# 02 Methodology

# 02 EIA Methodology

## Introduction

**2.1** This chapter sets out the overall approach to the EIA and the response to statutory requirements, the definition of significance used in the EIA and the overarching method of assessing environmental impacts.

## General Approach

**2.2** This ES has been prepared in accordance with current guidance and legislation, including:

- Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (hereafter referred to as the EIA Regulations) (Ref. 2-1);
- Department for Communities and Local Government (DCLG), 2006. Environmental Impact Assessment: A guide to good practice and procedures. A consultation paper, (Ref. 2-2);
- Department of Environment, Transport and the Regions (DETR). Circular 02/99, Environmental Impact Assessment (Ref. 2-3);
- Institute of Environmental Management and Assessment (IEMA), 2004. Guidelines for Environmental Impact Assessment (Ref. 2-4);
- DETR, 2000. Environmental Impact Assessment: A Guide to Procedures (Ref. 2-5); and
- Office of the Deputy Prime Minister (ODPM), 2008. The Crossrail Act, 2008 (C.18) (Ref. 2-6).

**2.3** This ES sets out the likely significant Impacts of the Proposed Development on the environment. Positive and negative, short and long term, direct, indirect and cumulative impacts have been considered. Where mitigation measures have been identified to either eliminate or reduce adverse impacts, these have been incorporated into the project design. In cases where no practical mitigation measure has been identified, the ES has highlighted remaining or 'residual' impacts and classified these in accordance with the significance criteria outlined in paragraph 2.17-2.22 below.

## Requirements for an EIA

**2.4** Section 14 of the Crossrail Act (Ref. 2-6) contains provisions that modify the EIA Regulations such that for specific sites, any later planning applications for OSD must be accompanied by an EIA, irrespective of whether the OSD would otherwise be qualifying EIA development (under Schedule 1 and 2 of the EIA regulations) and whether or not it would be likely to result in significant environmental impacts.

**2.5** The Proposed Development is included in the table of developments listed in Section 14 of the Crossrail Act, and therefore requires an EIA which fulfils the requirements of the EIA Regulations.

## Scoping and Consultation

**2.6** In line with best practice, the EIA has included a preliminary scoping exercise to determine the scope and methodology for the EIA and to focus the assessment on areas which have potential to result in significant environmental impacts.

**2.7** A scoping report was submitted to the LBC on the 6th August 2012 along with a request for a formal scoping opinion. A copy of this and the LBC's scoping opinion (received 10th September 2012) is provided in Volume III (Appendix A) and the key points are summarised in Table 2-1.

**2.8** The following were consulted by LBC during the EIA Scoping process:

- English Heritage (EH);
- The Environment Agency (EA);
- Thames Water Utilities Limited (TWUL); and
- Natural England (NE).

**Table 2-1 Scoping Opinion - Key Points**

| Scoping Opinion (Key Points) | Where Addressed in the ES / Planning Application |
|---|---|
| **London Borough of Camden** | |
| The ES should be prepared with consideration to the Bloomsbury Conservation Area Appraisal and Management Strategy 2011 and the Kingsway Conservation Area Statement 2001, as the Proposed Development is likely to be seen within the settings of buildings within each of these Conservation Areas. | Chapter 3: Planning Policy Context; Chapters 6 – 12; and ES Volume II: Townscape and Visual Impact Assessment. |
| **Environment Agency** | |
| Flood risk is the only identified constraint on this application site. The main flood risk issue at this site is the management of surface water run-off and ensuring that drainage from the development does not increase flood risk either on site or elsewhere. | Chapter 5: The Proposed Development; and Chapter 6: Construction |
| **Thames Water** | |
| The ES should consider the surface water drainage requirement and flood risk of the Proposed Development both on and off the application site, and how it can be addressed. | Chapter 5: The Proposed Development; and Chapter 6: Construction |
| The ES should consider any piling methodology and how this will adversely affect neighbouring utility services. | As discussed in Chapter 5: The Proposed Development and Chapter 6: Construction no piling is required for the construction of the proposed development. This is outside the scope of this planning application. |
| **Natural England** | |
| Although the application site is not located within the vicinity of any SSSI or any other area of designated landscape or biodiversity interest, the application needs to be supported by sufficient biodiversity related information to address the policies of the LDF which require all developments to enhance the biodiversity of their site. | Chapter 5: The Proposed Development |
| **English Heritage** | |
| Although the Grade II* Listed Baptist Church House and Grade II* Listed former St Martin's College Letharby Building may not meet the criteria for schemes included in the cumulative impact assessment, the ES should include them in any assessment of impact on setting. | ES Volume II: Townscape and Visual Impact Assessment |
| Any visual assessment undertaken should take into consideration the relationship between the Proposed Development and the Grade II* Listed Baptist Church House and former St. Martin's College Letharby Building (Grade II* Listed), in addition to the Grade II Listed 8 – 10 Southampton Row. The assessment should also take into consideration any views from Southampton Row and Red Lion Square. | ES Volume II: Townscape and Visual Impact Assessment |
| In relation to the setting of the adjacent listed buildings, vertical access to the Grade II Listed 8 – 10 Southampton Row needs to be resolved as the rear vertical access was previously removed by demolition for the vent shaft. | Works undertaken in relation to the Crossrail intervention shaft are already consented by the Crossrail Act and any works relating to 8-10 Southampton Row are outside the scope of this planning application. |

**2.9** The process of consultation is critical to the development of a comprehensive and balanced EIA. Views of the interested parties serve to focus the environmental studies and to identify specific issues which require further investigation. Consultation is an ongoing process which can assist in the identification of mitigation measures to be incorporated into the project design, thereby limiting potential for adverse impacts and potentially enhancing benefits.

**2.10** The design of the Proposed Development has evolved through consultation with a number of statutory and non-statutory consultees. This consultation process has served to focus the study on those issues of greatest significance and to inform the development of mitigation measures.

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**2.11** Key consultees involved in the design evolution of the Proposed Development include:

- The LBC Planning and Design Officers;
- EH;
- Bloomsbury Conservation Area Advisory Committee; and
- Local residents and other interested parties that attended the Public Consultation Event.

## Sensitive Receptors

**2.12** The EIA process has included the identification and assessment of all likely significant impacts on potentially sensitive environmental receptors resulting from the construction and operational phases of the Proposed Development. These receptors include buildings of cultural significance, archaeological heritage, Conservation Areas, local people and the wider community. Potential sensitive receptors are detailed in Table 2-2 and their locations are shown on Figure 2-1.

**Table 2-2 Sensitive Receptors**

| Category | Description of Receptor | Chapter Reference |
|---|---|---|
| Local residents | Sensitive residential receptors shown in Figure 2-1 and future onsite residential receptors within the Proposed Development have been assessed in the Air Quality assessment.<br><br>Benin House on Procter Street, Sicilian House on Sicilian Avenue and 21 Southampton Row have been assessed in the Noise and Vibration assessment. 8 – 10 Southampton Row has also been assessed in the Noise and Vibration and Daylight and Sunlight assessments. This property is currently vacant but will be returned to residential use after completion of the Proposed Development. | Chapter 6: Construction<br>Chapter 7: Air Quality<br>Chapter 8: Noise and Vibration<br>Chapter 10: Daylight and Sunlight |
| Nearby listed buildings | Carlisle House (8-10 Southampton Row) – Grade II listed<br>Baptist Church House Kingsgate House – Grade II* listed<br>Central St Martins College of Art and Design – Grade II* listed<br>Avenue Chambers, 6-20 Sicilian Avenue, 1-29 Sicilian Avenue, Numbers 25-35 and 35a and attached screen to Sicilian Avenue and 15-23 Southampton Row – Grade II listed<br>114 and 115 High Holborn – Grade II listed<br>Summit House – Grade II listed<br>14-17 Red Lion Square – Grade II listed<br>Kingsway Tram Subway (northern section only) – Grade II listed<br>Victoria House – Grade II listed | ES Volume II: Townscape, Heritage and Visual Impact Assessment |
| Nearby Conservation Areas (CAs) | Kingsway Conservation Area and Bloomsbury Conservation Area | ES Volume II: Townscape, Heritage and Visual Impact Assessment |
| Key short, medium and long-distance views | The application site does not affect any viewing corridors, as designated in the London View Management Framework 2012.<br>However, eight views have been tested following a review of potential points of visibility and sensitive receptors. The following viewpoint locations have been used in the Views Assessment:<br>• Sicilian Avenue, southeast end;<br>• Southampton Row, opposite Fisher Street;<br>• Southampton Row, opposite Catton Street;<br>• Red Lion Square, opposite Fisher Street;<br>• Sicilian Avenue, midpoint;<br>• Southampton Row, junction with Vernon Place;<br>• Southampton Row, junction with High Holborn; and<br>• Red Lion Square, northeast corner. | ES Volume II: Townscape, Heritage and Visual Impact Assessment |
| Pedestrians, cyclists and road users | Pedestrians, cyclists and road users | Chapter 6: Construction |
| Registered Parks and Gardens and Protected London Squares | Bloomsbury Square Gardens – Grade II listed<br>Lincoln's Inn Fields – Grade II listed<br>Red Lion Square | ES Volume II: Townscape, Heritage and Visual Impact Assessment |
| Commercial and Other property | St Martins College | Chapter 6: Construction<br>Chapter 8: Noise and Vibration |

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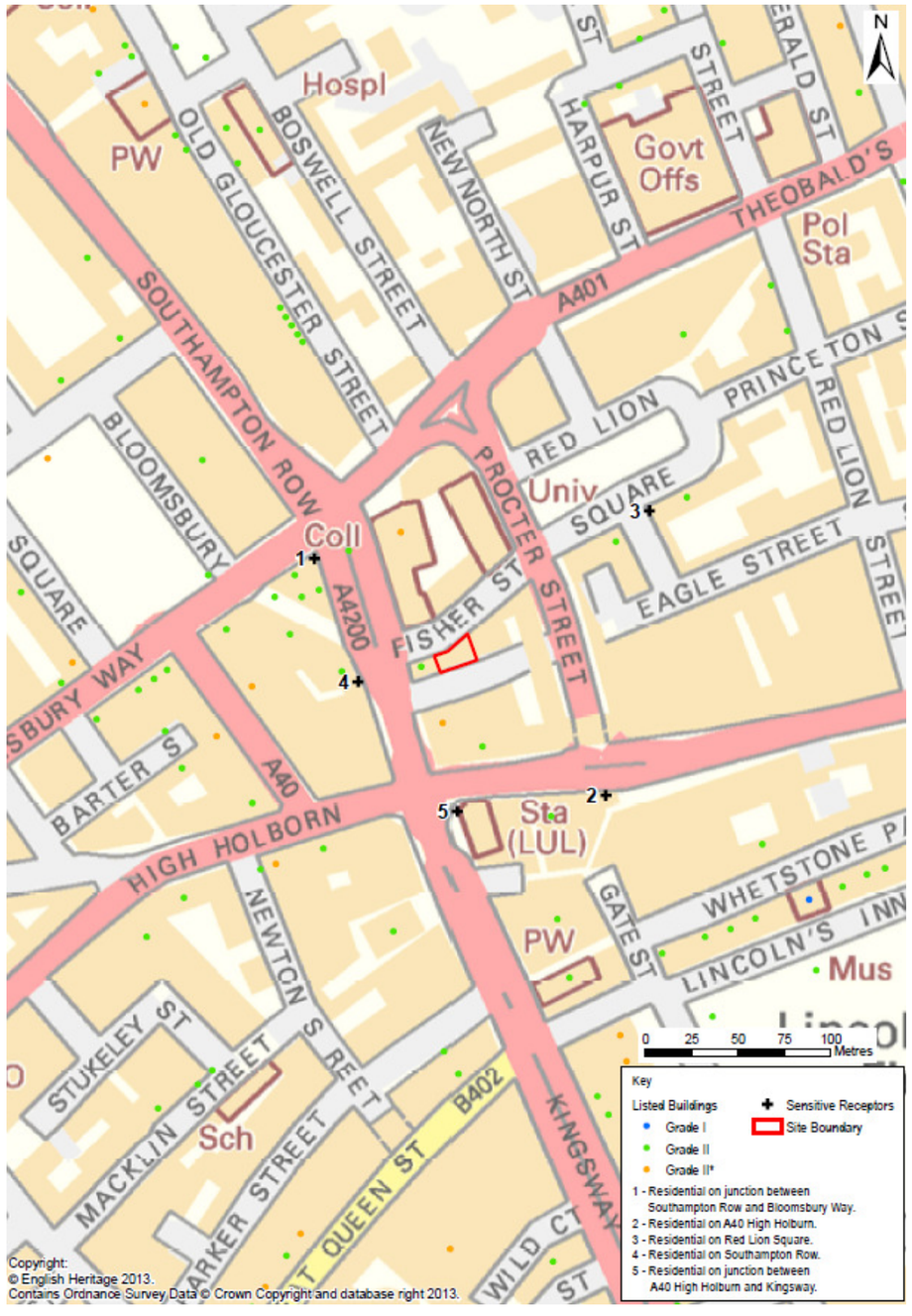
**Figure 2-1 Location of Sensitive Receptors**




## Assessment Methodology

**2.13** The EIA is based on a number of related activities, as follows:

- Consultation with stakeholders;
- Consideration of relevant local, borough, regional and national planning policies, guidelines and legislation relevant to EIA;
- Consideration of technical standards for the development of significance criteria;
- Design review;
- Review of secondary information, previous environmental studies and publicly-available information and databases;
- Expert opinion;
- Physical surveys, monitoring and modelling; and
- Reference to current best practice and guidance in relation to the sustainability of the overall development.

## Structure of Technical Chapters

**2.14** Technical chapters are provided for each environmental topic detailing the application site setting, likely impacts and proposed mitigation. For ease of reading, a standard approach has been taken to the structure of each technical chapter in the ES as follows:

### *Introduction*

**2.15** The introduction details the author/s of the technical study, provides a brief summary of what is considered in the chapter and provides any relevant background information.

### *Planning and Policy Context*

**2.16** This section includes a summary of relevant legislation as well as applicable policies and plans (both adopted and draft) at a national, regional and local level.

### *Assessment Methodology*

**2.17** The methods used in undertaking the technical study are outlined in this section with reference to relevant published standards (e.g. British Standards (BS) and Building Research Establishment (BRE) standards), guidelines (e.g. Design Manual for Roads and Bridges (DMRB)), guidance (e.g. Institute of Environmental Management (IEMA) guidance) and relevant significance criteria.

### *Significance Criteria*

**2.18** Environmental impacts have been classified as follows:

- **Adverse** - detrimental or negative impacts to an environmental resource or receptor;
- **Negligible** - imperceptible impacts to an environmental resource or receptor; or
- **Beneficial** - advantageous or positive impact to an environmental resource or receptor.

**2.19** For the purpose of consistency and in accordance with the principles of section 14 of the Crossrail Act, this EIA has (wherever appropriate) followed the assessment methodology and adopted the significance criteria set out in Volume 5 of the Crossrail ES (Ref. 2-7). These criteria apply a common EIA approach to classifying impacts. When no impacts are predicted, this is stated; however, the following terms have been used to describe the level of impact, according to whether they are:

- **Non-significant impacts (NSig);**
- **Significant impacts (Sig); or**

- **Significant impacts of particular importance (PSig).**

**2.20** Each technical chapter details the criteria used to determine significance in line with the terms described above. Where appropriate, this is based on the Crossrail significance criteria detailed in the Scoping Report issued to the LBC (see Volume III: Appendix A) and with regard to the following:

- Extent and magnitude of the impact;
- Number of receptors affected;
- Impact duration (whether short, medium or long term);
- Impact nature (whether direct or indirect, reversible or irreversible);
- Whether the impact occurs in isolation, is cumulative or interactive;
- Local, district, regional or national scale or value of the resource affected;
- Performance against environmental quality standards; and
- Sensitivity of the receptor.

**2.21** Each of the technical chapters provides the criteria, including sources and justifications, for quantifying the different levels of residual impact. Where possible, this has been based upon quantitative and widely accepted criteria.

**2.22** Where it has not been practical to quantify impacts, qualitative assessments have been carried out, based on professional experience and judgement. Where uncertainty exists, this has been noted in the relevant chapter.

**2.23** In the context of the Proposed Development, short to medium-term impacts are considered to be those associated with the construction phase, and long-term impacts are those associated with the completed, operational Proposed Development. Local impacts are those affecting neighbouring receptors, while impacts upon receptors in the LBC are considered to be at a borough level. Impacts affecting Greater London are considered to be at a regional level, whilst impacts which affect different parts of the country, or England as a whole, are considered at a national level.

### *Baseline Conditions*

**2.24** In order to assess the potential impact of the Proposed Development, it is necessary to determine the environmental conditions that currently exist on the application site. These are known as 'baseline conditions'. The EIA Regulations require that a baseline be used that:

> *"Recognises changes to conditions at the site and conditions 'projected forward' to take account of all 'committed development'."*

**2.25** As the Crossrail works for the Fisher Street shaft and head house are a 'committed development' and currently under construction at the time of undertaking this EIA, it is necessary to consider the completion of the Fisher Street shaft and head house as part of the baseline. However, since the Proposed Development will form part of the Crossrail project, the baseline conditions at the application site prior to the commencement of the Crossrail works (i.e. in 2009) will also need to be considered. As such, there is more than one baseline scenario reported within this ES.

**2.26** The Proposed Development will be assessed against the following two baseline scenarios:

- The 'pre-Crossrail' baseline will be used to assess the operational impacts of the Proposed Development, as the Proposed Development is part of the overall Crossrail project, and therefore should be assessed against the baseline prior to the commencement of the Crossrail works (i.e. 2009); and
- The 'post-Crossrail' baseline (i.e. the application site following the completion of the Crossrail works and prior to the commencement of the Proposed Development work) will be used to assess the construction impacts of the Proposed Development, as it will be representative of the application site conditions reasonably expected to exist at the time following the completion of the Crossrail works and prior to the construction of the Proposed Development (assumed to be the year 2015).

**2.27** In the pre-Crossrail baseline, the application site was occupied by 1 & 2 Fisher Street, and 2 to 6 (even) Catton Street. A four storey building used to front onto Fisher Street and a six storey building used to front onto Catton Street.

**2.28** In the post-Crossrail baseline, all buildings within the application site will have been demolished, all below ground construction works relating to Crossrail will have been completed and the above ground Crossrail operational building (the head house) will have been constructed. This head house is to form the foundation for the construction of the Proposed Development.

**2.29** Further reference is made to aspects of the baseline within each technical chapter.

### *Impact Assessment and Mitigation*

**2.30** This section of the technical chapters considers the likely potential impacts that will result from the Proposed Development both during construction and once the Proposed Development is completed and operational. With regard to the temporal scope and how this relates to Crossrail and the Proposed Development, it has been assumed for the purpose of the assessment that construction of the Proposed Development will commence in 2015 following the completion of the Crossrail works. The Proposed Development is assumed to be operational in 2018.

**2.31** This section describes each identified potential impact and discusses its significance prior to and, where applicable, after implementation of any committed mitigation measures. Quantitative descriptions are included as far as possible.

**2.32** The proposed mitigation measures, which are designed to offset or reduce any significant adverse impacts, are described with a commitment made by the Applicant to implement the measures where possible, either during the construction works or once the application site is operational. These measures can relate to any of the three key phases of the project: design, construction or operation. Examples include:

- Design – for example, a commitment to the use of appropriate materials to compliment the setting;
- Construction – such as commitment to the management of construction waste; and
- Operation – for example, a commitment to the control of operational noise from services.

### *Residual Impacts and Conclusions*

**2.33** Remaining impacts of the Proposed Development, following the implementation of any available mitigation measures, are known as 'residual impacts'. These are discussed in relation to each of the potential impacts, with their significance level identified.

### *Cumulative Impacts*

**2.34** In accordance with the EIA Regulations consideration has been given to 'cumulative impacts'. By definition, these are impacts that result from incremental changes caused by any reasonably foreseeable actions together with the Proposed Development. For the cumulative impact assessment, two types of impact have been considered:

- The combined impact of individual impacts (for example noise, airborne dust or traffic on a single receptor); and

- The combined impacts of several development schemes which may, on an individual basis be insignificant but, cumulatively, have a significant impact.

**2.35** A schedule of schemes has been considered for inclusion in the cumulative impact assessment, based on the following criteria:

- Within 1 kilometre (km) of the Proposed Development; **AND**
- Proposed by way of the submission of a planning application and consented at the time of writing the ES; **AND**
- Will either comprise over 50 residential units or produce a net uplift of more than 10,000 square metres ($m^2$) (Gross External Area (GEA)) of floor space.

**2.36** Owing to the size and scale of the Proposed Development, the nature of the schemes identified, and the likelihood of interactions with the Proposed Development (given the environmental topics considered within this EIA), only a select number of schemes have been included in the cumulative impact assessment. These schemes are listed in Table 2-3 below, with their locations illustrated in Figure 2-2.

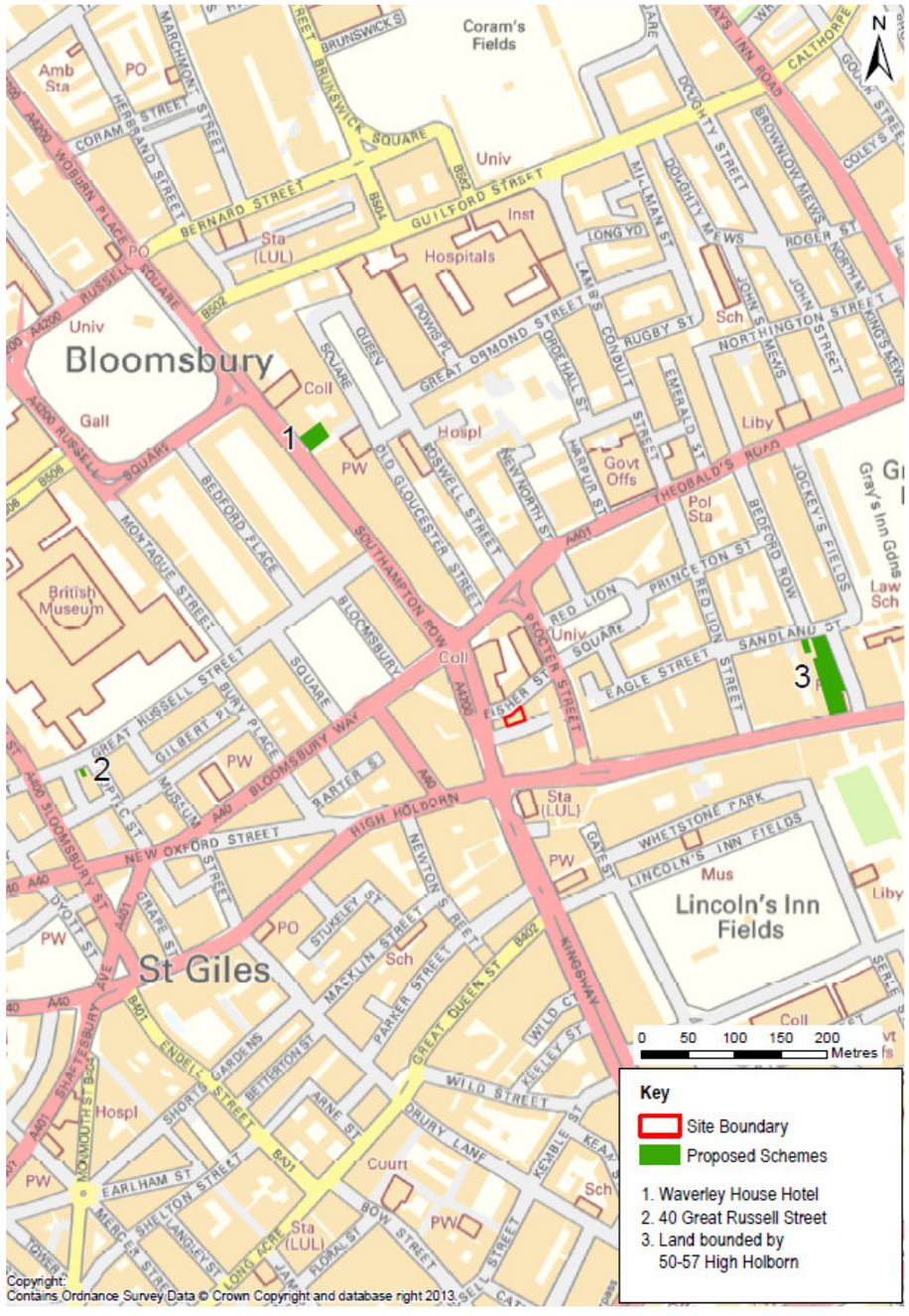
**2.37** Where no cumulative impacts have been identified this is also stated within the assessment chapters.

**Table 2-3 Schedule of Schemes included in the Cumulative Impact Assessment**

| Cumulative Scheme | Description of Scheme | Status |
|---|---|---|
| Waverley House Hotel (Planning reference number 2011/4011/P) | The erection of a seven storey side extension and 5 storey rear extension to an existing hotel, to provide an enclosed fire escape stairway and additional sitting rooms to guestrooms. | Consented |
| 40 Great Russell Street (Planning reference number 2010/6917/P) | The change of use from showroom / office to two 1-bed residential flats at first and second floor levels, and the erection of a four storey plus basement rear extension (including a rear roof terrace at first floor level). | Consented |
| Land Bounded by 50 -57 High Holborn (Planning reference number 2010/5725/P) | Revisions to planning permission 2009/0675/P for mixed use redevelopment of the site involving part demolition, part retention and part erection of a new eight storey (plus a two level basement and roof plant floor) building to accommodate flexible residential and student units. Revisions relate to: variations in the building envelope; office and retail space; relocation of a plant room to the basement to create an eighth floor of office accommodation and various other internal reconfigurations; the creation of ground floor retail units on Hand Court; an increase in parapet height at seventh and eighth floor levels on Brownlow Street; and increase in height of the mansard roof associated with High Holborn House; and an alteration to the location of the service yard entrance and kerb on Brownlow Street. | Consented |

**2.38** The Crossrail works for the Fisher Street shaft have not been considered as part of the cumulative impact assessment as no overlap is expected in terms of the construction programme (works for the Fisher Street shaft are anticipated to be complete prior to the commencement of the works for the Proposed Development).

**Figure 2-2 Location of Cumulative Schemes**



## Assumptions and Limitations

**2.39** A number of general assumptions have been made which are set out below. Assumptions specific to certain environmental aspects are discussed in the relevant chapters of the ES.

- Pre-Crossrail baseline conditions obtained from various external sources are assumed to be accurate;
- The principal land uses adjacent to the application site remain as they are at the time of the ES submission, except in cases where they are identified as cumulative schemes. In these cases, it is assumed that the developments will take place;
- Information provided by third parties, including publicly-available information and databases is correct at the time of publication;
- The application site or adjacent properties will not be the subject of any acts of terrorism or unforeseen events of a severe nature,
- It has been assumed for the purpose of the assessment that the OSD will be operational in 2018;
- The Crossrail works on the application site are ongoing at the time of writing but are expected to be complete prior to the construction of the Proposed Development, which is currently anticipated to commence in 2015. Post-Crossrail baseline conditions and the future scenario is subject to uncertainties due to the dynamic nature of development and the environment; and
- The assessment of cumulative impacts has been reliant on the availability of information on consented developments.

## References

Ref. 2-1 Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 (SI 2011/1824).

Ref. 2-2 DLCG (2006); Environmental Impact Assessment: A guide to good practice and procedures - A Consultation Paper;

Ref. 2-3 DETR; Circular 02/99; Environmental Impact Assessment.

Ref. 2-4 IEMA (2004); Guidelines for Environmental Impact Assessment.

Ref. 2-5 DETR (2000); Environmental Impact Assessment: A Guide to Procedures.

Ref. 2-6 ODPM (2008); The Crossrail Act (C.18).

Ref. 2-7 ERM / Crossrail Ltd (2005); Crossrail Environmental Statement Volume 5.