, apart from effect interactions which are considered within Chapter 12: Effect Interactions (see section 2.9 for further details).

2.4.6 The following technical topics have been scoped out of the EIA: archaeology; built heritage; ecology; ground conditions and contamination; water resources and flood risk; daylight, sunlight, overshadowing and solar glare; carbon emissions; light pollution; waste; human health; vulnerability to major accidents; telecommunications; electromagnetic fields; sustainability and climate change adaptation and resilience. Justification for scoping out these topics is provided in Appendix 2.6.

### Temporal Scope

#### Construction

2.4.7 The EIA considers the likely significant effects of during demolition and construction, as well as, completion and occupation of the Development. It was assumed that the works for the Development would commence in third quarter of 2019, although a different start date would not alter the findings of the assessment.

2.4.8 The indicative delivery programme for the Development is approximately 48 months with completion in the third quarter of 2023.

#### Completed Development

2.4.9 The principal assessment year of the EIA is based on completion of the whole Development. The year 2024 is nominally assumed as the year that the Development would be complete and occupied for the purposes of the assessment. This year may be subject to change, although this is unlikely to materially affect the outcome of the assessments.

### Spatial Scope

2.4.10 The geographical or spatial scope of the ES takes into account the following factors:

- The physical extent of the Development, shown on the Site Location Plan, with the planning application boundary demarcated by a red line;
- The nature of the baseline environment;
- The nature and scale of the likely environmental effects; and
- Consultation with stakeholders.

2.4.11 For each topic, the spatial extent of the predicted effects is put into the context. For example, direct cultural heritage effects on archaeological remains are confined to the Site rather than beyond the Site boundary. However, potential landscape and visual impacts are typically experienced at a local or wider level depending on the scale of buildings.

- 2.4.12 The study area or spatial scope for each technical assessment is defined and stated in the methodology section of each chapter.

## 2.5 Consultation

- 2.5.1 During the five-week statutory consultation period related to the Scoping Opinion request for the 2016 Detailed Application, LB Barnet liaised with a range of consultees and the public who provided comment on the proposed scope and approach to the EIA. Further consultation was undertaken by the project team as considered appropriate to their specialist roles.
- 2.5.2 Statutory consultees and other key stakeholders were also consulted during the EIA and design process. Regular meetings were held with LB Barnet and the GLA including a review with GLA's Quality Review Panel in February 2019. Other stakeholders and members of the public were consulted via public consultation events held on 14 November 2017, 15 November 2017, 9 March 2019 and 12 March 2019. A summary of the consultation events is detailed in the Statement of Community Involvement which accompanies the planning application.
- 2.5.3 During the consultation period for the 2017 Detailed Application, a number of consultation bodies commented on the planning application. This period is where the local planning authority must consult consultation bodies and other parties who, are affected or likely to be affected by, or have an interest in the planning application. Section 2 of the Planning Statement provides a background to the consultation process for the Development.
- 2.5.4 A summary of the key issues relevant to the EIA process raised through the consultation process and how they were addressed in the EIA is provided in the 'Assessment Methodology - Consultation' section of each technical chapter.

## 2.6 Defining the Baseline

### Baseline Conditions and Future Baseline Scenarios

- 2.6.1 The baseline environmental conditions need to be established to enable an accurate assessment of potential changes that may occur, and to assess the resultant environmental effects of the Development. Understanding baseline conditions also assists in the identification of the most appropriate mitigation which could be employed to avoid or minimise any significant effects.
- 2.6.2 Baseline information was gathered to define and describe the existing environmental characteristics and receptors for each environmental topic. The baseline assessment year for the EIA will be the Site and its surrounds in its current condition, as recorded in recent surveys, datasets and site inspections (i.e. 2016/2017, unless otherwise stated). In some cases, data was used which pre-dates or post-dates 2016/2017, however this is clearly stated and the rationale for use and validity is provided within each technical assessment/chapter.
- 2.6.3 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. Future baseline conditions are considered under the 'Baseline Conditions' section as appropriate within each technical chapter.

## 2.7 Assessment of Effects

### Enabling, Demolition and Construction

- 2.7.1 It is envisaged that the construction of Development will be undertaken in one continuous construction phase. Each technical assessment in the ES assumes a notional 'likely-case' scenario with respect to the envisaged construction methods, location (proximity to sensitive receptors) and timing as outlined in Chapter 5: Demolition and Construction. Both permanent and temporary construction effects have been identified.
- 2.7.2 The key activities during the enabling, demolition and construction phase which have informed the technical assessments of the ES are described within each chapter as relevant. General commentary on the construction programme and method is provided in Chapter 5: Demolition and Construction. An assumption is in place that contractors will adhere to a Construction Environmental Management Plan (CEMP), which would be secured by planning condition(s). In-line with the Institute of Environmental Management and Assessment (IEMA) best practice, the CEMP can be defined as 'tertiary' mitigation which is defined 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."*
- 2.7.3 For these reasons the CEMP, in essence, forms part of the project description, and is taken as read in assessing effects. As such, the EIA assumes this form of mitigation will be delivered. Thus, any effects that might have arisen without this form of mitigation are not needed to be identified as potential effects, as there should be no potential for them to arise and the principal construction effects can be anticipated and assessed with confidence.

### Completed Development

- 2.7.4 The assessment of potential effects of the completed and occupied Development incorporates analysis of the permanent effects that could arise as a result the Development.

### Identifying and Determining the Significance of Environmental Effects

#### *Identifying Impacts and Effects*

- 2.7.5 The Development has the potential to create a range of 'impacts' and 'effects' with regard to the physical, biological and human environment. The definitions of impact and effect used in this assessment are drawn from the Design Manual for Roads and Bridges (the DMRB), Volume 11<sup>9</sup> as follows:
- **Impact** - a change that is caused by an action. For example, road traffic from the Development would result in increased levels of noise (impact). Impacts can be classified as direct, indirect, secondary, cumulative and inter-related. They can be either positive (beneficial) or negative (adverse); and
  - **Effect** - is used to express the consequence of an impact. For example, increased levels of road traffic noise (impact) has the potential to disturb local noise sensitive receptors (effect).
- 2.7.6 This is expressed in the ES as the 'significance of effect' and is determined by considering the magnitude of the impact alongside the importance, or sensitivity, of the receptor or resource, in accordance with defined significance criteria.
- 2.7.7 Beneficial or adverse impacts are classified on the basis of their nature and duration as follows:

- **Temporary:** Effects that persist for a limited period only (due, for example, to particular activities taking place for a short period of time);
- **Permanent:** Effects that result from an irreversible change to the baseline environment (e.g. land-take) or which will persist for the foreseeable future (e.g. noise from regular or continuous operations or activities);
- **Direct:** Effects that arise from the project itself (e.g. removal of vegetation);
- **Indirect:** Effects that arise which are not a direct result of the project but are closely linked (e.g. changes to surface water quality due to change in land use and urbanisation);
- **Secondary:** Effects that arise as a consequence of an initial effect of the scheme (e.g. induced employment elsewhere); and
- **Cumulative:** Effects that can arise from a combination of different effects at a specific location or the interaction of different effects over different periods of time.

2.7.8 In the context of the Development, short (up to 24 months duration) to medium (up to 48 months duration) term effects are generally determined to be those associated with construction activities, and the long-term effects are those associated with the completed and occupied Development.

2.7.9 Local effects are those effects affecting receptors within and in close proximity to the Site, whilst effects on receptors in the wider study area are considered to be at a district level. Sub-regional effects are those affecting adjacent boroughs, whilst effects on London are considered to be at a regional level.

#### *Defining Magnitude of Impact*

2.7.10 For impacts assessed in this ES, a magnitude of impact has been assigned taking into account the spatial extent, duration, frequency and reversibility of the impact, where relevant. Table 2.2 defines the scale of magnitude of Impact and the associated descriptors used in this ES. Where different assessment criteria were used, this is stated within the relevant topic chapter.

**Table 2.2: Magnitude of Change and Typical Descriptors**

Magnitude	Typical Descriptors
High	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse) Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial)
Medium	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse) Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial)
Low	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse). Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial)

Magnitude	Typical Descriptors
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse) Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).
No change	No loss or alteration of characteristics, features or elements; no observable impact in either direction

2.7.11 The assessment of environmental effects has been undertaken in accordance with relevant industry standards and legislation where such material is available. In cases where it is not possible to quantify effects, qualitative assessments have been carried out and are based on the available knowledge of the Site and potential effect, alongside professional judgement. Where uncertainty exists, this is detailed in the 'Assumptions and Limitations' section under 'Assessment Methodology' in the respective technical chapters.

#### *Sensitivity of Receptor*

2.7.12 Sensitive receptors are defined as the physical or biological resource or user groups that would be affected by the project impacts. The identification of sensitive receptors is informed by baseline studies carried out as part of the EIA. In defining the sensitivity of receptors, the following factors have been considered:

- Vulnerability of the receptor - The degree to which a receptor is susceptible to injury, damage, or harm from an activity;
- Value / importance of the receptor - The ability of a receptor to be able to return to a state close to that which existed before an activity or event caused damage; and
- Recoverability of the receptor - The importance of the receptor in terms of ecological, social / community and / or economic value.

2.7.13 A summary of sensitive receptors is provided within each baseline assessment sections of the ES topic chapters. Table 2.3 defines the sensitivity receptor scale and descriptors in this ES. Where different assessment criteria were used, this is stated within the relevant topic chapter.

**Table 2.3: Environmental Value and Typical Descriptors (DMRB Guidance)**

Value (Sensitivity)	Typical Descriptors
High	High importance and rarity, national scale, and limited potential for substitution
Medium	Medium importance and rarity, regional scale, limited potential for substitution
Low	Low importance and rarity, local scale
Negligible	Very low importance and rarity, local scale

#### **Evaluation of Significance**

2.7.14 The overall significance of an effect is determined by consideration of the magnitude of impact alongside the sensitivity of receptor. In order to ensure a consistent approach to this evaluation throughout the EIA, a matrix approach has been adopted. The matrix presented in Table 2.4 was generally applied throughout this ES. Where different assessment criteria were used, this is stated within the relevant topic chapter.

Table 2.4: Significance Matrix

Sensitivity / Value or Receptor	Magnitude of Effect			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible

- 2.7.15 Each technical chapter provides the specific criteria, including sources and justifications, for quantifying the level of effect significance. Where possible, this has been based upon quantitative and accepted criteria, together with the use of value judgements and expert interpretations to establish to what extent an effect is significant.
- 2.7.16 There is no statutory definition of what constitutes a significant effect and guidance is of a generic nature. However, it is widely recognised that ‘significance’ reflects the relationship between the magnitude of an impact and the sensitivity (or value) of the affected resource or receptor. Statutory designations and any potential breaches of environmental law take precedence in determining significance because the protection afforded to a particular receptor or resource has already been established as a matter of law, rather than requiring a project or site-specific evaluation. Table 2.5 provides general significance descriptors which were used in this ES. Where different assessment criteria were used, this is stated within the relevant topic chapter.

Table 2.5: Descriptors of Significance of Effects

Level of Significance	Description
<b>Major</b>	Major effects (by extent, duration or magnitude) and/or a highly pronounced change in environmental conditions. Effects, both adverse and beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving regional or borough wide objectives, or, could result in exceedance of statutory objectives and/or breaches of legislation.
<b>Moderate</b>	Intermediate effects (by extent, duration or magnitude) and/or pronounced change in environmental conditions. Effect that is likely to be an important consideration at a local level.
<b>Minor</b>	Noticeable but small effect or change in environmental conditions. These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Typically, ‘Minor’ effects are considered ‘Not Significant’ in EIA terms unless otherwise stated within the technical chapter.
<b>Negligible</b>	No discernible change or neutral effect on environmental conditions. An effect that is likely to have a negligible influence, irrespective of other effects.

## 2.8 Mitigation, Monitoring and Residual Effects

- 2.8.1 The development of mitigation measures is an integral part of EIA. Mitigation measures are set out in each of the technical assessment chapters where significant effects are identified, with the aim of avoiding, reducing, or offsetting for potential adverse effects and maximising potential beneficial

effects. In each technical chapter, the specialists undertaking the EIA have identified appropriate mitigation measures based on their assessment of potential significant impacts.

#### 2.8.2 Mitigation measures are divided into:

- Inherent mitigation measures - are those which are 'designed in' or embedded to the scheme and certain to be delivered, i.e. what is proposed by the application forms and drawings.
- Standard mitigation - e.g. construction mitigation with a high degree of certainty over delivery, such as measures to be included in a CEMP.

#### 2.8.3 Actionable mitigation measures - those that require a controlling mechanism or legal undertaking to be implemented, but are under the control of the Applicant, the GLA or statutory bodies, e.g. planning conditions, Section 106 and Section 278 agreements.

## 2.9 Cumulative Effects

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

- **Intra-project effects:** The combined effects of individual effects resultant from the Development upon a set of defined sensitive receptors, for example, noise, dust and visual effects; and,
- **Inter-project effects:** The combined effects arising from another development site(s), which individually might be insignificant, but when considered together, could create a significant cumulative effect.

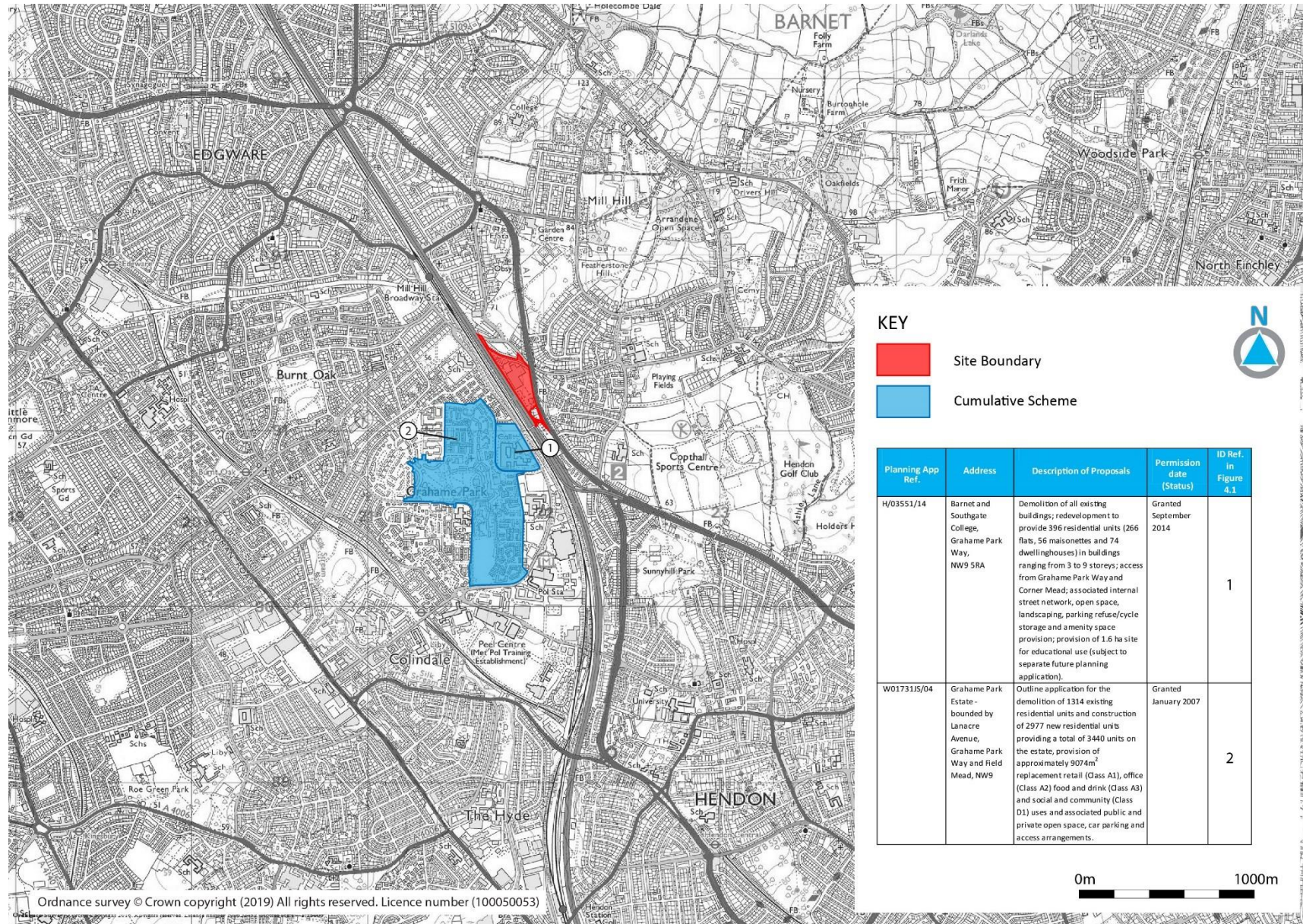
#### 2.9.2 There is currently no guidance on how to define an appropriate study area for considering cumulative effects. A set of screening criteria has, therefore, been developed to identify which reasonably foreseeable developments in the vicinity of the Site should be subject to assessment. This screening criteria has been informed by PPG, '*When should cumulative effects be assessed?*' and the PINS Advice Note 17<sup>10</sup>. Schemes to be considered have been identified based on the following criteria:

- Expected to be built-out at the same time as the Development and with a defined planning and construction programme;
- Spatially linked to the Development (within 1km of the Site);
- Considered an EIA development and for which an ES has been submitted with the planning application;
- Those which have received planning consent (granted or resolution to grant); and/or,
- Introduce sensitive receptors within close proximity of the Site boundary (but are not EIA development).

#### 2.9.3 The development schemes which meet the above criteria which have been included within the cumulative assessment are identified in Figure 2.1. Appendix 2.7 provides further detail of each cumulative scheme and its status. Each technical chapter assesses and presents the potential for inter-project effects arising from the cumulative schemes.

- 2.9.4 The list of cumulative schemes has been kept under review during the preparation of the ES but no further relevant developments have been identified to those identified in Figure 2.1 and Appendix 2.7 at the time of writing.
- 2.9.5 Inter-project effects are considered in Chapter 12: Effect Interactions.

Figure 2.1: Cumulative Schemes (see Appendix 2.7 for further details)



## REFERENCES

---

- <sup>1</sup> Her Majesty's Stationary Office (HMSO), 2017. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017. The Stationary Office. May 2017
- <sup>2</sup> HMSO, 2018. The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018. The Stationary Office. October 2018.
- <sup>3</sup> Department for Communities and Local Government (DCLG), 2017. *Planning Practice Guidance - Environmental Impact Assessment*. ID 4, updated: 28 July 2017. Available online at: <http://planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/>
- <sup>4</sup> Institute of Environmental Impact and Assessment (IEMA), 2011. Special Report: The State of Environmental Impact Assessment Practice in the UK. IEMA.
- <sup>5</sup> European Commission, (2017). Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment Report.
- <sup>6</sup> IEMA, (2016). EIA – Shaping and Delivering Quality Development. July 2016.
- <sup>7</sup> IEMA, (2017). Delivering Proportionate EIA: A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice. July 2017.
- <sup>8</sup> Institute of Environmental Impact and Assessment (IEMA), (2004). Guidelines for Environmental Impact Assessment. IEMA.
- <sup>9</sup> Highways Agency et al. (2008), Design Manual for Roads and Bridges.
- <sup>10</sup> The Planning Inspectorate, (2015). Cumulative Effects Assessment.