

Volume 1: Environmental Statement

Idé Real Estate Limited

1 Fisher Street & 8-10 Southampton Row London Borough of Camden

May 2017

Prepared by

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This document must only be treated as a draft unless it is has been signed by the Originators and approved by a Business or Associate Director.

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Limitations

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1 **1** Introduction

- 1.1 This document is an Environmental Statement (the ES), which has been produced by GL Hearn 2 with technical inputs from a number of third parties. The ES has been produced to accompany a 3 full application for planning permission to be submitted to London Borough of Camden (the 'Council' 4 or 'LBC'), relating to the "Full Planning Application and Listed Building Consent for change of use, 5 internal and external alterations to 8-10 Southampton Row and erection of an adjoining 8-storey 6 extension over the existing 1 Fisher Street to provide a part 7, part 9 storey hotel (Use Class C1) 7 with ancillary restaurant and bar and associated plant, refuse and cycle storage areas", the 8 Proposed Development). The Proposed Development will be located on an area of land 9 measuring 1,405 sq.m at 8-10 Southampton Row and 1 Fisher Street, Holborn (the 'Site'). 10
- 111.2This ES has been prepared on behalf of Idé Real Estate Limited (the 'Applicant'), in accordance12with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (the13'EIAR') as amended by the Town and Country Planning (Environmental Impact Assessment)14(Amendment) Regulations 2015 (the 'Amendment EIAR').
- 151.3The Proposed Development is an urban development project falling within the category of16developments referred to in paragraph 10(b) of the table at paragraph 2 of Schedule 2 of the17Amendment EIAR. The Proposed Development falls under thresholds for EIA, under the18Amendment EIAR. However, by virtue of the fact that the Site is referenced in Section 14 of the19Crossrail Act 2008, therefore the need for an Environmental Impact Assessment (EIA) is20mandatory.
- 1.4 Schedule 3 to the EIAR sets out the criteria for the consideration of whether such significant effects
 are likely in any individual scheme. These can be summarised as the characteristics of the
 Proposed Development, the sensitivity of the receiving environment and the characteristics of the
 environmental impacts associated with the proposals.

25 Non-Statutory Guidance

- 1.5 Further guidance is set out in Planning Practice Guidance, Environmental Impact Assessment 26 (2015) (the 'EIA Guidance'). The EIA Guidance provides non-statutory thresholds by way of 27 guidance in interpreting the EIAR. For this purpose, the relevant criteria mentioned include the 28 physical scale of the Proposed Development. The EIA Guidance suggests that EIA is more likely 29 to be required where sites have not previously been intensively developed and the "area of the 30 scheme is more than 5 hectares" or "it would provide a total of more than 10,000m2 of new 31 commercial floorspace" or "the development would have significant urbanising effects in a 32 33 previously non-urbanised area".
- 34 Compilation of Technical Data for this Environmental Statement
- 351.6There were no material difficulties encountered in compiling and assessing the data for this36Environmental Statement sufficient to prevent accurate modelling of the likely environmental37effects of the Proposed Development.
- 39 Implications of the Crossrail Act 2008
- 401.7The Proposed Development is located above a Crossrail emergency access shaft behind the
Listed Building at 8-10 Southampton Row and is defined as 'over site development' (OSD) which is
listed in Section 14 of the Crossrail Act 2008. The Crossrail Act 2008 is an act of Parliament "that
makes provision for a railway transport system from Maidenhead, in the County of Berkshire, and
Heathrow Airport in the London Borough of Hillingdon, through central London to Shenfield, in the
County of Essex, and Abbey Wood in the London Borough of Greenwich, and for connected

- 1 purposes" (Crossrail Bill 2006). The construction of Crossrail is in advanced stages, and is due to 2 commence operation in late-2018.
- 31.8Section 14 of the Crossrail Act 2008 relates to the EIA Regulations for replacement development.4It suggest that where a building is demolished or substantially demolished for the purposes of the5Crossrail works, future planning applications for replacement development must be accompanied6by an Environmental Impact Assessment (EIA). The Proposed Development in 'normal7circumstances' would otherwise fall under the thresholds for EIA, as set in the EIAR and8Amendment EIAR at Schedule 2.
- 9 1.9 On this basis it is therefore considered that the Proposed Development forms part of the overall 10 Crossrail project. Therefore it falls on the Applicant to ensure that all the direct and indirect 11 environmental effects of the development as authorised by the Crossrail Act 2008 are robustly 12 assessed within the ES.
- 13 Scoping
- 14 1.10 On 7 February 2017 the Council responded (**Appendices INT1**) to the Applicant's 'request for a 15 scoping opinion' in line with Regulation 13 of the EIAR in which the Council was requested to 16 confirm in writing their opinion as to the information that should be provided with the Environmental 17 Statement (this Statement). As part of the 'scoping' process the Council duly consulted with a 18 number of parties including those within the Council and external consultees, including Natural 19 England (NE) and the Environment Agency (EA). As a result of these internal and external 20 discussions the following topics were agreed on:
- Townscape, Heritage and Visual Impact;
- Socio-Economic Effects;
- Noise and Vibration
- Air Quality; and

- Sunlight and Daylight.
- 1.11 Within the Council's scoping response, reference is made to the concerns raised by the EA
 (Scoping Response Section 2.7-2.12) in relation to contamination and ground conditions, in
 particular that the Proposed Development "has the potential to create pathways for the transfer of
 pollutants to groundwater on site". Further investigation has been undertaken by WSP Parsons
 Brinckerhoff through reviewing ground investigation and construction works undertaken by
 Crossrail, where no significant contamination was identified. Further information on this is included
 at Appendices INT2.
- 1.12 Furthermore, it is understood that a robust concrete capping method will be used to cover the
 Crossrail shaft in order to construct the Proposed Development. As such this should provide a
 significant capping to prevent the possible pollutants from impacting groundwater and remove any
 possible pollutant linkages.
- 1.13 The proposed piles to be inserted for the new development are to be designed to a similar depth to 37 the Crossrail Pile Toe (92 m TD), which would place the base of the piles within the Lambeth 38 Group - Upper Mottled Beds. A review of the previous investigations reveals the bedrock consists 39 of London Clay and the Lambeth Group. These units comprise high percentages of clay and as 40 such are unproductive strata and will provide a significant aquatard to the vertical migration of 41 contamination into the Thanet Sands and Chalk below. As such there are no pollutant linkages to 42 the deeper bedrock groundwater with the current design scheme. For these reasons, ground 43 conditions and contamination has not been considered further, as part of this assessment. 44
- 1.14 The planning application is supported by an Ecological Impact Assessment, which concludes that
 during both construction and operational phases of the Proposed Development, that no impacts

- are predicted, including the Lincolns Inn Field Local SINC. As a result of this ecology and biodiversity has not been considered further within this ES.
- 3 Compilation of Technical Data for this Environmental Statement
- 1.15 There were no material difficulties encountered in compiling and assessing the data for this
 5 Environmental Statement sufficient to prevent accurate modelling of the likely environmental
 6 effects of the Proposed Development.
- 7 The Environmental Statement
- 8 1.16 This Environment Statement (ES) is made up of a numerous volumes, which need to read in conjunction with each in order to fully understand the Proposed Development. The ES is as follows:
 - Volume 1: Environmental Statement Main Text (this document)
 - Volume 2: Environmental Statement Appendices
 - Volume 3: Non-Technical Summary (NTS)
- 13 14

1 2	2	Project Description
3		The Proposed Development
4 5 6 7 8	2.1	The Proposed Development involve the conversion of 8-10 Southampton Row from the Crossrail site office to a new 120 room premium lifestyle hotel and will include the construction of a new building to the rear of 8-10 Southampton Row, over what is a currently a Crossrail construction access shaft. The planning application seeks planning permission and Listed Building Consent for the following:
9 10 11 12		"for change of use, internal and external alterations to 8-10 Southampton Row and erection of an adjoining 8-storey extension over the existing 1 Fisher Street to provide a part 7, part 9 storey hotel (Use Class C1) with ancillary restaurant and bar and associated plant, refuse and cycle storage areas".
13 14	2.2	The proposals provide a fundamental redevelopment of the Site, returning the frontage to its original use a hotel and will include the following:
15 16 17		 Conversion and restoration of 8-10 Southampton Row to a 120-bed hotel, including a restaurant and bar at first floor (30 Room in the existing building and 90 in the extension, four of them are duplexes)
18		 An eight storey extension to 8-10 Southampton Row to the rear, taking in 1 Fisher Street;
19 20		 An entrance from Southampton Row (northwest corner) serving the hotel and a secondary access located on the building's southwest corner, linking to the restaurant at first floor;
21		• Back of house areas at ground floor in the link between the retained and new build elements;
22		 A second back of house area at the rear (east) of the new build element; and
23		A service entrance from Catton Street.
24 25	2.3	With regards to highways arrangements, the following will be incorporated as part of the Proposed Development:
26		A service bay on Catton Street;
27		 Taxi drop off on Fisher Street, close to the hotel's entrance;
28		Cycle parking;
29		Zero car parking; and
30		Zero coach parking.
31		Site and Surroundings
32 33 34 35 36 37	2.4	The Site, which measures 1,405 sq.m, currently comprises the Grade II Listed Carlisle House (8-10 Southampton Row), fronts onto Southampton Row and is currently in use as Crossrail site offices on floors two to four. At present the Crossrail works are scheduled to be complete in late-2017, at which point construction works for the Proposed Development are expected to commence. To the rear of the Site is the Crossrail emergency access shaft, beyond which sits an existing UKPN electricity substation.
38 39 40	2.5	The Site is bound to the north by Fisher Street, and to the east by the electricity substation, existing commercial floorspace and Proctor Street. The southern boundary of the Site is adjacent to Catton Street and the main frontage of the Site is Southampton Row. For the most part the surrounding

- 1 area made up of existing office space, with some small residential and cultural (theatre) elements 2 interspersed.
- 2.6 8-10 Southampton Row which fronts the Site is situated within the Kingsway Conservation Area (KCA), however the remainder of the Site is outside of the KCA. Southampton Row is an example of early 20th century commercial architecture on a comprehensive scale. Most of the ground floors are commercial with offices above, with each individual building having different details with variations in quality. The majority of the buildings within the KCA were constructed within a short period between 1900 and 1922, and development was guided by general constraints on height and material, in an attempt to introduce order and coherence.
- 102.7The Grade II listed building (8-10 Southampton Row) is an 8-storey Edwardian Steel frame building,11with two basement levels. It was originally constructed as a hotel (Tollard Royal Hotel) and12Friendly Society Offices in 1905-1906. By the mid-20th century the building incorporated a bank,13and then a pub/ restaurant on the ground and first floors, with nine private residential dwellings14occupying the floors above.
- In terms of planning policy the Council's website identifies the site being within the Holborn Growth
 Area and an Archaeological Priority Area (London Suburbs). However, there are no Scheduled
 Monuments on the Site, with the closest being 'Barnard's Inn Hall (Mercers' School) approximately
 750m east of the Site off High Holborn. Furthermore, the Site in not in an area defined as a World
 Heritage Site.
- 2.9 The Site benefits from excellent transport links, and achieves the highest PTAL rating of 6b.
 Holborn underground station is located approximately 150m to the south, which provides access to
 London Underground services via both the Central and Piccadilly Lines. There are frequent bus
 services on Southampton Row, Proctor Street and High Holborn. In addition, there a number of
 Santander Cycle Hire (Boris Bikes) docks within walking distance of the Site.
- A review of the Environment Agencies Flood Map has revealed that the Site is located fully within
 an area defined as Flood Zone 1, which means that the Site has a low probability/ less than a 1 in
 1,000 annual chance of flooding from rivers or the sea. As a result, land within Flood Zone 1 is
 suitable for all types of development including hotels.

29 1 Fisher Street

- As can be seen in Figure 1 (below), the Fisher Street part of the Site (eastern part) has been cleared of previous buildings and is currently a construction site for Crossrail. Under the provisions of Schedule 7 to Crossrail Act 2008, 'Plans and Specifications' approval was granted on 16 December 2011 by London Borough of Camden (LBC) for the Fisher Street intervention shaft and protective head house, which will allow emergency and maintenance access to the proposed Crossrail tunnel between Tottenham Court Road and Farringdon. As the existing site currently stands, construction is ongoing by Crossrail within the intervention shaft.
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Figure 1: Site Location



8-10 Southampton Row

- Control 2.12 The 8-10 Southampton Row part of the Site comprises a standalone 8no storey (plus 2no basement levels) building with its entrance located on the corner of Fisher Street and Southampton Row. The building is a Grade II listed building which is currently occupied by Crossrail and used as a site office for the neighbouring development at Fisher Street.
- 10 2.13 The basement levels are currently being used as back of house areas for Crossrail construction 11 staff. The ground floor provides site access, at first floor is currently a canteen area and kit 12 storage/locker room, at second - fourth floors are offices, and the upper floors are currently 13 unoccupied providing partial evidence of historical residential occupation.
- 2.14 Built in 1905 8-10 Southampton Row, also known as Carlisle House, was designed by architectural
 firm Bradshaw and Gass in an Edwardian Baroque style. The building was listed grade II on 5th
 May 1988. The list description reads:
- "Hotel and offices, now office block and shop. 1905-6. By Bradshaw Gass and Hope. Stone faced 17 with steel frame. Steeply pitched slated roof to eaves with 2 levels of dormers. Freestanding to 18 front and sides. Edwardian Baroque manner. EXTERIOR: 6 storeys plus roof storeys at 2 levels. 5 19 bays with corner turrets. Rusticated ground and first floors, above ashlar faced. Main entrance on 20 left hand corner; round-headed with rusticated keystone and voussoirs, cartouche over and broken 21 segmental pediment. Square-headed windows except to 4th floor where round-headed with heavy 22 keys. Segmental pediments to 1st floor centre windows and continuous cast-iron balcony. Cornices 23 above ground and first floors; main cornice above fourth floor with subsidiary cornice to fifth floor. 24 Giant pilaster strips rising from second, through fourth floor. Corner turrets corbelled out from first 25

floor level rising to copper covered domes. Turrets have irregular, narrow, vertically set windows.
 Returns with broad segmental pediment above 4th floor and tall pedimented gable above. Tall slab
 chimneys. INTERIOR: retains original staircase and panelling to first floor. HISTORICAL NOTE: an
 early example of a substantial building of steel framed construction. (The British Architect, 1 March
 1907)."

6 **The Wider Context**

- 7 2.15 The surrounding buildings vary in height, age and use. In the immediate surroundings though, the 8 prevailing height is between 5 - 7 storeys, with some buildings to the east increasing to between 9 10-13 storeys in some limited places.
- 2.16 In terms of age of the local buildings, the majority of buildings in Southampton Row/Kingsway were constructed in a relatively short period between 1900-1922, and show Edwardian style. The sites lining Kingsway were developed as a series of prestigious commercial buildings in a neo-classical style, generally uniform in materials, scale and massing and following a consistent building line.
 There are also a number of modern buildings featuring contemporary designs located to the east of the site.
- 16 2.17 In terms of surrounding uses, the local area can be described as mixed use in nature, with typically
 17 commercial uses (Use Classes A1 and A3) at ground floor level, and office uses at upper floors.
 18 There are some residential uses within the wider area, as well as a number of hotels, however the
 19 dominating land use is office.

20 Heritage Context

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- 21 **2.18** The relevant heritage context is as follows:
 - 8-10 Southampton Row is listed grade II located within the Kingsway Conservation Area which ends at the rear of the building i.e. 1 Fisher Street is not in a conservation area;
- Opposite, to the west is the grade II listed 15-23 Southampton Row, within the Bloomsbury Conservation Area;
 - To the south is the grade II* listed Baptist Church House;
 - To the north is the grade II* listed Central St Martin's College of Art and Design; and
- The Kingsway Tram Subway is also grade II listed and forms the only underground tunnel in
 London specifically designed for trams. This part of the tunnel is no longer in use but the tunnel
 further south along Kingsway has been adapted for buses.

31 Planning History

- A full search of the planning history attached to the site has been undertaken and is extensive;
 however we have detailed here the most relevant to the proposal. There are three planning
 applications of interest:
 - Planning Application Ref: P9603002R1 Permission granted for the change of use to a restaurant/pub at basement, ground and first floor, with 9 residential units above;
- Planning Application Ref: 2013/1477/P Permission granted for erection of a part 8/part 9
 storey building to provide 22 residential units at the Southampton Row and Fisher Street site;
 and

• Planning Application Ref: 2016/2985/P - Certificate of Lawfulness, resuming the former lawful use of the property for A4 use at basement, ground and first floor and 9 x residential flats above.

1 3 Project Alternatives

- 3.1 In accordance with Part 1 of Paragraph 2 of Schedule 4 of the EIAR, consideration has been given
 to alternative methods of delivering the Proposed Development. It is a requirement of Crossrail
 that the Proposed Development maintains access to the existing shaft. 'head house' and
 substation that are currently being delivered on the Site. These will all be incorporated within the
 ground floor of the Proposed Development at 1 Fisher Street. This therefore has restrictions on the
 flexibility and layout of any proposals that incorporate 1 Fisher Street.
- 3.2 The Site is currently subject to an approved planning permission (2013/1477P) for 22 residential units. However, the approved residential scheme has not progressed or been implemented, as
 when marketed the scheme proved not to be commercially viable, and it is considered unlikely that
 this permission will be progressed.

12 **Pre-Application Advice**

- 133.3The Applicant has undertaken a series of pre-application meetings with the Council since14November 2016 and has received a number of responses (as set out below):
 - 10 November 2016: Pre-application documents submission
 - 30 November 2016: First Pre-application meeting with the Council.
 - 21 December 2016: First Pre-application written advice received
 - 16 January 2017: Second pre-application revised design submitted
 - 19 January 2017: Second pre-application meeting and site visit with the Council.
 - 17 February 2017: Second pre-application written advice received.
 - 29 March 2017: Third pre-application revised design submitted with additional evidence provided.
 - 30 March 2017: Third pre-application meeting with the Council.
 - 11 May 2017: Third pre-application written advice received.
- 253.4These discussions with LBC have principally centred on matters regarding the existing and26proposed land use, design and heritage matters. However, given that the Proposed Development27can only go on this Site, alternative options only focus on design.

28 Design

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- 29 3.5 The design has been amended a number of times through the pre-application process, with the 30 principle concerns surrounding the relationship between the proposed extension and the existing building, the impact on the historic fabric of the building, and the overall height, bulk and massing 31 of the building. The Council's principle concerns following the first and second pre-application 32 submissions was that the bulk, scale and mass of the building to the rear should be refined and 33 reduced to be more sympathetic on views to the building from the Conservation Area, and also that 34 the link between the buildings should be more carefully considered. As such amendments were 35 made after the first and then second pre-application incorporating the following changes: 36
 - Massing reduced towards the existing building at 6th and 7th floors;
 - Reduction of building to the rear to be sympathetic to views from the Conservation Area;
 - Increased stepping of the façade at Catton Street;
 - Details of the link between the proposed extension and existing listed building; and
- Alterations to the external elevations and material detailing to be sympathetic to the listed building.

- 13.6If the scheme were not progressed, it would be a missed opportunity to regenerate and re-vitalise a2Listed Building, in thriving City Centre location and further degradation of the disused building is3likely to ensue. The opportunity to deliver a high quality premium lifestyle hotel, which returns the4Listed Building to its original use, would be lost. A "do nothing" alternative is not acceptable.
- 5

4 Potentially Cumulative Effects

- 4.1 An Environmental Statement must contain an assessment of the potential for cumulative effects. Cumulative effects may arise from other development which have direct or secondary environmental impacts on the construction or operation of a development e.g. highways, landscaping, visual impacts and air quality. These 'cumulative' projects must therefore be considered alongside the assessments for the Proposed Development for the purposes of a comprehensive EIA.
- 4.2 Discussions with the Council through both the 'scoping' exercise and through other discussions have identified a number of schemes within the vicinity of the Site, which may have either direct or secondary effects, during both construction and operation stages. An overview of the relevant schemes is shown in the table below with information obtained from the Council's Public Access website. They have been considered during assessment, both cumulatively and in combination.

Application Ref	Address	Description of Development	Decision	Link to application
2016/3083/P (Camden)	British Museum Great Russell Street London WC1B 3DG (420m north west)	External extensions and alterations including erection of a four storey extension to the existing Crawford stair within the courtyard of the White Wing Building following the removal of the existing roof of the two storey extension.	Granted 19-10-2016 (Under Construction)	http://planningrecords.ca mden.gov.uk/Northgate/P lanningExplorer17/Generi c/StdDetails.aspx?PT=PI anning Applications On- Line&TYPE=PL/Planning PK.xml&PARAM0=43848 2&XSLT=/Northgate/Plan ningExplorer17/SiteFiles/ Skins/Camden/xslt/PL/PL Details.xslt&FT=Planning Application Details&PUBLIC=Y&XML SIDE=/Northgate/Plannin gExplorer17/SiteFiles/Ski ns/Camden/Menus/PL.x ml&DAURI=PLANNING
2013/3983/P (Camden)	262-267 High Holborn London WC1V 7EE (223m south east)	Construction of a roof extension and 8 storey rear extension following demolition of existing 7 storey rear block and top floor, change of use of part of the ground floor from retail (class A1) to office use (class B1), basement and first floor of the existing public house (class A4) to office use (class B1), and basement and ground floor of existing public house (class A4) to flexible shop/restaurant/bar (class A1/A3/A4) all with associated alterations to new shopfronts; replacement windows and roof top plant.	Granted Subject to a Section 106 Legal Agreement 11- 04-2014	http://planningrecords.ca mden.gov.uk/Northgate/P lanningExplorer17/Generi c/StdDetails.aspx?PT=PI anning Applications On- Line&TYPE=PL/Planning PK.xml&PARAM0=35926 4&XSLT=/Northgate/Plan ningExplorer17/SiteFiles/ Skins/Camden/xslt/PL/PL Details.xslt&FT=Planning Application Details&PUBLIC=Y&XML SIDE=/Northgate/Plannin gExplorer17/SiteFiles/Ski ns/Camden/Menus/PL.x ml&DAURI=PLANNING

Table INT01: Cumulative Schemes

2015/4408/P (Camden)	Library and Under Treasurer's House Lincoln's Inn Lincoln's Inn Fields London WC2A 3TL (430m south east)	Erection of three storey plus basement library and administration building following demolition of Under Treasurer's House, with two storey glazed link to existing library, installation of rooflights over existing lightwells, provision of 6 cycle spaces, provision of attenuation soakaway, and associated landscaping.	Granted Subject to a Section 106 Legal Agreement 01- 06-2016 (Under Construction)	http://planningrecords.ca mden.gov.uk/Northgate/P lanningExplorer17/Generi c/StdDetails.aspx?PT=PI anning Applications On- Line&TYPE=PL/Planning PK.xml&PARAM0=41191 6&XSLT=/Northgate/Plan ningExplorer17/SiteFiles/ Skins/Camden/xslt/PL/PL Details.xslt&FT=Planning Application Details&PUBLIC=Y&XML SIDE=/Northgate/Plannin gExplorer17/SiteFiles/Ski ns/Camden/Menus/PL.x ml&DAURI=PLANNING
2016/0477/P (Camden)	New Oxford Street, 10-12 Museum Street, 16A-18 West Central Street London WC1A 1AP (355m west)	Refurbishment and extension of the site to provide a mixed use scheme which includes 19 self-contained units (6 x 1 bed and 11 x 2 bed and 2 x 3 bed), flexible A1/ A2/ A3 uses and/or B1 and/or D1 at basement and ground floor levels and associated works.	Application Registered: 05- 02-2016 Target Date: 17- 08-2016	http://planningrecords.ca mden.gov.uk/Northgate/P lanningExplorer17/Generi c/StdDetails.aspx?PT=PI anning%20Applications% 20On- Line&TYPE=PL/Planning PK.xml&PARAM0=42814 8&XSLT=/Northgate/Plan ningExplorer17/SiteFiles/ Skins/camden/xslt/PL/PL Details.xslt&FT=Planning %20Application%20Detai Is&PUBLIC=Y&XMLSIDE =/Northgate/PlanningExpl orer17/SiteFiles/Skins/ca mden/Menus/PL.xml&DA URI=PLANNING
15/07560/FULL (Westminster)	Development Site at Land Bounded By Drury Lane, Dryden Street, Arne Street And Shelton Street London (390m south west)	Demolition and redevelopment of site in buildings ranging from 5 storeys to 7 storeys (excluding roof top plant enclosures), including facade retention of 30-35 Drury Lane, 2 Dryden Street, 4-10 Dryden Street and 12 Dryden Street, in buildings to provide retail and restaurant/cafe uses at ground and basement level (Class A1/A3), 68 residential units (Class C3), cycle parking, basement car parking, associated landscaping works.	Decision: Pending, Application received 06-08- 15 Target Date: 05- 11-2015	http://idoxpa.westminster. gov.uk/online- applications/applicationD etails.do?activeTab=sum mary&keyVal=NT7RY0R P06A00

14/11129/FULL (Westminster)	First Chicago House 90 Long Acre London WC2E 9RA (490m south west)	Demolition of existing office building (forming whole street block with frontages to Long Acre, Endell Street, Shelton Street and Arne Street) and redevelopment to provide two new buildings comprising two basements, ground and part seven to part 12 upper floors to provide a mix of uses comprising office (Class B1), 119 residential units (Class C3), retail (Class A1/A3), rehearsal space (sui generis), car parking for 30 cars accessed from Shelton Street together with new kiosk, publically accessible courtyard, landscaping works, plant, cycle parking and other ancillary works	Permitted subject to conditions 05- 05-16	http://idoxpa.westminster. gov.uk/online- applications/applicationD etails.do?activeTab=docu ments&keyVal=NETXYF <u>RP01R00</u>
14/12261/FULL (Westminster)	London School of Economics & Political Science Houghton Street London WC2A 2AE (470m south)	Demolition of existing buildings known as Clare Market, The Anchorage, the East Building, St Clements (partial) and Tower One (partial) and redevelopment to provide replacement interconnected academic facilities for Class D1 and ancillary uses, comprising a two storey basement, a part six storey / part 13 storey building and a seven storey core extension to the St Clements building and associated cycle parking and other works. All arranged around a new public square.	Permitted 12-06- 15 (Under Construction)	http://idoxpa.westminster. gov.uk/online- applications/caseDetails. do?caseType=Applicatio n&keyVal=NGH91QRP0 C400

4.3 The European Commission (1999) Guidelines on the Assessment of Indirect and Cumulative 1 Impacts indicates that there are two types of cumulative effects. Those on a single project and 2 those from different projects (in combination with the project being assessed). Cumulative effects 3 therefore consider the interactions between environmental disciplines as well as between projects. 4 However, with the exception of Townscape and Visual Impacts, which can be considered, to be 5 subjective, the Proposed Development will have negligible effects on the surrounding area once 6 operational, as a result of its location, distance to other development and mitigation. There may 7 be limited effects during construction, but these will be temporary in nature and have not been 8 considered further, as impacts will be mitigated through the careful use of planning conditions. 9

5 Constructing the Proposed Development

- 5.1 At the time of drafting this ES, no contractor has been appointed to deliver the Proposed Development. A result of this a Construction Management Plan (CMP) will need to be implemented, to ensure that the various mitigation measures set out in the technical assessments of this ES are adhered to during the construction period. The CMP can be secured by way of planning condition, the details of which will be supplied to the Council prior to the commencement of development.
- The Applicant has completed the Council's CMP, which is included (in draft) at Appendix INT3. The
 purpose the CMP is to help developers minimise construction impacts and relates to both on site
 activity and the transport arrangements for vehicles servicing the Site.
- In the absence of a detailed CMP, it is expected that the Proposed Development will be constructed
 in line with best practice techniques, whilst complying with the relevant British Standards for the
 construction industry. The current programme of works shows that work will commence in Q4 of
 2017/early Q1 of 2018 or when Crossrail have completed their works. For the purposes of this ES
 the construction period is considered to be 24 months.
- 15 5.4 Construction work will only take place during the following periods:
 - 0800hrs 1800hrs (Monday to Fridays); and
- 0800hrs 1300hrs (Saturdays).

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- 5.5 There will be no working allowed on Sundays or Bank Holidays, unless otherwise agreed in writing
 with the Council prior to a requirement. The only exception to this will be occasions when quieter,
 fitting-out activities take place within the building envelopes, or in the event of an emergency.
- 5.6 In planning the layout of the construction site, the Applicant will ensure that a good housekeeping policy is applied at all times, and as far as reasonably practicable; that amongst other things;
- hoarding will be utilised to screen the construction site;
- all site hoardings will be regularly inspected, repaired and repainted as necessary;
- all working areas will be kept in a clean and tidy condition;
- adequate toilet facilities will be provided for all site staff and disposal of effluent will be 27 disposed of according to waste duty of care regulations;
- rubbish will be removed at frequent intervals and the Site kept clean and tidy;
 - food waste will be removed at frequent intervals;
- any waste susceptible to spreading by wind or liable to cause litter will be stored in enclosed
 containers;
- open fires and burning of waste will be prohibited at all times;
- all necessary measures will be taken to minimise the risk of fire and the contractor will comply
 with the requirements of the local fire authority;
- storage areas, fixed plant and machinery, equipment and temporary buildings will be located
 in areas to limited adverse environmental effects;
 - piling for building foundations will use methods, which minimise noise and vibration disturbance to nearby occupiers;
- all external lighting and illumination associated with the construction process will be in accordance with relevant guidance;
- to ensure that construction lighting does not affect the amenity of residents or create a statutory nuisance under the Environmental Protection Act 1990 (as amended)

1	•	the use of energy efficient options for site facilities will be incorporated wherever possible.
2		They may include energy efficient light bulbs and automatic controls, which will supplement
3		good housekeeping such as switching off equipment when not in use;
4	•	the provision of adequate security will be exercised to protect the public and prevent
5		unauthorised entry to or exit from the Site;
6	•	any CCTV cameras will be located and directed so that they do not intrude into occupied
7		residential property; and
8	•	wheel wash / rumble strips at site exit will prevent material being spread onto the public
9		highway.

1 6 Impact Prediction Methodology

2 Impact Significance Criteria

6.1 The methodology used to assess the scale of impact in this Environmental Statement is based on a standardised scale, as set out in **Table INT02** below. Each of the specialist consultants have based their assessment on this general approach, but the accepted good practice criteria within each topic have led in some cases to modifications to this general approach.

7 Table INT02: Magnitude of Significance

Major (Beneficial/Adverse)	Change resulting in a high degree of deterioration or improvement.		
Moderate (Beneficial/Adverse)	nange resulting in a material deterioration or improvement.		
Low (Beneficial/Adverse)	Change resulting in a low degree of deterioration or improvement.		
Negligible	Change resulting in a negligible degree of deterioration or improvement.		
Neutral	No change.		

8 6.2 The following table (**Table INT03**) shows the general principles that apply in determining the 9 significance of the impact on the receiving environment in each case.

10

Table INT03: Significance Description

Major (Beneficial/Adverse)	A magnitude change that materially affects the receiving environment in a situation where there is little or no scope to accommodate change.			
Moderate (Beneficial/Adverse)	A magnitude of change that materially affects a receiving environment that may have the ability to accommodate change.			
Low (Beneficial/Adverse)	A magnitude of change that has a limited effect on a receiving environment that has the ability to accommodate change.			
Negligible	A magnitude of change that has little effect on a receiving environment that has the ability to accommodate change.			
Neutral	A magnitude of change that results in an impact of neutral significance due to the change being entirely compatible with the receiving environment.			

- 11 6.3 The introductory paragraphs to each topic set out how significant is defined in accordance with this 12 general approach.
- 136.4The significance of any impact identified in the Environmental Statement will vary according to the
sensitivity of the receptor or receiving environment. Where such special sensitivities or
characteristic have been identified. This is explained in the text.
- 16 6.5 The ES has considered the impacts of the construction of the Proposed Development. .
- 17 6.6 The mitigation measures set out in this ES are those which have been identified as appropriate in
 18 the light of current good practice and the project team's experience on other projects. The residual
 19 impacts described are those remaining after completion of the Proposed Development and
 20 implementation of all the proposed mitigation measures.

7 Effects on the Local Environment

2 7.1 **Townscape, Heritage and Visual Impact**

3 Technical references and illustrations for this topic are reproduced in Appendix THV to this 4 ES.

7.1.1 Heritage Collective have been commissioned by Ide Real Estate Limited ('the applicant') to 5 undertake a Townscape and Visual Assessment (TVIA) in respect of the proposed re-development 6 7 of the application site. The purpose of this chapter of the ES is to consider the likely significant 8 effects of the Proposed Development on the character and visual amenity of the application site and surrounding area. This chapter also considers the likely significant effect of the Proposed 9 Development on the historic environment, taking into account the setting of statutory and non-10 statutory heritage assets within the townscape. Appendix THV1 contains the Visual Impact 11 Assessment and Appendix THV2 contains the Heritage Statement - this contains detailed 12 assessment of the heritage impacts relating to both effects on setting and on the fabric of the host 13 building, 8-10 Southampton Row. 14

15 Methodology

- 7.1.2 The study area for the assessment extends to 1km from the application site boundary. It is 16 considered that this is the area in which significant effects brought about by the Proposed 17 Development are most likely to occur. Though there may be the potential for effects of the 18 Proposed Development to extend beyond the limits of the study area, it is considered that any such 19 effect on character or visual amenity is unlikely to be significant. In respect of visual amenity, the 20 visual perception of the Proposed Development within the surrounding townscape diminishes with 21 ever increasing distance. The Proposed Development, where visible, is seen as a progressively 22 smaller element of a wider townscape composed of numerous elements and features of built form 23 and infrastructure. 24
- 7.1.3 The Landscape and Visual Impact Assessment (LVIA) has been undertaken with regard to best
 practice. Particular regard has been given to the 'Guidelines for Landscape and Visual Impact
 Assessment, 3rd Edition' 2013 Landscape Institute/Institute of Environmental Management and
 Assessment (hereafter referred to as GLIVA3).
- 7.1.4 In addition, with regard to the setting of heritage assets Historic England's Historic Environment
 Good Practice Advice Note in Planning Note 3: The Setting of Heritage Assets has been taken into
 account when assessing the effect of the development on the historic environment. The assets
 assessed are those which have the potential to have their heritage significance changed as a result
 of the Proposed Development.
- 7.1.5 The assessment included both a desk based analysis and on site field study and observation. The
 desk survey and study involved the collation and review of existing maps and written information
 about the application site and the wider townscape beyond.
- 7.1.6 The on-site townscape resource survey work and visual assessment for the Proposed
 Development was undertaken on 4th April 2017.

39 Proposals

7.1.7 The information collated under the baseline study is analysed and an assessment made to review
 the effect of the Proposed Development on the townscape character and townscape elements and
 features (townscape resource receptors) of the application site and its surroundings. The
 assessment is based on the Proposed Development detailed in the drawings and documents
 submitted as part of the planning application and outlined in chapter 2 of the ES.

4

- 1 7.1.8 The townscape/landscape character assessment sets out the townscape baseline under two categories (GLVIA3, page 71):
 - Townscape/landscape elements and features; and
 - Townscape character and key characteristics, including townscape value.
- 5 7.1.9 The heritage assessment sets out the baseline within the Heritage Statement and includes the 6 effects on heritage significance and setting of Listed Buildings, conservation areas, and registered 7 parks and gardens.

8 Sensitivity of Receptors

- 7.1.10 The assessment then identifies townscape/landscape receptors, and assesses the sensitivity
 (decided as a combination of susceptibility and value) of those receptors. The likely effects of the
 Proposed Development on the receptors are identified and the magnitude of the effects assessed.
 Combining sensitivity of the receptor and magnitude of effect leads to an assessment of the
 significance of effects arising from the Proposed Development.
- 7.1.11 The assessment considers the sensitivity of the townscape character and the magnitude of change 14 which would result from the Proposed Development. The sensitivity of townscape character is an 15 expression of the townscape's ability to accommodate change. It varies depending on factors such 16 17 as the existing land use, pattern and scale of the townscape, density of development and the degree of openness, condition, the value placed on the townscape and any designations that may 18 apply etc.(GLIVA3 page 74). In most cases the townscape components in the immediate 19 surroundings strongly influence the townscape character, more so than more distant elements or 20 features. However, at elevated viewpoints it may be possible to feel a sense of exposure or 21 remoteness due to the absence of nearby features. 22
- 7.1.12 Townscape value is considered in terms of factors such as the condition and quality of the townscape, the scenic quality, the rarity of the townscape in the locality and at a larger scale, the representativeness of the townscape, the recreation or amenity value of the townscape, its perceptual aspects, and any associations that may exist between the local townscape and historical people or events. This list is not necessarily exhaustive or definitive (GLVIA3, page 84).
- 7.1.13 The townscape assessment evaluates the effects of the Proposed Development on individual 28 townscape/landscape elements and features, such as topography, water features, trees and 29 hedges, street furniture etc. which have been identified within the study area in the baseline survey. 30 The assessment considers the sensitivity of these townscape resources and identifies the 31 magnitude of change that the Proposed Development would create. The sensitivity of an individual 32 townscape/landscape element or feature reflects a combination of its susceptibility to the type of 33 development proposed and its value. An element or feature may be more sensitive in one location 34 than another. Therefore it is not possible to simply place different types of townscape/landscape 35 elements or features into sensitivity bands. Where individual townscape/landscape elements or 36 features have been affected professional judgement has been used to give an objective evaluation 37 of its sensitivity. Justification is given for this evaluation where necessary. 38
- 7.1.14 The sensitivity of Heritage Assets with regard to effects on the historic environment is dependent
 on a number of factors, including the grade of the asset, its archaeological, architectural, historic
 and

42 Significance Criteria

7.1.15 The significance of effects on townscape character and townscape/landscape elements and
 features is determined by combining the sensitivity of the townscape character or features with the
 magnitude of change. Those effects identified as being of major significance may be regarded as
 significant effects with respect to the Town and Country Planning (Environmental Impact
 Assessment) Regulations 2011 (as amended).

- 7.1.16 The following tables set out the criteria and significance thresholds for measuring the effects of the Proposed Development on the townscape character and townscape elements and features (the townscape resource receptors) of the application site and the surrounding area together with the definition of significance. The nature of the effects can be adverse or beneficial or neutral. Unless otherwise stated any effects identified are taken to be adverse in nature.
- 7.1.17 Sensitivity of both townscape resource receptors and townscape character is determined by a combination of the value that is attached to a particular townscape resource receptor/townscape character area and the susceptibility of the townscape resource receptor/townscape character area to any changes that arise as a result of the Proposed Development see pages 88-90 of GLVIA3.
 Vale and Susceptibility are both assessed as high, medium or low.

Table THV1: Sensitivity of Townscape Resource Receptors and Townscape Character

	VALUE			
		HIGH	MEDIUM	LOW
SE	HIGH	High	High	Medium
NSITI	MEDIUM	High	Medium	Low
VITY				
	LOW	Medium	Low	Low

12 7.1.18 The following table THV2 sets out the criteria for townscape and heritage value.

13

Table THV 2: Criteria for Townscape and Heritage Value

	CRITERIA
HIGH	Designated areas at an International, Regional, National or Local (including but not limited to World Heritage Sites, Conservation Area etc.) and also considered an important component of the town/city's character, experienced by a high number of people.
	Townscape condition is good and components are generally maintained to a high standard.
	In terms of perception, enclosure by land use, traffic and movement, light pollution and presence/absence of major infrastructure, the townscape has an elevated level of tranquillity.
	Rare or distinctive elements and features are key components that contribute to the character of the area.
	Listed Buildings would normally be considered to be high sensitivity with regard to heritage interest; however this is dependent on intactness of significance and setting.
	Registered Parks and Gardens would normally be considered to be high sensitivity with regard to heritage interest; however this is dependent on intactness of significance and setting.
MEDIUM	No formal townscape designation but considered to be an important/distinctive component of the wider town/city's character experienced by a large proportion of its population.
	Townscape condition is fair and components are generally well maintained.

	CRITERIA
	In terms of perception, enclosure by land use, traffic and movement, light pollution and presence/absence of major infrastructure, the townscape has a moderate level of tranquillity.
	Rare or distinctive elements and features are notable components that contribute to the character of the area.
LOW	No formal designations but a townscape of local relevance likely to be visited and valued by the local community.
	Townscape condition may be poor and components poorly maintained or damaged.
	In terms of perception, enclosure by land use, traffic and movement, light pollution and presence/absence of major infrastructure, the townscape has limited levels of tranquillity.
	Rare or distinctive elements and features are not notable components that contribute to the character of the area.

1 7.1.19 The following table THV3 sets out the criteria for townscape susceptibility.

2

Table THV 3: Criteria for Townscape Susceptibility

	CRITERIA			
HIGH	Scale of enclosure – townscapes with a low capacity to accommodate the ty of development proposed owing to the interactions of topography, vegetatio cover, built form etc.			
	Nature of land use – townscapes with no or little existing reference or context to the type of development being proposed.			
	Nature of existing elements – townscapes with components that are not easily replaced or substituted (e.g. ancient woodland, mature trees, historic parkland etc.).			
	Nature of existing features – townscapes where detracting features or major infrastructure is not present or where present has limited influence on the townscape.			
MEDIUM	Scale of enclosure – townscapes with a medium capacity to accommodate the type of development proposed owing to the interactions of topography, vegetation cover, built form etc.			
	Nature of land use – townscapes with some existing reference or context to the type of development being proposed.			
	Nature of existing elements – townscapes with components that are easily replaced or substituted.			
	Nature of existing features – townscapes where detracting features or major infrastructure is present and has a noticeable influence on the townscape.			
LOW	Scale of enclosure – townscapes with a high capacity to accommodate the type of development proposed owing to the interactions of topography, vegetation cover, built form etc.			
	Nature of land use – townscapes with extensive existing reference or context to the type of development being proposed.			
	Nature of existing features – townscapes where detracting features or major			

infrastructure is present and has a dominating influence on the townscape.

1 7.1.20 The following table THV4 outlines the magnitude of change for townscape and heritage resource 2 receptors and townscape character.

2

4

 Table THV4: Magnitude of Change for Townscape and Heritage Resource Receptors and

 Townscape Character

HIGH	Total loss or major alteration to existing townscape element or feature/townscape character area					
	I otal loss of major alteration result in harm to significance or setting					
MEDIUM	Partial loss or alteration to existing townscape element or feature/townscape character area					
	Significant modification or change which affects key elements of significance or setting					
LOW	Minor loss or alteration to existing townscape element or feature/townscape character area					
	A change or difference to a key element with is capable of affecting significance or setting					
NEGLIGIBLE	Negligible/no noticeable loss or alteration to existing townscape element or feature/townscape character area					
	Slight change that amounts to no harm to significance or setting					
NEUTRAL	No change					

5 7.1.21 The following table THV5 gives the degree of significance threshold for townscape and heritage 6 resource receptors and townscape character.

7

8

Table THV5: Degree of Significance Threshold for Townscape and Heritage Resource Receptors and Townscape Character

		MAGNITUDE OF CHANGE				
		HIGH	MEDIUM	LOW	NEGLIGIBLE	NEUTRAL
RECEPTOR SENSITIVITY	HIGH	Major	Major	Moderate	Minor	Neutral
	MEDIUM	Major	Moderate	Minor	Negligible	Neutral
	LOW	Moderate	Minor	Negligible	Negligible	Neutral
	NEGLIGIBLE	Negligible	Negligible	Negligible	Negligible	Neutral
	NEUTRAL	Neutral	Neutral	Neutral	Neutral	Neutral

9 10 NB: Boxes highlighted in dark grey = Significant.

Un-highlighted boxes = Not significant

- 1 7.1.22 Professional judgement has been used to determine the magnitude of direct physical impacts on 2 individual existing townscape elements and features/townscape character and on heritage assets.
- 3 Planning Policy, Guidance and Legislative Context

4 Legislation

5 7.1.23 The Planning (Listed Buildings and Conservation Areas) Act 1990 requires in sections 16 and 66 6 that the decision maker in the planning process should have special regard to the desirability of 7 preserving a Listed Building or its setting or any features of architectural or historic interest which it 8 possesses. Section 72 of the Act is relevant to conservation areas, stating that special regard 9 should be had to the desirability of preserving the character or appearance of a conservation area.

10 National Planning Policy Framework

- 117.1.24The National Planning Policy Framework (NPPF) (March 2012) provides guidance for planning12authorities, property owners, developers and others on the preservation and investigation of13archaeological remains and the management of the historic environment. The framework sets out14the obligations placed on the local planning authority (Chapter 12) through the development and15implementation of a local plan. The framework also sets out the need for the determining authority16to ensure that they have sufficient information when making decisions on applications affecting the17historic environment.
- 7.1.25 The NPPF requires the significance, i.e. the archaeological, architectural, artistic or historic interest of heritage assets to be taken into account in planning decisions. In cases where there is harm to significance, such harm should be balanced against the public benefits of the Proposed Development, in a proportionate way. Harm can fall into two categories, less than substantial (paragraph 134 of the NPPF) and substantial (paragraph 133). In both cases the public benefits of a development are to be weighed against the harm in a balancing exercise undertaken by the decision maker.

25 **Regional Planning Policy**

- 7.1.26 The current London Plan (March 2016) includes Policy 7.7 'Location and Design of Tall and Large
 Buildings'. This policy states:
- 28 "Strategic
- A Tall and large buildings should be part of a plan-led approach to changing or developing an area by the identification of appropriate, sensitive and inappropriate locations. Tall and large buildings should not have an unacceptably harmful impact on their surroundings.
- 32 Planning decisions
- B Applications for tall or large buildings should include an urban design analysis that demonstrates the proposal is part of a strategy that will meet the criteria below. This is particularly important if the site is not identified as a location for tall or large buildings in the borough's LDF.
- 36 C Tall and large buildings should:
- a generally be limited to sites in the Central Activity Zone, opportunity areas, areas of
 intensification or town centres that have good access to public transport
- b only be considered in areas whose character would not be affected adversely by the scale, mass
 or bulk of a tall or large building
- 41 c relate well to the form, proportion, composition, scale and character of surrounding buildings, 42 urban grain and public realm (including landscape features), particularly at street level;

- d individually or as a group, improve the legibility of an area, by emphasising a point of civic or visual significance where appropriate, and enhance the skyline and image of London
- e incorporate the highest standards of architecture and materials, including sustainable design and
 construction practices
- 5 f have ground floor activities that provide a positive relationship to the surrounding streets
- 6 g contribute to improving the permeability of the site and wider area, where possible
- 7 h incorporate publicly accessible areas on the upper floors, where appropriate
- 8 i make a significant contribution to local regeneration.
- 9 D Tall buildings:
- a should not affect their surroundings adversely in terms of microclimate, wind turbulence,
 overshadowing, noise, reflected glare, aviation, navigation and telecommunication interference
- 12 b should not impact on local or strategic views adversely
- E The impact of tall buildings proposed in sensitive locations should be given particular consideration. Such areas might include conservation areas, Listed Buildings and their settings, registered historic parks and gardens, scheduled monuments, battlefields, the edge of the Green Belt or Metropolitan Open Land, World Heritage Sites or other areas designated by boroughs as being sensitive or inappropriate for tall buildings".
- 18 LDF preparation
- E Boroughs should work with the Mayor to consider which areas are appropriate, sensitive or inappropriate for tall and large buildings and identify them in their Local Development Frameworks. These areas should be consistent with the criteria above and the place shaping and heritage policies of this Plan."
- 7.1.27 The site is not located within any protected views as identified in The London Plan. Policy 7.7 has
 helped inform the design evolution of the Proposed Development scheme and the preparation of
 this Townscape, Heritage and Visual Assessment.
- 7.1.28 Policy 7.8 and 7.9 relate to Heritage Assets and Heritage Led Regeneration in London. These
 policies advocate the protection and enhancement of the historic environment and encourage the
 use of existing assets to stimulate economic and social regeneration.

29 Local Planning Policy

- 7.1.29 Camden Council's Core Strategy Policy CS14 'Promoting high quality places and conserving our heritage' states; requires development of "the highest standard of design that respects local context and character". It also aims to preserve and enhance Camden's heritage assets and their settings, promote high quality streets and public spaces, and protect important views of St Paul's Cathedral and the Palace of Westminster and important local views.
- 7.1.30 Within the Camden Council's 'Camden Development Policies' document (adopted in 2010), policy
 DP24 'Securing high quality design' states:
- 37 "Policy DP24 Securing high quality design
- The Council will require all developments, including alterations and extensions to existing buildings, to be of the highest standard of design and will expect developments to consider:

- a) character, setting, context and the form and scale of neighbouring buildings;
- b) the character and proportions of the existing building, where alterations and extensions are
 proposed;
- 4 c) the quality of materials to be used;
- 5 d) the provision of visually interesting frontages at street level;
- 6 e) the appropriate location for building services equipment;
- 7 f) existing natural features, such as topography and trees;
- 8 g) the provision of appropriate hard and soft landscaping including boundary treatments;
- 9 h) the provision of appropriate amenity space; and
- *i) accessibility.*"
- 7.1.31 Policy 25 Conserving Camden's Heritage, states that Camden will not permit development that
 causes harm to the character and appearance of a conservation area or to the setting of a Listed
 Building and will seek to protect other heritage assets including Parks and Gardens of Special
 Historic Interest and London Squares (see page 4 of Appendix THV2).
- 7.1.32 Camden Council has an emerging Local Plan, to be given limited weight in the planning process.
 Policy D1 (Design) and Policy D2 (Heritage) replicate the wording already contained within
 previous policies contained in the adopted Development Policies document.
- 7.1.33 Within the scoping opinion response Camden Council requested consideration of the tall buildings policy (within D1 of the emerging Local Plan). However, the Proposed Development is not considered to be a tall building (defined as 'those which are substantially taller than their neighbours or which significantly change the skyline') and as such this policy is not applicable to the development. For this reason, the Historic England Advice Note 4: Tall Buildings is also not relevant.
- 24 Consultation
- 7.1.34 Extensive pre-application discussions have taken place with Camden Council over a series of
 meetings. Consultation has also included discussions and feedback from Historic England. The
 Kingsway Conservation Area Advisory Committee were consulted as part of the scoping exercise
 but did not respond. In addition, a public exhibition was held; details of which can be found
 elsewhere within this submission. As such this chapter covers all the aspects requested by London
 Borough of Camden. A design review panel considered the Proposed Development and provided
 commentary which has influenced the design of the Proposed Development.
- 32 7.1.35 With regard to Archaeology, due to the existing works at the application site there is no 33 requirement to provide further information, as confirmed by GLAAS in a letter dated 25th April 2017.
- 34 Existing Conditions

35 **Description of the Application Site**

7.1.36 The application site is located on the east side of Southampton Row to the south of Fisher Street
 and to the north of Catton Street. The site is broadly rectangular in shape and includes Carlisle
 House (numbers 8-10 Southampton Row), a grade II Listed Building on its eastern edge and One
 Fisher Street to the west. Carlisle House is currently in use by Crossrail Limited as a site office for
 the construction of a large shaft (Fisher Street Shaft) to assist with the development of the Cross
 Rail network. Construction of the Fisher Street Shaft is expected to be completed in December

2017. The construction of the Fisher Street Shaft currently occupies most of the western part of the application site. 2

- 7.1.37 Except for the public highway, the site is private with no public access. The public realm 3 immediately surrounding the site is hard landscaped and there is an absence of any street trees. 4 Built form contains both Fisher Street to the north and Catton Street to the south. The three storeys 5 UKPN electricity substation building and the six storeys Lion Court building, which faces onto 6 Procter Street, contains the site to the east. The topography both on the site and in the surrounding 7 area is level with a gradual and gentle rise in topography to the north of the site boundary. 8
- 7.1.38 Carlisle House, 8-10 Southampton Row, is located within the Kingsway Conservation Area. The 9 remainder of the site is outside the conservation area boundary. To the west of the site boundary, 10 the Kingsway Conservation Area boundary runs to the centre line of Southampton Row. On the 11 western side of this centre line is the Bloomsbury Conservation Area. 12
- 7.1.39 Part of the site, excluding 8-10 Southampton Row, is subject to an extant planning permission -13 Camden Council reference 2013/1477/P. Planning permission was granted, subject to an 14 agreement of Section 106 Agreement, on 5 January 2015 on One Fisher Street for the erection of 15 a residential development to include: 16

"...a part 8/part 9 storey building to provide 22 residential units (Class C3) namely 5 x 1-bedroom, 17 14 x 2-bedroom, 2 x 3-bedroom and 1 x 4-bedroom self-contained flats with associated entrances, 18 refuse and cycle storage and substation; alterations to ground floor facade and screening of 19 Crossrail head house building..." 20

7.1.40 The permitted building has an overall height of 32.230 metres as determined by a finished floor 21 level of +125.270 metres and a maximum roof top height of +157.500 metres. The permitted 22 building would connect to 8-10 Southampton Row at ground floor level. The permitted building 23 forms part of the baseline for the Proposed Development. 24

Heritage Significance 25

7.1.41 A detailed description of Carlisle House, 8-10 Southampton Row (within the application site) is 26 included at Appendix THV2, providing the development of the building over time, its heritage 27 significance and sensitivity to change. The surrounding Listed Buildings, conservation areas and 28 registered parks and gardens are also described in terms of heritage significance and setting within 29 the Appendix. The following assets have been taken into account and their sensitivity judged based 30 on their grade and heritage value as summarised in the table THV6. 31

Table THV6: Sensitivity of Listed Buildings 32

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Asset	Grade	Sensitivity
Carlisle House (8-10 Southampton Row)	П	Moderate
Baptist Church House Kingsgate House	*	High
Central St Martins College of Art and Design	ll*	High
Avenue Chambers, 6-20 Sicilian Avenue, 1-29 Sicilian	П	Moderate
Avenue, Numbers 25-35 and 35a and attached screen		
to Sicilian Avenue and 15-23 Southampton Row		
Summit House	II	Moderate
14-17 Red Lion Square	11	Moderate

Kingsway Tram Subway (northern section only)		Moderate
Victoria House		Moderate

7.1.42 In summary, all of the above assets have an urban setting, experienced as part of the Edwardian 1 streetscape created by the development of Southampton Row. They have group value and 2 contribute to the setting of each other. Heritage significance is best appreciated through visual 3 considerations, which are described later in this chapter it has been taken into account within the 4 assessment of townscape character for area based designation - namely conservation areas and 5 the registered park and garden that is Bloomsbury Square. 6

Townscape Character 7

National Character

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- 7.1.43 National Landscape Character Areas (NCAs) are managed by Natural England. NCAs divide 9 England into 159 distinct natural areas. Each NCA is defined by a unique combination of landscape, 10 biodiversity, geo-diversity, history, and cultural and economic activity. The boundaries of the NCAs 11 follow natural lines in the landscape rather than administrative boundaries. The site is located in 12 NCA 112 Inner London. The key characteristics of NCA 112 Inner London are given as: 13
 - "Varied geology and topography that have defined the growth of London. Inner London sits within a wide flood plain dominated by London Clay soils and gravel terraces; low hills to the north and shallow river valleys are almost entirely obscured by dense urban development. Hills to the north provide highly valued views across London's gentle terraces.
 - The River Thames is the most immediately visible natural feature in the Inner London landscape. The Thames with its tributaries is an internationally important river system, the principal draining network for the Thames Basin, a major source of drinking water for London, and an important historic trade route. It provides wildlife habitat, iconic views and cultural inspiration in Inner London. The Port of London provides deepwater facilities for international marine traffic.
 - An extensive network of parks and open spaces, providing outdoor recreation close to people's homes and places of work. This network, which is also a resource for wildlife, features large public parks such as Hyde Park in the west and Queen Elizabeth Olympic Park in the east; heaths and commons to the north and south; garden squares, churchyards, allotments and public open spaces; and the Thames Path National Trail.
- An extensive urban forest of small woodlands and trees in streets, parks, gardens and open 29 spaces which bring nature into the heart of the city, provide shade and cooling, clean the air, 30 communicate the seasons, support wildlife and provide a link to London's previous wooded 31 landscape. 32
 - A network of rivers, streams, canals, lakes, reservoirs and smaller waterbodies which, together with similar features in outer London, form a strategically important network which provides transport corridors, drainage and flood management, freshwater, diverse wildlife habitats, heritage value, recreational opportunities and important views.
- A unique mix of modern architecture and built heritage features. Many important historic buildings, features and designed landscapes provide evidence of a rich heritage. Roman remains, medieval churches, historic Royal palaces, former Royal hunting grounds and World Heritage Sites at Westminster Palace, the Tower of London and Maritime Greenwich sit alongside and among modern urban development and contemporary iconic features such as the Shard, the Gherkin and the London Eye, providing views across Inner London and to 42 neighbouring NCAs. Architectural materials are very varied and reflect a wide range of sources, from locally made bricks to further afield within the UK, such as Portland Stone from Dorset.

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- Remnant sites of former industry feature throughout Inner London, some of which are managed to support wildlife and/or provide recreational activities. These include former filter beds, brownfield sites awaiting development, railway sidings, canals, docks and quays."
- NB Underlining author's emphasis. The description indicates the diversity of the townscape of
 inner London in terms of the architectural styling of new and old buildings together with the
 variety of architectural materials used. This provides particular context to the Proposed
 Development.
- 8 7.1.44 The general description of NCA 112 Inner London includes the following extract:

"...The central area of London comprises broad formal streets, lined by stone and brick buildings, 9 with narrow streets in the commercial centre and planned layouts of streets and squares in the 10 West End. Surrounding the centre are extensive housing areas, lines of terraced houses, blocks of 11 flats or estates of semi-detached dwellings, focused around local shopping centres, offices and 12 small manufacturing works. Throughout, the dense urban structure is punctuated by a series of 13 large parks and open spaces, in particular the Royal Parks – St James's Park, Hyde Park, Green 14 Park and Regent's Park, near the centre. Elsewhere, small local parks, cemeteries (some 15 extensive, such as Highgate Cemetery, and others very small) and areas of common such as 16 Hampstead Heath and Clapham Common break up the extensive urban area and provide a 17 18 changing scene of vegetation and open space. Street trees play an important part, in particular the mature planes in the streets and squares of the West End, and the lines of flowering cherries in 19 some suburbs. Many of the houses in the suburbs have well-stocked gardens, which contribute to 20 a feel of greenness ... " 21

- 7.1.45 The value of the townscape within the NCA 112 Inner London is assessed as high and the susceptibility to the type of development being proposed is low. Overall the sensitivity of the townscape within the NCA is assessed as medium.
- 25 Local Character
- 7.1.46 Camden Council have prepared a townscape character assessment for the borough the Camden Character Study – Final (June 2015). The detail assessment expressly excludes those parts of the borough within conservation areas. It is noted those parts of the study area for this assessment not within a conservation area specifically the area of townscape centred on Theobald's Road, Drake Street/Procter Street are also excluded from the study.
- 7.1.47 Certain high level aspects of the Camden Character Study cover all areas of the borough. These
 include amongst others, topography, distribution of open/green space, population, urban
 morphology etc. The application site is shown to be in an area of the borough where building
 heights vary between 6 and 12 storeys.
- 35 Kingsway Conservation Area
- 7.1.48 The eastern part of the site is located within the Kingsway Conservation Area. The conservation area was designated on16th June 1981. The Kingsway Conservation Area Statement produced by Camden Council in 2001 describes the character of the area. On page 7 of the statement the introduction states:
- "The majority of buildings in Kingsway were constructed in a relatively short period between 1900
 and 1922. The London County Council attempted to introduce order and coherence by introducing
 a new scale and character to the streets replacing the intensely congested streets and courts. The
 redevelopment was guided by general constraints on height and materials. The sites lining this new
 thoroughfare were developed as a series of prestigious commercial buildings in a neo-classical
 style, generally uniform in materials, scale and massing and following a consistent building line. As
 such, it provides a complete example of large scale Edwardian architecture...

1 ...Together with Regent Street, Kingsway and the Aldwych are outstanding examples of early 20th 2 century commercial architecture on a comprehensive scale, whose character contrasts strongly 3 with the gardens and legal precinct of Lincoln's Inn Fields to the east and the smaller buildings of 4 Covent Garden to the west. Individually the buildings provide a range of architectural detail and 5 there is some difference in quality. <u>The whole however is cohesive; a distinct boulevard character</u> 6 was created a century ago and remains largely intact..."

- NB Underlining is author's emphasis. The emphasised text provides particular context to the application site and the Proposed Development.
- 7.1.49 The part of the site within the conservation area 8-10 Southampton Row, is located in the High
 Holborn to Vernon Place sub area. 8-10 Southampton Row is not specifically mentioned within the
 description of the character of the area. Extracts from the sub area description include:
- "Southampton Row is narrower than the rest of Kingsway...The narrower roadway produces a less
 expansive character than the southern part of the Conservation Area...Walking along Kingsway
 narrow roads lead off it providing breaks in the scale of the street.."
- 7.1.50 The statement identifies plane trees as being a key characteristic of Kingsway. The statement also
 identifies a number of views that are said to "reinforce Kingsway particular character and provide
 interest and relief." One such view is that from Southampton Row along Fisher Street towards Red
 Lion Square.
- 197.1.51The value of the townscape within the Kingsway Conservation Area is assessed as high. The
susceptibility of the townscape to the type of development being proposed is assessed as medium.21Overall the sensitivity of the townscape within the Kingsway Conservation Area is assessed as
high.
- 23 Bloomsbury Conservation Area
- 7.1.52 The Bloomsbury Conservation Area is located approximately 12 metres from the site boundary at
 its closest point. The conservation area designation covers much of the study area outside the
 townscape covered by the Kingsway Conservation Area designation. The Bloomsbury
 Conservation Area was designated on 1st March 1984. A Conservation Area Statement was
 prepared in April 2011.
- 7.1.53 On page 6 of the Bloomsbury Conservation Area Statement the 'Spatial character and plan form' of
 the area is described in the following extracts as:
- 31 "Bloomsbury is noted for its formally planned arrangement of streets and the contrasting leafy 32 squares. The urban morphology comprises a grid pattern of streets generally aligned running 33 north-west to south-east and south-west to north-east, with subtle variations in the orientation of 34 the grid pattern. The quintessential character of the Conservation Area derives from the grid of 35 streets enclosed by mainly three and four storey development which has a distinctly urban 36 character of broad streets interspersed by formal squares which provide landscape dominated 37 focal points...
- ...The townhouses arranged in terraces is the predominant form across the area, reflecting the 38 speculative, (mainly) residential development of the Stuart, Georgian, Regency and early Victorian 39 40 periods. This gives a distinctive, repeated grain to large parts of the area. Around the Inns of Court, courtyard plan forms are the common type relating to this specialist use and a remnant of their 41 former uses as medieval manor houses or mansions that also had a courtyard plan. Overlain on 42 this pattern is the significant influence of a series of much larger footprint buildings associated with 43 a number of large institutional uses (hospitals and universities) which have shaped the 44 development pattern over time. These include the site of the former Foundling Hospital, The British 45 Museum, the University of London, University College, and Great Ormond Street Hospital ..." 46

- 17.1.54The conservation area statement identifies the main building type within the townscape of the
conservation area as being three to four storey town houses. Shops and offices feature along the
main arterial routes through the area. On page 20 it is stated that, "The buildings of the later 20th
century have detailing more influenced by the Modern Movement, although some developments
have adopted a more imitative, historicist approach."
- 7.1.55 Under the section 'Character Analysis' the conservation area statement notes that the conservation area is so extensive that a number of sub areas can be identified. On page 20 the statement says the following:
- 9 "The townscape and character of Bloomsbury results from an inter-play of factors that have 10 affected its evolution over time. Consequently, there are exceptions and examples of buildings and 11 spaces that differ from the overriding character of the area and locations where the change in 12 character from one area to the next may not always be distinct. There are instances, for example 13 where buildings of a similar style, scale and period are located within different sub areas but the 14 overriding character alters as a result of the streets and spaces they define. Where buildings adjoin 15 different sub areas and there are longer views, the contribution to both areas is important."
- 7.1.56 The site is in closest proximity to the Sub Area 8: New Oxford Street/High Holborn/Southampton
 Row. The description of the character of this sub area is extensive. The summary introduction
 states:
- "This sub area is characterised by areas of large-scale, late 19th and early 20th century blocks
 fronting busy thoroughfares. Development followed the construction of new routes combined with
 the widening of earlier streets, thereby cutting through the earlier 17th and 18th century street
 pattern. The narrow back streets in the sub area reflect the earlier layout. <u>The predominant use is</u>
 <u>commercial, with a range of shops, banks, offices, hotels and theatres</u>. Residential accommodation
 generally takes the form of mansion blocks.
- NB Underlining is author's emphasis. The emphasised text within the description indicates that
 hotel uses are a key characteristic of the townscape surrounding the site.
- 7.1.57 Under the heading 'West end of High Holborn and south end of Southampton Row' the statement states:
- "To the south and east, the prevailing building heights in High Holborn and Southampton Row are
 five or six principal storeys rising to eight storeys at the junction of High Holborn with New Oxford
 Street. In High Holborn there is a greater variety of materials; the earlier buildings are
 characterised by red brick and stone, together with yellow stock brick and stucco, whereas the
 1960s insertion tend to be clad in concrete panels. In Southampton Row there is a predominance
 of red brick buildings with contrasting white stone terracotta details."
- 7.1.58 The Queen Square/Red Lion Square sub area 11 covers much of the townscape to the north and
 north-east of the site. On page 80 the statement notes:
- "This sub-area is split into two physically separate areas as a result of the large scale 20th century 37 interventions along Theobald's Road, which fall outside the Conservation Area. Both areas are 38 characterised by a focal square (Queen Square in the north and Red Lion Square in the south) 39 which is surrounded by a network of streets and minor routes. These secondary thoroughfares are 40 characterised by a mix of commercial or residential uses, since these areas were originally 41 developed speculatively in the late 17th and early 18th centuries for a combination of residential and 42 other uses. The formally planned squares comprise landscaped gardens enclosed by cast-iron 43 railings and are now surrounded by a variety of building types, styles and ages, the earlier 44 townhouses having been largely redeveloped during the 19th and 20th centuries." 45
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- 1 7.1.59 On page 81 the statement notes:
- "Although <u>the sub area is architecturally diverse</u>, there are a number of unifying elements. The
 historic building form consists of terraces of townhouses opening out into squares. These create a
 fine urban grain with predominantly small footprints, and narrow frontages. The townhouses create
 greater architectural variety than their more modern neighbours. Where <u>later 19th and 20th century</u>
 <u>buildings have larger footprints</u>, they generally provide continuous frontages and respect the
 historic streetscape..."

NB – Underlining is author's emphasis. The emphasised text provides a particularly useful context
 for the Proposed Development by indicating that the townscape within the Bloomsbury
 Conservation Area is already accommodating of architecturally diversity and that more modern
 buildings are generally larger than buildings pre the late 19th century.

- 12 7.1.60 Under the title 'Southampton Row' the conservation area statement notes:
- "...Southampton Row is well known for its hotel buildings, an important function in Bloomsbury. It
 also has associated retail uses and is home to several office buildings. The buildings lining the east
 side of the street are a mixture of Victorian, Edwardian and later 20th century examples, many of
 which make a positive contribution to the Conservation Area. The predominant building height is
 seven-storeys, although there are some variations..."
- 7.1.61 The value of the townscape within the Bloomsbury Conservation Area is assessed as high. The susceptibility of the townscape to the type of development being proposed is assessed as low, reflecting its greater diversity of character than other parts of the study area. Overall the sensitivity of the townscape within the Bloomsbury Conservation Area is assessed as medium.
- 22 Bloomsbury Square Gardens
- 7.1.62 Bloomsbury Square Gardens were laid out at the end of the 17th century as the centre piece of
 development on the Bloomsbury estate. It was originally formed of town houses along the east
 and west sides with only Southampton House forming the northern side (the eastern side now
 having been replaced by Victoria House). It had a simple layout of four pathways originally before
 being remodelled by Humphry Repton. It now incorporates an underground car park at its southern
 end.
- 7.1.63 The garden has historical value as part of the wider town planning of the Bloomsbury Estate and offers a welcome green lung in the centre of the city. It has traditional cast iron railings surrounding it and some of its 19th century design has been retained. The garden holds artistic value as a place likely to have formed part of many images depicting London and town squares as well as potential archaeological value as largely undeveloped land. Its railings have architectural value.
- 7.1.64 The setting of the garden is defined on its east side by Victoria House, which sits at an entirely different scale to the town houses now occupying its other sides, they enclose views within the square but there is some visibility between the square and the application site when looking southeast along Sicilian Avenue. The contribution of the application site to the setting of the square is positive but limited.
- 7.1.65 The value of the heritage asset is assessed as high. The susceptibility of the setting of the area to
 the type of development being proposed is assessed as high. Overall the sensitivity of the asset is
 assessed as high.
- 42 Study Area Character
- Adjoining the site to the west is an area of townscape not covered by any formal designation. This
 area is irregular in shape and radiates out from the thoroughfares of Boswell Street, Procter Street
 and Theobalds Road. An appraisal of this area shows it to be mainly a mixture of large scale
 residential, commercial and educational/institutional buildings. Buildings are typically late 20th or
early 21st century and range in height but with the majority of buildings being between six and nine storeys. The architectural style is typically modernist and building materials vary considerably but include brick, concrete and metal cladding with large areas of glazing. Street trees are common in the public realm but apart from a number of eateries and shops there is little active frontage evident along most building facades. Noise and movement of vehicles is a detractor across most of the area.

7 7.1.67 The value of the area is assessed as medium. The area is assessed as having a low susceptibility 8 to the type of development being proposed. The overall sensitivity of the area is assessed as low.

9 Visual Context – General Views from the Application Site

7.1.68 The primary views from the site are westward into Southampton Row. Views along Southampton
 Row are oblique ones. Views north, east and southwards from the site are restricted by intervening
 built form. Views along both Fisher Street and Catton Street are oblique.

13 Visual Context – General Views toward the Application Site

- 7.1.69 There is some direct inter-visibility with the application site from those buildings in closest proximity
 to the application site boundary. The adjacent buildings to the north, east and west currently have
 limited amounts of fenestration on those elevations facing the site.
- 7.1.70 Views from the north towards the site are greatly restricted through intervening built form and
 infrastructure between the site boundary and the potential visual receptor i.e. the person or people
 observing the view. 8-10 Southampton Row is visible in oblique views from a limited section of
 Southampton Row to the north of the site and from a number of side streets.
- 7.1.71 Views from the east towards the site are greatly restricted through intervening built form and infrastructure between the site boundary and the potential visual receptor. In particular, the presence of the Lion Court building on Procter Street acts to filter and screen most views of the site from the east. Views from the east towards the site are mainly close distance oblique ones.
- 7.1.72 Views from the south towards the site are greatly restricted through intervening built form and
 infrastructure between the site boundary and the potential visual receptor. 8-10 Southampton Row
 is visible in oblique views from a limited section of Southampton Row south of the application site
 boundary.
- 7.1.73 8-10 Southampton Row is directly visible from the western side of Southampton Row opposite the site boundary. Other views towards the site from the west are greatly restricted through intervening built form and infrastructure between the site boundary and the potential visual receptor.
- 7.1.74 Generally, distant views are greatly restricted through a combination of relatively level topography
 and intervening built form and infrastructure in the townscape between the site boundary and the
 potential visual receptor. Where visible the site is seen only in part and not in its entirety and as
 part of a 360-degree view that already contains other built form within the surrounding townscape.
- 36 Effects During Construction

37 Effect on Townscape Character (Construction Phase)

- 7.1.75 During the construction phase, construction activity would be evident throughout the application
 site. Construction activity evident on the site would include (the list is not necessarily exhaustive):
- Vehicle and plant movement on and off site
- Construction lighting
- Excavations for underground services and utilities
- Demolition works

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- Construction of buildings including the temporary erection of tower cranes
 - Construction of foundations, footings, footways and roads
- Temporary material, plant and machinery storage
 - Temporary protective fencing and hoardings
 - Reinstatement of areas following completion of the construction phase
- 6 7.1.76 The construction activity on the site would be temporary in nature and the resulting effects from 7 such activity would similarly be temporary in nature.

8 Effect on National Character (Construction Phase)

- 7.1.77 The key characteristics identified within NCA 112 Inner London would be materially unaffected during the construction phase of the Proposed Development. With a medium sensitivity, the magnitude of effect on NCA 112 Inner London is assessed as negligible. The effect of the Proposed Development on the character of the townscape at a national level, as expressed in NCA 112 Inner London, during the construction phase is assessed as negligible. The effect would not be significant.
- 15 Effect on the Significance and Setting of Listed Buildings (Construction Phase)
- 7.1.78 During the construction phase of the Proposed Development there would be some limited effect on
 the experience of the Listed Buildings identified as part of this assessment but it would be limited in
 time period and limited to a change within the setting of the Listed Buildings. For Carlisle House
 the effects would be more visible, however it is noted that is has formed part of a construction site
 for some considerable time and that the effects would be no different to those which have already
 taken place.
- 7.1.79 The magnitude of change to the significance of the surrounding Listed Buildings during the construction period is assessed as low. With a high/medium sensitivity and a low magnitude of change the effect on the Listed Buildings during the construction period is assessed as moderate/minor. The effect will be temporary in nature and is not significant

Effect on the Character and Significance of Kingsway Conservation Area (Construction Phase)

- 7.1.80 During the construction phase of the Proposed Development there would be some limited effect on 28 the character of the Kingsway Conservation Area. However, construction works on the site will not 29 represent an intensive change within the Kingsway Conservation Area. Though the construction 30 work will be apparent from the streetscape of Kingsway for the duration of the construction phase 31 32 much of the activity will be screened and filtered from view by hoardings and the retained exterior of 8-10 Southampton Row. For much of the construction period, work will be taking place outside 33 the conservation area designation, with only the taller plant, including cranes and gantries being 34 visible above the hoardings. Physically the elements and features outside the application boundary 35 36 that characterise the townscape of the wider conservation area would be unaltered.
- 7.1.81 The magnitude of change to the character of the Kingsway Conservation Area during the
 construction period is assessed as low. With a high sensitivity and a low magnitude of change the
 effect on the Kingsway Conservation Area during the construction period is assessed as moderate.
 The effect will be temporary in nature and is not significant.

41 Effect on the Character and Significance of Bloomsbury Conservation Area (Construction 42 Phase)

43 7.1.82 Except for the movement of delivery and haulage vehicles, activity on the site during the
 44 construction phase would be outside the designated area of the Bloomsbury Conservation Area.
 45 The movement of vehicles onto and off the site would be confined to certain times of the day and

would not be continuous. The conservation area will be marginally and indirectly affected by construction on the site due to inter-visibility across Kingsway and along Procter Street from Red 2 Lion Square. Other aspects of the character of the townscape within the Bloomsbury Conservation 3 Area will be materially unaffected during the construction period. 4

7.1.83 The magnitude of change within the character of the Bloomsbury Conservation Area during the 5 construction period is assessed as low. With a medium sensitivity and a low magnitude of change 6 7 the effect on the Bloomsbury Conservation Area during the construction period is assessed as minor. The effect will be temporary in nature and is not significant 8

Effect on Study Area Character (Construction Period) 9

- 7.1.84 The eastern part of the site is located within this townscape character area so the character of the 10 townscape will be affected to some extent. This area is a less sensitive part of the wider townscape 11 as it is not within a conservation area and is less tranquil owing to the busy thoroughfares of 12 Theobald's Road and Drake Street/Procter Street. The construction work will only take place in a 13 small proportion of the area as a whole. The movement of delivery and haulage vehicles into and 14 out of the site would be apparent at certain times of the day but vehicle movement and noise are 15 already characteristic of the townscape. There would be a limited amount of intervisibility with the 16 site and the streets surrounding it to the north, south and east but in general owing to the presence 17 of the Lion Court building and the UKPN substation only the taller plant, including cranes and 18 gantries would be evident during much of the construction period. As indicated in the baseline 19 description, the Site is currently a construction site. Though further change would inevitably occur 20 as a result of the Proposed Development's construction period the change would not be a material 21 one - the appearance and activity of the proposal's construction period would be consistent with 22 that of the current construction site. 23
- 24 7.1.85 The magnitude of change on the townscape character of the study area during the construction 25 period is assessed as low. With a low sensitivity and a low magnitude of change, the effect of the Proposed Development on the townscape character of the study area is assessed as negligible. 26 The effect will be temporary in nature and not significant. 27

Mitigation 28

- 7.1.86 The detail mitigation measures for the construction phase of the Proposed Development is 29 contained within the submitted Construction, Environment Management Plan and cross reference 30 should be made to this. 31
- 7.1.87 Typical mitigation measures to be included to help mitigate the effects of the Proposed 32 Development on townscape character and visual amenity during the construction period would 33 include but would not be restricted to: 34
- The programming and sequencing of activities to try and ensure that visually detracting 35 operations such as demolition work etc. will be done as quickly and efficiently as possible. 36
 - The considered routing, programming and timing of vehicle movements onto and off site to avoid conspicuous amounts of work traffic passing through the surrounding townscape.
 - Endeavour to position material storage areas and temporary accommodation so as to reduce the visual effect on receptors (people) living near to or passing by the application site.
 - Reviewing the siting and movement of large scale plant, such as tower cranes, to try and ensure that its visual effects are minimised if possible.
 - Townscape, heritage and landscape features that have been identified as being retained will be appropriately protected throughout the construction phase to ensure their long term viability.
- The use of site hoarding in key locations to reduce or remove sight of the works from nearby 45 receptors. 46
- The minimal use of use of external and internal artificial lighting to maintain safety standards. 47

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1 Effects on Operation

Effect on Townscape Character (Operational Phase)

- 3 Effect on National Character
- 7.1.88 At year 1 of the operational phase of the Proposed Development there would be no further 4 alterations to the character of the NCA 112 Inner London following the completion of the Proposed 5 Development's construction phase. The key characteristics identified within the NCA 112 Inner 6 London would be materially unaltered. Going forward the Proposed Development would be 7 perceived as integral part of the inner London townscape. The magnitude of change on NCA 112 8 Inner London is assessed as negligible. With a medium sensitivity and a negligible magnitude of 9 change, the effect of the Proposed Development at year 1 of the operational phase on the NCA 10 112 Inner London is assessed as negligible and neutral in nature. The effect is not significant. 11
- 12 Effect on the Character and Significance of Kingsway Conservation Area (Operational Phase)
- At year 1 of the operational phase the construction activity would have been removed and the 7.1.89 13 external appearance of 8-10 Southampton Row when perceived from within the townscape of the 14 conservation area would be substantially unaltered. The new element of the Proposed 15 16 Development would be outside the conservation area boundary so that the physical elements and 17 features which help inform the character of the townscape of the conservation area would be physically unaffected with the Proposed Development in place. There would be some intervisibility 18 between the new element of the proposals and a limited section of the conservation area but the 19 townscape of the conservation area is already accommodating in appearance terms of the 20 permitted building granted through application 2013/1477/P. The visual relationship between the 21 townscape conservation area and the site would be largely unaltered so that in character terms the 22 appearance of the townscape of the area would be materially unchanged. The magnitude of 23 change on the character of the Kingsway Conservation Area is assessed as low. With a high 24 sensitivity and a low magnitude of change, the effect of the Proposed Development at year 1 of the 25 operational phase on the Kingsway Conservation Area is assessed as moderate and neutral in 26 27 nature. The effect is not significant.
- 7.1.90 This assessment applies equally in terms of heritage significance in relation to magnitude of effect
 and significant of effect being non-significant.
- 30 Effect on the Character and Significance of Bloomsbury Conservation Area (Operational Phase)
- 7.1.91 At year 1 of the operational phase the construction activity would have been removed. The new 31 element of the Proposed Development would be outside the conservation area boundary so that 32 the physical elements and features that help inform the character of the townscape of the 33 conservation area would be physically unaffected with the Proposed Development in place. There 34 would be some intervisibility between the new element of the proposals and a limited section of the 35 conservation area but the townscape of the conservation area is already accommodating in 36 appearance terms of the permitted building granted through application 2013/1477/P. Only discrete 37 elements of the Proposed Development would be visible and would be seen in the context of other, 38 existing, modern buildings so that in character terms the appearance of the townscape of the area 39 would be materially unchanged. The magnitude of change on the character of the townscape in the 40 Bloomsbury Conservation Area is assessed as low. With a medium sensitivity and a low magnitude 41 of change, the effect of the Proposed Development at year 1 of the operational phase on the 42 character of the townscape in the Bloomsbury Conservation Area is assessed as minor and neutral 43 in nature. The effect is not significant. 44
- This assessment applies equally in terms of heritage significance in relation to magnitude of effect
 and significant of effect being non-significant.
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Effect on the Character and Significance of Bloomsbury Square Gardens (Operational Phase)

7.1.93 At year 1 of the operational phase the construction activity would have been removed. The
 Proposed Development will not be visible from Bloomsbury Square Gardens and as such there will
 be no operational effects.

Effect on the Significance and Setting of Listed Buildings (Operational Phase)

- 7.1.94 At year 1 of the operational phase the construction activity would have been removed and the new 6 development located to the rear of 8-10 Carlisle House developed. The table below summaries the 7 anticipated effects for each Listed Building outside the application site with the effects on Carlisle 8 House being considered separately below. The Visual Impact Assessment (Appendix THV1) 9 demonstrates the change to views from the vicinity, which includes the setting of the Listed 10 Building named below. The assessment of effects is based upon the baseline of the consented 11 development to the rear of Carlisle House and as such the works being assessed are the 12 difference in bulk, scale and mass between the two schemes, changes in detailed design of the 13 elevations of the rear development and internal alterations to Carlisle House (which only affect that 14 single Listed Building). No significant EIA effects are assessed with regard to Listed Buildings. 15
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Table THV7 – Listed Buildings Assessment of Effects

Asset	Grade	Sensitivity	Magnitude of Change	Effect
Carlisle House (8-10 Southampton Row)	II	Medium	Medium	Moderate (Beneficial and Adverse) See below
Baptist Church House Kingsgate House	II*	High	Low	Moderate Although the Proposed Development is larger than that which has consent the setting of this building will not be affected by the new design, which is a high quality proposal. The rear elevation of Carlisle House, such that it would have been visible in views from Baptist Church House does not contribute significantly to the heritage significance of Listed Building and as such the setting of Baptist House Church would be preserved.
Central St Martins College of Art and Design	*	High	Negligible	Negligible The Proposed Development will not present a significant change to that which has consent when considering the setting of this Listed Building, which is defined by large scale buildings in a tight urban form. Views of the building which form part of the backdrop to the new development would be different, but not harmed by the design of the Proposed Development or the increased bulk, which is set in from Fisher Street, away from this Listed Building.

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	II	Medium	Negligible	Negligible There would be no material change between the consented scheme and the Proposed Development in views from this set of Listed Buildings and as such setting would be preserved.
Summit House	=	Medium	Neutral	Neutral There will be no change to the setting of this Listed Building.
14-17 Red Lion Square	II	Medium	Neutral	Neutral There will be no change to the setting of this Listed Building.
Kingsway Tram Subway (northern section only)	II	Medium	Negligible	Negligible There will not be a material change in the setting of the tram subway as a result of the Proposed Development and as such the setting will be preserved.
Victoria House	II	Medium	Negligible	Negligible Views from Victoria House are limited and there will be no material change to the setting of the building as a result of the Proposed Development.

Effect on the Heritage Significance and Setting of Carlisle House (Operational Phase)

- 2 7.1.95 The nature of the effects on Carlisle House are direct and involve change to its setting and to its 3 fabric and internal and external appearance as a result of the Proposed Development.
- 7.1.96 The Proposed Development includes intervention into the rear elevation of the Listed Building and changes to its internal layout to allow it to be returned into a hotel use, as it was originally intended.
 This will involve intervention into the central staircase area to provide access between it and a new extension and the insertion of partitions and services for the hotel. As described in detail within the Heritage Statement at Appendix THV2 the effects will be both harmful (negative) and restorative (beneficial).
- 7.1.97 Negative impacts will arise as a consequence of the removal of the rear elevation at 2nd and 3rd
 floor level, removing the corbeled bays either side of the central staircase to accommodate access
 into new lifts to the rear of the building. In addition, new openings at the half landings between the
 ground and first, first and second and second and third floors will result in loss of two historic
 windows and the removal of wall fabric.

- 17.1.98Internally fabric removal will occur at level 6 of the building. A secondary staircase from level 5 to2level 6 will be removed and replaced in a different location to allow enough headroom on the 5th3floor level landing. On floors 2-7 some areas of historic chimney breast will be removed to allow4enough spaces within bedrooms. These remnants of chimney breasts have no fireplaces (save one,5which is to be retained). These works will result in harm to significance and will affect a key6element of significance such that the magnitude of effect would be medium.
- 7.1.99 In conjunction with these areas of alteration the proposed works will involve beneficial effects which
 will enhance significance, most notably the restoration of the interiors and condition of the building
 following a long period of vacancy. The restoration of the ground and first floor areas to provide
 commercial uses will restore the building to its former glory and enable a greater appreciation of its
 heritage interest. The magnitude of effect for these works is considered to be low to medium.
- 7.1.100 A new extension to the Listed Building will change the setting of the building and the way in which it 12 is experienced. This change, from the consented scheme, will be relatively minimal with reference 13 to views from Southampton Row along Catton Street and Fisher Street (in that a modern, large 14 scale building will be visible beyond the Listed Building in both the baseline and proposed scenario 15 views). The additional bulk of the development will be visible in close range views from Fisher 16 Street and will affect an ability to appreciate the rear elevation of the Listed Building from these two 17 18 streets in short range views. The sensitivity of these views is not as high as those looking onto the principal elevations. In addition, the non-original roof scape to the rear, which is not of special 19 interest, will be and as such the magnitude of change is assessed as low to medium. 20
- 7.1.101 Overall the sensitivity of the asset is medium, due to the already highly altered fabric internally and
 to the rear, and the magnitude of change is assessed as medium that will have an effect on
 significance and setting. This results in moderate effect, classed as a non-significant EIA effect.
- 24 Effect on the Character of the Study Area (Operational Phase)
- 7.1.102 At year 1 of the operational phase the construction activity would have been removed. The 25 Proposed Development would not introduce an unusual or alien element or feature into the 26 townscape of the study area. The character of the study area is already composed of numerous 27 modern and contemporary buildings of a similar height and massing to the new building being 28 proposed. Such existing built form comprises a variety of modern and more traditional building 29 materials. The relationship of the area to 8-10 Southampton Row is that the latter is typically 30 glimpsed, in part only, as an element of the skyline. This relationship would not alter with the 31 Proposed Development in place. The proposed building would be visible only as discrete parts so 32 that the appearance of the townscape in the study area would be substantially unchanged. The 33 magnitude of change on the character of the townscape in the study area is assessed as low. With 34 a low sensitivity and a low magnitude of change, the effect of the Proposed Development on the 35 character of the townscape within the study area is assessed as negligible and neutral in nature. 36 The effect is not significant. 37
- 38 Visual Assessment Effects on Visual Amenity
- 7.1.103 A total of seven representative viewpoints have been agreed with Camden Council upon which to
 base an assessment of the effects of the Proposed Development on visual amenity. A roof top
 viewpoint has not been assessed. The detailed assessment of each viewpoint is given in Appendix
 THV1.
- 7.1.104 The following table THV8 summarises the effect of the Proposed Development on the
 representative viewpoints during the construction phase.

Table THV8 – Summa	y of Visual Effects	(Construction	Phase)
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Viewpoint	Viewpoint Receptor	Level of Effect
VP 1	Users of highway and	Minor

	occupiers of commercial properties	
VP 2	Users of highway and occupiers of commercial properties	Moderate
VP 3	Users of highway and occupiers of commercial properties	Moderate
VP 4	Users of highway and occupiers of commercial properties	Moderate
VP 5	Users of highway and occupiers of commercial properties	Minor
VP 6	Users of highway and occupiers of commercial properties	Moderate
VP 7	Users of highway and occupiers of commercial properties	Minor

17.1.105The nature of the effects during the construction phase would be temporary. No effects have been
identified as being significant.

3 7.1.106 The following table THV9 summaries the effect of the Proposed Development on the 4 representative viewpoints during year 1 of the operational phase.

Table THV9 – Summary of Visual Effects (Operational Phase)

Viewpoint	Viewpoint Receptor	Level of Effect
VP 1	Users of highway and occupiers of commercial properties	Moderate
VP 2	Users of highway and occupiers of commercial properties	Moderate
VP 3	Users of highway and occupiers of commercial properties	Moderate
VP 4	Users of highway and occupiers of commercial properties	Minor
VP 5	Users of highway and occupiers of commercial properties	Minor

VP 6	Users of highway and occupiers of commercial properties	Moderate
VP 7	Users of highway and occupiers of commercial properties	Moderate

1 7.1.107 The nature of the effects during year 1 operational phase would be permanent. No effects have been identified as being significant.

3 Mitigation

7.1.108 Mitigation for the loss of features of heritage significance has been incorporated into the design process. This is demonstrated by the extensive pre-application discussions with key stakeholders to develop and refine the detailed design of the extensions and alterations to the Listed Building.
 The design has changed dramatically through this process, resulting in an enhanced architectural treatment to be employed with the Listed Building.

9 Residual Effects

- 7.1.109 No significant EIA effects have been identified with regard to the effect on the historic environment,
 which will be preserved and enhanced through the reuse of the listed Carlisle House and the
 development to the rear. Moderate adverse and beneficial effects have been identified with respect
 to Carlisle House itself due to the direct effect on fabric and setting.
- 7.1.110 In policy terms the level of harm is less than substantial and there is a requirement to weigh this up with the heritage and wider benefits of the proposal, as detailed in the Heritage Statement at Appendix THV2.
- 7.1.111 No significant EIA Effects have been identified with regard to the effect on the character or visual amenity of the townscape surrounding the application site. Neither have any residual effects been identified that are assessed as significant. The assessment demonstrates that the Proposed Development can be accommodated successfully into the existing fabric of the townscape surrounding the application site.

Receptors	Sensitivity	Magnitude of	Nature of Effect	Duration	Significance of	Significance of	Residual Effects
		Change			Effect without	Effect with	
					Mitigation	Mitigation	
National Character	Medium	Negligible	Temporary	Short term	Negligible	Negligible	No effect
Bloomsbury	Medium	Low	Temporary	Short term	Minor	Minor	No effect
Conservation Area							
Character							
Bloomsbury Square	High	Low	Temporary	Short term	Moderate	Moderate	No effect
Gardens Character							
Kingsway	High	Low	Temporary	Short term	Moderate	Moderate	No effect
Conservation Area							
Character							
Study Area	Low	Low	Temporary	Short term	Negligible	Negligible	No effect
Character							
Viewpoint 1	Medium	Low	Temporary	Short term	Minor	Minor	No effect
Viewpoint 2	High	Low	Temporary	Short term	Moderate	Moderate	No effect
Viewpoint 3	High	Low	Temporary	Short term	Moderate	Moderate	No effect
Viewpoint 4	High	Low	Temporary	Short term	Moderate	Moderate	No effect
Viewpoint 5	Medium	Low	Temporary	Short term	Minor	Minor	No effect
Viewpoint 6	High	Low	Temporary	Short term	Moderate	Moderate	No effect
Viewpoint 7	Medium	Low	Temporary	Short term	Minor	Minor	No effect

Table THV9: Effects Summary Table – Construction Phase

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Table THV10: Effects Summa	ary Table – Operational Phase
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Receptors	Sensitivity	Magnitude of	Nature of Effect	Duration	Significance of	Significance of	Residual Effects
		Change			Effect without	Effect with	
					Mitigation	Mitigation	
National Character	Medium	Negligible	Permanent/neutral	Long term	Negligible	Negligible	Negligible
Bloomsbury	Medium	Low	Permanent/neutral	Long term	Minor	Minor	Negligible
Conservation Area							
Character							
Bloomsbury Square	High	No effect	Permanent	Long term	No effect	No effect	Negligible
Gardens Character							
Kingsway	High	Low	Permanent/neutral	Long term	Moderate	Moderate	Negligible
Conservation Area							
Character							
Study Area	Low	Negligible	Permanent/neutral	Long term	Negligible	Negligible	Negligible
Viewpoint 1	Medium	Medium	Permanent	Long term	Moderate	Moderate	Negligible
Viewpoint 2	High	Low	Permanent	Long term	Moderate	Moderate	Negligible
Viewpoint 3	High	Low	Permanent	Long term	Moderate	Moderate	Negligible
Viewpoint 4	High	Negligible	Permanent	Long term	Minor	Minor	Negligible
Viewpoint 5	Medium	Low	Permanent	Long term	Minor	Minor	Negligible
Viewpoint 6	High	Low	Permanent	Long term	Moderate	Moderate	Negligible
Viewpoint 7	Medium	Medium	Permanent	Long term	Moderate	Moderate	Negligible

1 7.2 Socio-Economic Effects

There are no technical appendices associated with this section of the ES.

3 Introduction

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- This section of the ES of the ES has been prepared by GL Hearn Limited and reports on the likely socio-economic effects of the Proposed Development, including the likely significant effects on the local economy, employment levels (existing and future) and demand on certain local facilities.
- 7 7.2.2 This section provides a summary of relevant planning policy and a description of the methods used 8 in the assessment. This is followed by a description of the relevant baseline conditions of the Site 9 and the surrounding area, and an assessment of the likely significant effects of the Proposed 10 Development during construction works and once the Proposed Development is completed and 11 operational. Mitigation measures are identified where appropriate to avoid, reduce or offset any 12 adverse effects identified, together with the nature and significance of the likely residual effects.

Planning Policy

14 National Planning Policy Framework, 2012

- 7.2.3 The National Planning Policy Framework (NPPF) was published in March 2012. The NPPF sets out the Government's planning policies for England and has replaced virtually all previous Planning Policy Guidance notes and Planning Policy Statements. The 'golden thread' running through the NPPF is a presumption in favour of sustainable development, with reference made to the three key elements of sound planning, which are economic, social and environmental.
- 20 7.2.4 The economic and social roles state:
- an economic role contributing to building a strong, responsive and competitive economy, by
 ensuring that sufficient land of the right type is available in the right places and at the right time
 to support growth and innovation; and by identifying and coordination development
 requirements, including the provision of infrastructure; and
- a social role supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being.
- 7.2.5 The NPPF contains 12 core planning principles, which should underpin both plan-making and decision-taking. One of these core principles states that plan-makers and decision-takers should:
- proactively drive and support sustainable economic development to deliver the homes,
 business and industrial units, infrastructure and thriving local places that the country needs;
 - make every effort to objectively identify and then meet the housing, business and other development needs of an area, and respond positively to wider opportunities for growth;
- always seek to secure high quality design and a good standard of amenity for all existing and
 future occupants;
 - take account of the different roles and character of different areas, promoting the vitality of our main urban areas;
 - encourage the effective use of land by reusing land that has been previously developed;
 - promote mixed use developments;
- actively manage patterns of growth to make the fullest possible use of public transport, walking
 and cycling, and focus significant development in locations which are or can be made
 sustainable; and take account of and support local strategies to improve health, social and
 cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to
 meet local needs."

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- 7.2.6 In terms of commercial development, the NPPF states that Local Planning Authorities (LPA) should
 formulate strategic policies to deliver "the provision of retail, leisure and other commercial development".
- The NPPF also states that the planning process can play an important role in "...facilitating social interaction and creating healthy, inclusive communities" (Paragraph 69). Planning decisions should aim to achieve places that promote:
 - opportunities for meetings between members of the community who might not otherwise come into contact with each other, including through mixed-use developments, strong neighbourhood centres and active street frontages which bring together those who work, live and play in the vicinity;
 - safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion; and
 - safe and accessible developments, containing clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas"
- 7.2.8 NPPF states that the Government is committed to securing economic growth in order to create jobs
 and prosperity, and that the planning system should do everything it can to support sustainable
 economic growth.

London Plan (2016)

- 207.2.9The London Plan acts as the overall strategic plan for London, and sets out an integrated
economic, environmental, transport and social framework for the development of London over the
next 20-25 years.
- 7.2.10 Central to the London Plan, is the Mayor's objective to ensure that London is a city of diverse,
 strong, secure and accessible neighbourhoods; providing residents, workers, visitors and students
 with opportunities to realise and express their potential.
- 7.2.11 Policy 4.5 of the London Plan states the Mayor's commitment to supporting London's visitor
 economy and stimulating growth; taking into account the needs of business as well as leisure
 visitors and seeking to improve the range and quality of provision. The Mayor will seek to achieve
 40,000 net additional hotel rooms by 2036; of which, at least 10% should be wheelchair accessible.
- 7.2.12 Policy 4.5 further states that new visitor accommodation should be located in appropriate locations;
 CAZ's, town centres, intensification areas, and where there is goof public transport access.
- 7.2.13 Policy 4.5 (C) states that Local Development Frameworks should seek to ensure that all new visitor
 accommodation meets the highest possible standards of accessibility and inclusion. Developments
 should be of high quality design.
- 36 Local Planning Policy
- 37 7.2.14 The Local Development Framework comprises the following adopted documents:
- Core Strategy (2010);
 - Camden Development Policies (2010); and
 - Camden Site Allocations (2013).
- 7.2.15 The London Borough of Camden is working towards the adoption of a new Local Plan, which was submitted for examination in June 2016.
- 7.2.16 Camden's Planning Policies Map identifies that 8-10 Southampton Row is located within Kingsway
 Conservation Area. The entire Proposed Development site is located within:

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- An Archaeological Priority Area;
- Central London Area; and
- Holborn Growth Area.

Core Strategy

- 5 7.2.17 The Core Strategy Vision Statement outlines the Councils commitment to ensuring that Camden 6 continues to prove a "valuable contribution to London, in terms of business, employment, research, 7 retail, culture, entertainment, tourism, education and medicine, while supporting housing and our 8 residential communities".
- 9 7.2.18 Policy CS2 states that development in Camden (up to 2025) will be concentrated in the growth 10 areas of Kings Cross, Euston, Tottenham Court Road, Holborn and the West Hampstead 11 Interchange. These areas are expected to host the majority of new business floorspace in the 12 period to 2024/2025.
- 7.2.19 Policy CS8 outlines the Councils commitment to securing a strong economy in Camden. The 13 Council are promoting the provision of 444,000sg.m of permitted office floorspace at Kings Cross, 14 as well as c. 70,000sq.m of office provision at Euston; with further provision in the other growth 15 areas and Central London to meet the forecast demand of 615,000sg.m to 2026. Policy CS8 also 16 states that the Council will expect a mix of employment facilities and types, including the provision 17 of facilities suitable for small and medium sized enterprises. In addition, development should 18 recognise and support the concentrations of cultural and creative businesses in the borough; 19 ultimately supporting Camden's tourism sector. Notwithstanding, the Council recognise the 20 importance of other employment generating uses, including retail, markets, leisure, education, 21 tourism and health. 22
- 7.2.20 Policy CS8 states that the Council will support and promote the Central London area of Camden as a successful and vibrant part of the capital, to live in, work in and visit. As such, the Council will support Central London as a focus for Camden's future growth in homes, offices, hotels, shops and other uses. This policy further reinforces the Councils commitment to concentrating growth within the key areas of Kings Cross, Euston, Tottenham Court Road and Holborn. Notwithstanding, when determining decisions on planning applications, the Council will take into account the specific identity of the area.
- 30 7.2.21 The Core Strategy identifies that the Council's aspirations for Holborn include:
 - The provision of a mix of land uses, with offices and housing as the predominate uses;
 - The provision of appropriate retail and service uses in the area's Central London Frontage and taking opportunities to introduce ground floor retail uses where the continuity of the frontage is currently broken;
 - Appropriate contributions to open space, community facilities, regeneration initiatives and employment and training schemes;
- High quality, sustainable design that respects its surroundings and preserves and enhances
 the area's historic environment; and
- Improving community safety, including reducing opportunities for crime and anti-social behaviour.
- 41 Development Management Policies
- 7.2.22 Policy DP12 explains that the Council will ensure that the development of shopping, services, food,
 drink, entertainment and their town centre uses to not cause harm to the character, function, vitality
 and viability of the centre, the local area or the amenity of neighbours. As such, the Council will
 consider:
- 46 a. The effect of non-retail development on shopping provision and the character of the centre in 47 which it is located;

1 2 3		b. The cumulative impact of food, drink and entertainment uses taking into account the number and distribution of existing uses and non-implemented planning permissions, and any record of harm caused by such uses:
4 5		c. the impact of the development on nearby residential uses and amenity, and any prejudice to future residential development;
6 7		d. parking, stopping and servicing and the effect of the development on ease of movement on the footpath;
8		e. noise and vibration generated either inside or outside of the site;
9		f. fumes likely to be generated and the potential for effective and unobtrusive ventilation;
10		g. the potential for crime and anti-social behaviour, including littering;
11 12 13	7.2.23	Under Policy DP12, to manage potential harm, planning conditions and obligations may be used to address the following issues: h. <i>Hours of operation;</i>
14		i. Noise/vibration fumes and the siting of plant and machinery;
15		j. The storage and disposal of refuse and customer litter;
16		k. Tables and chairs outside of premises;
17		I. Community safety; and
18		m. The use of local management agreements to ensure that the vicinity of the premises are
19		managed responsibly to minimise impact on the surrounding area.
20 21 22	7.2.24	According to DP12, the Council will retain land and buildings that are suitable for continued business use and will resist a change to on-business unless: a. It can be demonstrated to the Councils satisfaction that a site or building is no longer suitable
23		for its existing business use; and
24		b. There is evidence that the possibility of retaining, reusing or redeveloping the site or building for
25		similar or alternative business use has been fully explored over an appropriate period of time.
26 27 28	7.2.25	Where a change of use has been justified to the Council's satisfaction, they will seek to maintain some business use on site, with a higher priority for retaining flexible space that is suitable for a variety of business uses.
29 30 31 32 33	7.2.26	Policy DP14 states that the Council will support tourism development and visitor accommodation, whilst expecting such accommodation to be located in Central London; particularly in the growth areas of Kings Cross, Euston, Tottenham Court Road and Holborn. Furthermore, all tourist development must be easily reached by public transport, provide necessary off-highway pick up points and prove no harm to the balance and mix of uses within the area.
34 35 36 37 38 39	7.2.27	Policy DP25 states that in order to maintain the character of conservation areas, the Council will take account of Conservation Area Appraisals when assessing applications; only permitting development that enhances the character and appearance of the area. The Council will also preserve and enhance listed buildings through preventing demolition, and only granting consent for change of use and/or alterations where it is considered that no harm to the special interest of the building would be incurred.

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Draft Local Plan (2015)

- 7.2.28 Policy G1 states the Council's commitment to creating the conditions for growth, to deliver jobs and facilities to meet Camden's identified needs. Therefore, the Council will support development that makes full use of its site, and resist development that makes inefficient use of Camden's limited land. The Council will expect the provision of a mix of uses in suitable scales; particularly in accessible locations within the borough. The most significant growth is anticipated within growth areas, including Holborn.
- Policy E1 establishes that the Council will secure a strong economy in Camden by creating 7.2.29 9 conditions for economic growth. As such, the Council will maintain a stock of premises suitable for 10 a variety of business activities and for firms of differing sizes, whilst supporting local enterprise 11 development and employment. New office development will be directed to growth areas within 12 Central London, in order to meet the forecast demand for 695,000 sq.m of office floorspace 13 between 2004 and 2031. It is important to note that this policy seeks to safeguard existing 14 employment sites, whilst considering proposals for intensification and redevelopment where 15 additional employment can be offered. Within this, the Council recognise the importance of other 16 17 employment generating uses, including: retail, leisure and tourism.
- 7.2.30 Policy E2 states that the Council will protect sites that are suitable for continued business use, in
 particular premises for small businesses and those businesses and services that provide
 employment for Camden residents. The Council will resist the development of business premises
 for non-business uses, unless it is demonstrated that:
 - The site of the building is no longer suitable for its existing business use; or
 - That the possibility of retaining, reusing or redeveloping the site of building for similar or alternative business use has been fully explored over an appropriate amount of time.
- 7.2.31 The Council will consider redevelopment of sites that are suitable for continued business
 development providing that:
 - the level of employment floorspace is increased or at least maintained;
- the proposed premises are suitable for the continued use of the existing businesses or they are
 suitable for start-ups, small and medium enterprises, such as managed affordable workspace;
- the scheme would increase employment opportunities for local residents, including training and
 apprenticeships; and
 - they include other priority uses, such as housing, affordable housing and open space, where relevant.
- 7.2.32 With regards to tourism infrastructure, under Policy E3, the Council recognise the importance of the visitor economy within the Borough, and as such, will support the development of visitor accommodation. The Council will expect new, large-scale tourism development and accommodation to be located in Central London, and within the Growth Areas. They will also expect large-scale developments to provide training and employ Camden residents. All accommodation must be easily reached by public transport, not harm the balance and mix of uses in the local area and not lead to a loss of permanent residential accommodation.
- 7.2.33 Policy TC4 states that the Council will ensure that the development of shopping, services, food,
 drink, entertainment and other town centre uses does not cause harm to the character, function
 vitality and viability of the centre. As such, the Council will consider:
 - the effect of development on shopping provision and the character of the centre in which it is located;
- the cumulative impact of food, drink and entertainment uses, taking into account the number
 and distribution of existing uses and non-implemented planning permissions, and any record of
 harm caused by such uses;

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- the impact of the development on nearby residential uses and amenity, and any prejudice to future residential development; and
 - noise and vibration generated either inside or outside of the site.

Assessment Methodology and Significance Criteria

- 5 7.2.34 The section provides an assessment of the economic effects of the Proposed Development but 6 also considers the socio-economic issues in the local area, for example increased local 7 expenditure. The impacts of the Proposed Development are considered at varying levels 8 according to the nature of the impact considered. This approach is undertaken in accordance with 9 the 'Additionality Guide: Forth Addition1'. The economic impact of the Proposed Development is 10 considered relative to Greater London, as this is the principal catchment area for the labour market.
- 11 7.2.35 The assessment of potential effects has been undertaken the following methods:
 - The estimation of total jobs on the Site for the Proposed Development was calculated using the Homes & Communities Agency Employment Density Guide 3rd edition (November 2015). Net Internal Area (NIA) was calculated on the basis of 85% Gross Internal Area (GIA), which is RICS accepted calculation.
- Spending estimates of £6 per day for employees taken from YouGov.
- 177.2.36The socio-economic effects were assessed for both magnitude and significance in accordance with18the guidance on the preparation of Environmental Statements which is provided within the Good19Practice Guide² published by the DoE Planning and Research Programme in 1995. These are20described in the tables as set out below:

21 Table SEE01: Magnitude of Significance

Substantial (Beneficial / Adverse)	Change resulting in a high degree of deterioration or improvement.
Moderate (Beneficial / Adverse)	Change resulting in a material deterioration or improvement.
Minor (Beneficial / Adverse)	Change resulting in a low degree of deterioration or improvement.
Negligible	Change resulting in a negligible degree of deterioration or
	improvement.
Neutral	No change.

7.2.37 The following table (Table SEE02) shows the general principles that apply in determining the effect
 on the receiving environment in each case.

24 Table SEE02: Significance Description

Substantial (Beneficial / Adv	verse) A magnitude of change that materially affects the receiving
	environment in a situation where there is little or no scope to
	accommodate change.
Moderate (Beneficial / Adve	rse) A magnitude of change that materially affects a receiving
	environment that may have the ability to accommodate change.
Minor (Beneficial / Adverse)	A magnitude of change that has a limited effect on a receiving
	environment that has the ability to accommodate change.
Negligible (Beneficial / Adv	erse) A magnitude of change that has little effect on a receiving
	environment that has the ability to accommodate change.
Neutral	A magnitude of change that results in an impact of neutral
	significance due to the change being entirely compatible with the
	receiving environment.

¹ Homes & Communities Agency, Additionality Guide, Forth Edition 2014

² Preparation of Environmental Statements for Planning Projects that Require Environmental Assessments – A Good Practice Guide, (HMSO 1995)

- 7.2.38 This guidance in relation to socio-economic matters requires consideration of how the potential
 effects of a development on the physical environmental, impacts on human life. The environmental
 consequences of changes in population, services and employment provision are therefore relevant
 and considered further within this section of the ES.
- 5 7.2.39 In this assessment the potential effects are considered over the construction and operational 6 phases. The construction phase is described in more detail in Chapter 5 of this Environmental 7 Statement. Based in the information provided within Chapter 5 of this ES it is currently anticipated 8 that the construction period, which includes demolition will be approximately 24 months (from start 9 to practical completion).

10 Existing Conditions

- 11 7.2.40 In line with good practice, it is key to fully understand the environmental conditions, resources and 12 sensitivities that exist on the Site (the 'Baseline Conditions'), as this will enable an assessment of 13 the potential effects of the Proposed Development. In order to ensure a consistent approach 14 across baseline figures, we have used data from the 2011 census as this is the last time all the 15 required data was gathered. The Site is located within the London Borough of Camden, so for 16 purpose of this assessment consideration has been given to Camden compared to Greater London 17 with data from England as a whole used as benchmark.
- 7.2.41 This section of the ES reviews current baseline condition in relation to the following characteristics
 relevant to the Proposed Development, which includes:
- Population and labour force;
- Skills and unemployment; and
 - Education.

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7.2.42 For the purposed of this assessment the 2011 Census has been used. Although undertaken in
 2011, it provides a cross section of the above topics and enables us to demonstrate, how the
 Borough and various topics inter-relate.

26 **Population and Age Profile**

- 7.2.43 The 2011 Census shows that there are over 53 million residents in England (4 per hectare), while
 the population in the administrative area of Greater London is over 8 million (52 per hectare) and
 within London Borough of Camden (LBC) the population is 220,338 (101.1 per hectare). Whilst the
 population has significantly increased, the locational trends remain broadly similar.
- 317.2.44The average age of residents with LBC is 35.7 years, which is lower than Greater London (35.632years) and England (39.3 years). According to census data (2011) the number of economically33active people aged 16-74 in Camden is 173,833 (79% of the Borough's population), which is higher34than Greater London (75%). This demonstrates that the Borough has the potential to benefit from35an existing workforce.

36 Employment and Education Profile

- 377.2.45The qualifications and skills profile in LBC is higher than national average (i.e better). Following382011 census, adults (over 16) in LBC with National Vocation Qualification Level 4 and above sat at3953.8%% with national levels at 30.3% and London at 40.4%. Furthermore, the 2011 census40demonstrates that that 13.5% of adults (over 16) had no qualifications. Nationally that figure is41higher at 24.8% and 18.8% across Greater London. This would demonstrate that LBC benefits42from a skilled workforce, which is to be expected within a central London Borough.
- 7.2.46 In addition to the above the 2011 census indicates that 3.8% of the working age (16-74) population
 in LBC is in full-time education, which is higher than England (3.4%), but lower than Greater
 London (4.1%).

1 7.2.47 In 2011 of those residents in LBC aged 16-74, 4.5% were registered as unemployed. This figure is 2 slightly lower (i.e worse) than that of Greater London (5.2%). This is to be expected within a city 3 centre location, where there is close proximity to jobs.

4 Other Topics

5 7.2.48 The Proposed Development involves the construction of a 120 room hotel, with associated uses 6 including a restaurant and bar. As a result an assessment of housing tenure/ need, access to 7 primary healthcare (GPs and dentists) and open space has not been undertaken as the impacts on 8 these elements will be associate d with temporary users (visitors) and will result in no change.

9 Effects During Construction

- 107.2.49The Proposed Development will create temporary construction related jobs on Site. The amount of11employment created is a function of the scale and type of construction expenditure. We have12estimated construction jobs based on calculating an economic output (GVA) per job based on13London-wide benchmarks of £58,128. Based on the Gross Development Value (GDV) of the14different elements of the Proposed Development, and two-year construction period, construction15job creation is estimated at 227 full time equivalent jobs.
- 7.2.50 The data used for below table was extracted from the Experian Economic Forecast 2013. We
 have used the 2013 figures, as they are based on real data rather than estimates and therefore
 provide a clear representation of what is required. For information, we have used a London-wide
 figure, as the Site is in central location well served by public transport and London is therefore a
 reasonable catchment area for the workforce.

	Greater London		
Construction GVA	£14,968,000,000 (Experian Data 2013)		
Construction Employment 2013	257,500		
GVA per Job	£58,128		
Cost (Proposed Development)	£26,500,000		
Total Jobs	455		
Construction Phase (years)	2		
FTE Jobs	227		
Gross Total			
Leakage (Borough)	28%		
Displacement (Borough)	25%		
Substitution	0%		
Economic Multiplier (Borough)	1.7		

21Table SEE3:Construction Jobs

*Note: The headline figures (Construction GVA and Construction) have been established using the 2013 Experian Economic Forecast for the construction industry. The construction GVA is then divided by the number of people employed in the construction industry. This figure is used to calculate the number of people employed by the Proposed Development, by dividing the total build cost of the scheme by the average wage, which results in 455. This figure has then been divided by the length of construction to create the final figure of 227 full time equivalent jobs.

Additionality

7.2.51 Additionality reflects the wider impact of the Proposed Development including job losses seen elsewhere and other jobs created as a knock-on effect of the development. To quantify this we take the gross employment creation and apply a series of calculations as set out in the HCA Additionality Guidance.

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1 Leakage

7.2.52 This calculates the number of jobs that will not be taken up by local residents i.e the number of jobs that will leak out of the area, the area being Greater London which currently has a high demand for skilled construction workers. Analysis of the 2011 Census indicates that approximately 72% of the people who work in LBC live in London, with 28% living outside. A 28% discount should therefore be applied to the estimated 113 gross jobs, and it is assumed that 31 people from outside Greater London and 82 persons from Greater London will be working at the Proposed Development, per year during construction.

9 Displacement

107.2.53This step calculates the approximate number of jobs that will be lost elsewhere in the study area as11increased competition forces a loss of existing jobs elsewhere, and therefore the benefits of the net12gain are offset by reductions of output or employment elsewhere. The HCA Guidance sets 'ready13reckoners' for displacement and within the context of a Greater London construction project a low14displacement of 25% is considered appropriate. Construction may result in a 0% rate of15displacement as the construction industry is a significant employer with minimal direct competition.16However, we have used to 25% to provide an overview of potential worst case.

17 Multiplier Effect

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7.2.54 This step calculates the number of jobs that will be created through the supply chain, either directly 18 or indirectly as a result of construction activities. Employment growth would arise locally through 19 manufacturing services and suppliers to the Proposed Development and could include expenditure 20 by workers within Greater London generating and maintaining further employment elsewhere. 21 Greater London is like to have 'strong' supply linkages based on the size of the economy. 22 Therefore a multiplier of 1.7 was determined from the HCA Additionality Guide as the most 23 appropriate measure of the multiplier effects. This means that for every direct job created as a 24 result of the Proposed Development, another 0.7 will be created through the supply chain (indirect 25 26 jobs).

	Greater London (Worker	Outside of Greater	Total	
	per year average)	London (Workers	(Workers per year	
		per year average)	average)	
Gross Direct Employment	82	31	122	
Displacement	-20	-7	-27	
Net Direct Employment	62	24	86	
Net Indirect Employment	43	16	59	
Total Net Employment	105	40	145	

Table SEE4: Construction Employment (Direct and Indirect)

- 7.2.55 In the context of Greater London a development that can support approximately 145 FTE
 equivalent jobs per year would be considered to be a negligible effect, albeit any employment
 generating proposals are positive.
- 7.2.56 The construction workforce would inevitably give rise to additional expenditure in the local area.
 Based upon an estimate of 50% (figure based on previous experience of similar developments) of
 the workforce spending £6 a day, it is projected that the total workforce has the potential to
 contribute £95,700 per annum (working 220 days per annum) of the two year construction period.
- 35 **7.2.57** Whilst this revenue stream to the local area cannot be guaranteed, it will inevitably provide 36 increased expenditure, which will result in a moderate beneficial effect, albeit on a temporary basis.
- 7.2.58 It should be recognised that not all of these jobs would or indeed could be taken up by people living
 in the local area. However, the construction phase is likely to offer some short-term employment

1 for the local area population. Therefore, in terms of employment generation, at a local level this is 2 likely to be temporary and beneficial.

3 Effects on Operation

Given the nature of the Proposed Development i.e a hotel with restaurant and bar, there will obviously be some level of employment generated through servicing, maintenance, security etc.
 The HCA Employment Density Guide (November 2015) suggests that a luxury hotel has the potential to support 1 full-time equivalent (FTE) employee per room (130). This is through both direct and indirect means. The Applicant is in discussions with a number of potential operators who suggest that the Proposed Development will directly support around 85 employees, which would mirror the HCA guidance.

11 Increased Local Expenditure

- In order to establish the benefits of the Proposed Development in terms of additional local 7.2.60 12 expenditure, we have used figures supplied by the London Tourism Report 2014-2015³, which 13 suggests that in 2014 London welcomed 132 million overseas and domestic overnight visits, 14 generating £14.7 billion in expenditure (approx. £113 per person per visit). Discussions with 15 potential hotel operators suggest that a hotel such as the one proposed, should be aiming to 16 achieve an 85% occupancy rate throughout the year. Therefore, the Proposed Development has 17 the potential to generate over £4.5 million pounds in additional expenditure in Camden and the 18 wider area. 19
- 7.2.61 As a result of the Proposed Development there is likely to be an increase in direct local expenditure
 from the increased employment floorspace i.e employee's spending money locally.
- 7.2.62 This increased expenditure represents a substantial long-term benefit to the area, by creating and
 maintaining direct and indirect employment opportunities.
- 24 Mitigation
- 7.2.63 Overall the Proposed Development during both construction and operation will be of a benefit to
 Camden, through increased employment (direct and indirect), CIL and planning obligation (S106)
 contributions. As a result no additional mitigation measures or monitoring procedures are deemed
 necessary. In addition, consideration will be given to the Kings Cross Construction Skills Centre
 and requirements for apprenticeships to be made available at 1 apprentice per £3million build costs
 (8 apprentices during the 24 month construction period where there is need and is viable).

31 Cumulative Effects

7.2.64 Overall there is not expected to be any negative residual effect as a result of the Proposed 32 Development, either in isolation or cumulatively with other committed developments. The potential 33 impacts of this development and other cumulative schemes will be mitigated through the Council's 34 planned investment via CIL monies and through strategies set out in S106 planning obligations. In 35 terms of socio-economic effects, the Proposed Development along with other committed schemes 36 in the area will bring much needed investment and accommodation into the City Centre. As a result 37 of increased spending in the locality of the Site, the overall impact economy of Camden is seen as 38 long-term major benefit. 39

³ http://files.londonandpartners.com/l-and-p/assets/our-insight-london-tourism-review-2014-15.pdf

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Table S	EE5: Effects Sur	nmary Table – Co	onstruction Phase				
Receptors	Effect	Magnitude of	Nature of Effect	Duration	Significance of	Significance of	Residual Effects
		Effect			Effect without	Effect with	
					Mitigation	Mitigation	
Community	Disruption during construction	Minor	Adverse	Temporary	N/A	Negligible	Negligible
Employment	Creation of 145 jobs during construction (direct and indirect)	Moderate	Beneficial	Temporary	N/A	N/A	Major Beneficial

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Table SEE6: Effects Summary Table – Operational Phase

Receptors	Effect	Magnitude of Effect	Nature of Effect	Duration	Significance of Effect without Mitigation	Significance of Effect with Mitigation	Residual Effects
Investment	Opportunities for inward investment	Major	Beneficial	Long-term	N/A	N/A	Major Beneficial

1 7.3 Noise and Vibration

Technical references and illustrations for this topic are reproduced in Appendix NVB to this ES.

Introduction

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- 7.3.1 This chapter presents the approach and findings of the assessment of potential effects on Noise and Vibration. The Chapter presents the methodology followed, and provides a review of the baseline conditions within the Application Site and surrounding area. The Chapter then presents the results of the assessment of the effect of the Proposed Development on the baseline assessment scenarios in order to determine the anticipated magnitude and significance of effects. Mitigation measures are presented and discussed to minimise the effects of the Proposed Development during the operational phases to an acceptable level.
- 12 7.3.2 This assessment was undertaken by Royal HaskoningDHV.

13 National Legislation

14 Environmental Protection Act 1990⁴

- 7.3.3 Section 79 of the Act defines statutory nuisance with regard to noise and determines that local
 planning authorities have a duty to detect such nuisances in their area. The Act also defines the
 concept of "Best Practicable Means" (BPM):
- " 'practicable' means reasonably practicable having regard among other things to local conditions
 and circumstances, to the current state of technical knowledge and to the financial implications;
- 20 the means to be employed include the design, installation, maintenance and manner and periods 21 of operation of plant and machinery, and the design, construction and maintenance of buildings 22 and structures:
- 23 the test is to apply only so far as compatible with any duty imposed by law; and
- the test is to apply only so far as compatible with safety and safe working conditions, and with the exigencies of any emergency or unforeseeable circumstances."
- 7.3.4 Section 80 of the Act provides local planning authorities with powers to serve an abatement notice
 requiring the abatement of a nuisance or requiring works to be executed to prevent their
 occurrence.
- 29 The Control of Pollution Act 1974⁵
- 7.3.5 Section 60 of the Act provides powers to Local Authority Officers to serve an abatement notice in
 respect of noise nuisance from construction works.
- 7.3.6 Section 61 provides a method by which a contractor can apply for 'prior consent' for construction
 activities before commencement of works. The 'prior consent' is agreed between the Local
 Authority and the contractor and may contain a range of agreed working conditions, noise limits
 and control measures designed to minimise or prevent the occurrence of noise nuisance from

⁴ Her Majesty's Stationery Office (1990) Environmental Protection Act. HMSO, London.

⁵ Her Majesty's Stationery Office (1974) Control of Pollution Act. HMSO, London.

- 1 construction activities. Application for a 'prior consent' is a commonly used control measure in 2 respect of potential noise impacts from major construction works.
- 3 National Policy Guidance

4 National Planning Policy Framework⁶

- 57.3.7The National Planning Policy Framework (NPPF) was introduced in March 2012 replacing the
former Planning Policy Guidance 24: Planning and Noise. Paragraph 123 of the National Planning
Policy Framework states that planning policies and decisions should aim to:
- "avoid noise from giving rise to significant adverse impacts on health and quality of life as a result
 of new development;
- *mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;*
- recognise that development will often create some noise and existing businesses wanting to
 develop in continuance of their business should not have unreasonable restrictions put on them
 because of changes in nearby land uses since they were established; and
- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and
 are prized for their recreational and amenity value for this reason."
- 17 7.3.8 The NPPF also refers to the Noise Policy Statement for England (NPSE) (Defra, 2010).
- 18 **NPSE**⁷
- 7.3.9 The Noise Policy Statement for England (NPSE) document was published by Defra in 2010 and paragraph 1.7 states three policy aims:
- "Through the effective management and control of environmental, neighbour and neighbourhood
 noise within the context of Government policy on sustainable development:
- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life; and
- where possible, contribute to the improvement of health and quality of life."
- 7.3.10 The first two points require that significant adverse impact should not occur and that, where a noise
 level falls between a level which represents the lowest observable adverse effect and a level which
 represents a significant observed adverse effect:
- "...all reasonable steps should be taken to mitigate and minimise adverse effects on health and
 quality of life whilst also taking into consideration the guiding principles of sustainable development.
 This does not mean that such effects cannot occur." (Paragraph 2.24, NPSE, March 2010).
- 7.3.11 Section 2.20 of the NPSE introduces key phrases including "Significant adverse" and "adverse"
 and two established concepts from toxicology that are being applied to noise impacts:
- "NOEL No Observed Effect Level

⁶ Department for Communities and Local Government (2012) National Planning Policy Framework. DCLG, London.

⁷ Department for Environment, Food and Rural Affairs (2010) Noise Policy Statement for England. DEFRA, London.

1 This is the level below which no effect can be detected. In simple terms, below this level, there is 2 no detectable effect on health and quality of life due to the noise.

- LOAEL Lowest Observed Adverse Effect Level
- 4 This is the level above which adverse effects on health and quality of life can be detected".
- 7.3.12 Paragraph 2.21 of the NPSE extends the concepts described above and leads to a significant observed adverse effect level SOAEL, which is defined as the level above which significant effects on health and quality of life occur.
- 8 7.3.13 The NPSE states:
- 9 "it is not possible to have a single objective noise-based measure that defines SOAEL that is 10 applicable to all sources of noise in all situations". (Paragraph 2.22, NPSE, March 2010).
- 11 7.3.14 Furthermore paragraph 2.22 of the NPSE acknowledges that:
- "further research is required to increase understanding of what may constitute a significant adverse
 effect on health and quality of life from noise".
- 14 National Planning Practice Guidance for Noise⁸
- 7.3.15 The National Planning Practice Guidance for Noise (NPPG Noise, December 2014), issued under
 the NPPF, states that noise needs to be considered when new developments may create
 additional noise and when new developments would be sensitive to the prevailing acoustic
 environment. When preparing local or neighbourhood plans, or taking decisions about new
 development, there may also be opportunities to consider improvements to the acoustic
 environment.
- 21 Guidance
- 22 7.3.16 The following guidance has been used for the purpose of the noise and vibration assessment:

British Standard (BS) 4142:2014 – Method for rating and assessing industrial and commercial sound⁹

- 7.3.17 BS 4142 describes methods for rating and assessing sound of an industrial and/or commercial nature. The methods use outdoor sound levels to assess the likely effects of sound on people who
 might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident. Where new residential receptors are proposed close to existing industrial/commercial noise sources the standard allows for, and encourages, the use of other standards such as BS
 8233 (detailed below).
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⁸ Department for Communities and Local Government (2014) National Planning Practice Guidance Noise. DCLG, London.

⁹ British Standards Institute (2014) BS 4142:2014 Methods for rating and assessing industrial and commercial sound. BSI, London.

British Standard (BS) 7445:2003 Parts 1 and 2 - Description and measurement of environmental noise¹⁰¹¹

7.3.18 This Standard provides details of the instrumentation and measurement techniques to be used
 when assessing environmental noise, and defines the basic noise quantity as the continuous A weighted sound pressure level (LAeq). Part 2 of BS 7445 replicates ISO standard 1996-2.

6 British Standard (BS) 8233:2014 – Guidance on Sound Insulation and Noise Reduction for 7 Buildings¹²

7.3.19 Provides a methodology to calculate the noise levels entering a building through facades and façade elements and provides details of appropriate measures for sound insulation between dwellings. It includes recommended internal noise levels which are provided for a variety of situations.

12 Calculation of Road Traffic Noise (CRTN)¹³

The Calculation of Road Traffic Noise (CRTN) document provides a method for assessing noise 13 7.3.20 from road traffic in the UK and a method of calculating noise levels from the Annual Average 14 Weekday Traffic (AAWT) flows and from measured noise levels. Since published in 1988 this 15 document has been the nationally accepted standard in predicting noise levels from road traffic. 16 The calculation methods provided include correction factors to take account of variables affecting 17 the creation and propagation of road traffic noise, accounting for the percentage of heavy goods 18 vehicles, different road surfacing, inclination, screening by barriers and relative height of source 19 and receiver. 20

21 Design Manual for Roads and Bridges (DMRB)¹⁴

7.3.21 Volume 11, Part 3, Section 7 of the Design Manual for Roads and Bridges (DMRB) provides guidance on the environmental assessment of noise impacts from road schemes. DMRB contains advice and information relating to transport-related noise and vibration, which has relevance with regard to the construction and operational traffic impacts affecting sensitive receptors adjacent to road networks. It also provides guideline significance criteria for assessing traffic related noise impacts.

28 World Health Organisation (WHO) (1999) Guidelines for community noise¹⁵

- 7.3.22 These guidelines present health-based noise limits intended to protect the population from
 exposure to excess noise. They present guideline limit values at which the likelihood of particular
 effects, such as sleep disturbance or annoyance, may increase. The guideline values are 50 or
 55dB LAeq during the day, related to annoyance, and 45 dB LAeq or 60dB LAmax at night, related
 to sleep disturbance.
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¹⁰ British Standards Institute (2003) BS 7445-1:2003 Description and measurement of environmental noise. Guide to quantities and procedures. BSI, London.

¹¹ British Standards Institute (2003) BS 7445-2:2003 Description and measurement of environmental noise. Guide to the acquisition of data pertinent to land use. BSI, London.

¹² British Standards Institute (2014) BS 8233:2014 Sound Insulation and Noise Reduction for Buildings. BSI, London.

¹³ Department of Transport Welsh Office (1988) Calculation of Road Traffic Noise. HMSO, London.

¹⁴ The Highways Agency (2011) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 7 : Noise and Vibration. The Highways Agency, Manchester.

¹⁵ Berglund et al (1999) Guideline for Community Noise. WHO, Geneva.

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Local Planning Policy Guidance

- 7.3.23 London Borough of Camden Council (LBC) adopted their Core Strategy¹⁶ in 2010. It contains within it the council's vision and strategy for the borough until 2025 and referenced the policies which will be used in the determination of planning applications contained within their supplementary Development Policies Document.
- 7 7.3.24 "DP28 Noise and vibration
- 8 The Council will seek to ensure that noise and vibration is controlled and managed and will not 9 grant planning permission for:
- 10 a) development likely to generate noise pollution; or
- b) development sensitive to noise in locations with noise pollution, unless appropriate attenuation measures are provided.
- 13 Development that exceeds Camden's Noise and Vibration Thresholds will not be permitted.
- The Council will only grant permission for plant or machinery if it can be operated without cause harm to amenity and does not exceed our noise thresholds. The Council will seek to minimise the impact on local amenity from the demolition and construction phases of development. Where these phases are likely to cause harm, conditions and planning obligations may be used to minimise the impact."
- 19 Methodology

20 Study Area

- 7.3.25 This section describes the assessment methodologies, including data collation and consultation,
 which were used in the noise assessment.
- 7.3.26 The Study Area for the noise assessment comprises the area of the Proposed Development. The baseline noise measurement locations are illustrated on Appendix NVB1, Figure A1.
- 7.3.27 The primary source of noise affecting the Proposed Development is road traffic along the A4200 (Southampton Row).

27 Baseline Noise Survey

- 7.3.28 In order to establish the baseline conditions at the Site, a noise measurement survey was
 undertaken at a distance of 1m from the 5th floor of the western façade of 8-10 Southampton Row
 in order to obtain a representative measurement of the dominant noise source affecting the site.
- The survey was conducted on 16 and 17 November 2017, the results are presented in Section 4.
- All noise measurements were conducted with regard to the procedure and guidance contained in
 BS 7445, parts 1 and 2. All instrumentation was fully calibrated to traceable UKAS standards and
 satisfied the requirements for Class1 instruments described in BS EN 61672-1:2013. The

¹⁶ Camden London Borough Council (2010) Camden Core Strategy 2010 - 2025. Available:

https://www.camden.gov.uk/ccm/navigation/environment/planning-and-built-environment/planning-policy/planning-policy/ documents/core-strategy/. Last Accessed: 2nd May2017.

- calibration of the sound level meter (SLM) was checked before and after each of the surveys, with no significant drift in sensitivity observed.
- 7.3.31 The surveys were conducted during periods of weather favourable for noise measurements, i.e. no
 rainfall and wind speeds below 5m/s
- 5 7.3.32 The noise levels measured during the surveys included the following noise indices:
- *L_{Aeq}* the equivalent continuous sound pressure level over the measurement period;
- *L_{Amax}* the maximum sound pressure level occurring within the defined measurement period;
 - L_{A90} the sound pressure level exceeded for 90% of the measurement period and is used within BS 4142 as a descriptor of background noise level; and
- L_{A10} the sound pressure level exceeded for 10% of the measurement period.
- 11 **7.3.33** The equivalent continuous sound pressure level (LAeq) is the conventional descriptor of 12 environmental noise and is defined below.

$$L_{eq,T} = 10 \times \log \left[\frac{1}{T} \int \frac{\rho^2(t) \partial t}{\rho_0^2} \right] dB$$

7.3.34 Noise measurements are normally taken with an A-weighting (denoted by a subscript 'A') to
 approximate the frequency response of the human ear. The time constant of the SLM was set to
 'Fast' during all measurements.

16 Consultation

- 7.3.35 The study area lies within the administrative boundary of London Borough of Camden (LBC).
 Consultation with LBC was undertaken via email ¹⁷ to agree the methods of assessment appropriate for the noise affecting the Proposed Development. The following elements of assessment were agreed by telephone:
- The Proposed Development will be assessed in accordance with the guidance in BS8233:2014, BS4142:2014 and the WHO Guidelines.

23 Assessment Methodology – External Noise Levels

7.3.36 The external daytime noise levels at the site were compared with the WHO recommended noise
 levels detailed in Table NVB1.

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Table NVB1: WHO Guidelines for Community Noise – External

Specific Environment	Typical Situation	L _{Aeq,T}	Time base (hours)
-	Serious annoyance, daytime evening	55	16
Outdoor Living Areas	Moderate annoyance, daytime evening	50	16
	dayan o overning		

¹⁷ From: CLBC Planning and Public Protection, To: Royal HaskoningDHV. Subject: RE: Noise assessment, Southampton Row, Holborn – Consultation in confidence. Date: 28th December 2016

⁻ Consultation in confidence. Date: 28th December 2016.

1 BS8233 Internal Habitable Room Noise Levels

- 7.3.37 Guidance on suitable internal noise levels is provided in BS 8233:2014 (Section 7.7.2, Table 4)
 derived from the guidance provided by the WHO. This details recommended internal noise levels
 to ensure that adequate noise reduction occurs to reduce direct and flanking transmission across
 facade elements. Recommended internal noise levels are reproduced in Table NVB2.
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Table NVB2: Recommended Internal Noise Levels – BS8233

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living rooms	35 dB L _{Aeq,16hour}	-
Dining	Dining room/area	40 dB L _{Aeq,16hour}	-
Sleeping (daytime resting)	Bedrooms	35 dB L _{Aeq,16hour}	30 dB L _{Aeq,8hour}

7.3.38 The previous version of BS8233 (1999) provided guidance that noise levels in bedrooms during the
 night should not regularly exceed 45dB LAmax. The updated BS8233 does not give a specific limit
 for LAmax noise levels within bedrooms but it is considered prudent to adhere to the guideline level
 from the previous version of BS8233.

Assessment Assumptions and Limitations

- 7.3.39 BS8233:2014 demonstrates that the use of standard thermal glazing in residential units will reduce
 noise by 33dB Rw from an external free field noise level. BS8233 states that a partially open
 window can provide up to 15dBA attenuation from a free-field external noise to an internal noise
 level.
- 16 Industrial and Commercial Sound Assessment Noise from Fixed Plant
- 7.3.40 Noise from fixed plant is typically assessed in the context of BS 4142:2014, which involves a comparison of the rating level and the measured background (LA90) noise level at potential receptor locations.
- 7.3.41 BS 4142 describes methods for rating and assessing sound of an industrial and/or commercial nature. The methods use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident, and combines procedures for assessing the impact in relation to:
 - The development of new industrial and/or commercial sources affecting existing receptors.
- 7.3.42 The standard applies to industrial/commercial and background noise levels outside residential
 buildings and for assessing whether existing and new industrial/commercial sound sources are
 likely to give rise to significant adverse impacts on the occupants living in the vicinity.
- 7.3.43 Assessment is undertaken by subtracting the measured background noise level from the derived
 rating level; the greater this difference, the greater the magnitude of the impact.
- 30 7.3.44 BS 4142 refers to the following;
- "A difference of around +10 dB or more is likely to be an indication of a significant adverse impact,
 depending on the context.
- A difference of around + 5 dB is likely to be an indication of an adverse impact, depending on the context.

The lower the rating level relative to the measured background sound level the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context".

- 7.3.45 When assessing the noise from a source, which is classified as the Rated Noise Level, it is
 necessary to have regard to the acoustic features that may be present in the noise. Section 9.1 of
 BS 4142 states:
- 8 "Certain acoustic features can increase the significance of impact over that expected from a basic 9 comparison between the specific sound level and the background sound level. Where such 10 features are present at the assessment location, add a character correction to the specific sound 11 level to obtain the rating level".
- 12 7.3.46 The methods for assessing whether an acoustic feature is present are:
 - Subjective method;

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- Objective method for tonality; and
- Reference method.
- 7.3.47 For the subjective method a rating penalty for tones of 2 6dB can be added; a penalty of +2dB for
 a tone which is just perceptible at the noise receptor, +4dB where it is clearly perceptible and +6dB
 where it is highly perceptible.
- 197.3.48For impulsive noise a correction of up to 9dB can be applied; a penalty of +3dB for impulsivity20which is just perceptible at the noise receptor, +6dB where it is clearly perceptible and +9dB where21it is highly perceptible.
- 7.3.49 For other sound features, where the specific sound features characteristics that are neither tonal
 nor impulsive, though otherwise are readily distinctive against the residual acoustic environment, a
 penalty of +3dB can be applied.
- 7.3.50 Where tonal and impulsive characteristics are present in the specific sound within the same
 reference period then both corrections can be taken into account. If one feature is dominant then it
 would be appropriate to apply a single correction. Where both features are likely to affect
 perception and response, the corrections can be added in a linear manner.
- 7.3.51 When the specific sound has identifiable on/off conditions and the intermittency is readily distinctive against the residual acoustic environment, a penalty of +3dB can be applied.
- 7.3.52 The perception of audibility at the receptor location determines the value of the penalty to be
 applied.
- 7.3.53 For the objective and reference methods sections 9.3.2 and 9.3.3 and Annexes C and D of the
 standard should be referred to.
- 7.3.54 The determination of the specific sound level free from sounds influencing the ambient sound at
 the assessment location is obtained by measurement or a combination of measurement and
 calculation. This is to be measured in terms of the LAeq,T, where 'T' is a reference period of:
 - 1 hour during daytime hours (07:00 hrs to 23:00 hrs); and
 - 15 minutes during night-time hours (23:00 to 07:00 hrs).
- 7.3.55 Taking the above guidance into account the impact magnitude criteria presented in Table NVB3
 were determined.

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Table NVB3: Operational noise impac	t magnitude criteria for industrial/commercial sound
sources	

Rating level dB L _{Ar,Tr}	Impact criteria
< Measured L _{A90}	No impact
= Measured L _{A90}	Low Adverse
L _{A90} + up to 5 dB	Minor Adverse
Measured L _{A90} + >5 dB	Moderate Adverse
≥ Measured L _{A90} + 10 dB	Significant (Major) Adverse

- 7.3.56 SoundPLAN noise modelling software was utilised to predict the noise effects from fixed plant
 associated with the development. The model was created using topographical data of the local
 area and the plan of the proposed extension and included nearby sensitive receptors and other
 surrounding buildings.
- Noise output and location information for the external plant was provided by Long and Partners 7 7.3.57 Building Services Consultants18. It is understood that no confirmed M&E plan is available at the 8 time of issue of this report, however indicative locations for plant equipment were provided as well 9 as associated noise levels for each piece of equipment. This information was used for the noise 10 modelling in SoundPLAN. It is understood that the AHU's (Air Handling Units) for the hotel will be 11 situated on the roof along with the CU's (Condenser Units). Twin fan extracts (EF) are to be 12 situated on top of the AHU's. The plant equipment for the hotel is to be located on the roof of the 13 new build portion of the development with no additional cover. All plant has been modelled as 14 individual point sources. 15
- 7.3.58 SoundPLAN noise modelling software was utilised to predict the noise from on-site operational
 noise sources. In order to provide a conservative assessment plant equipment was modelled with
 an on-time of 100% during the daytime and 50% during the night time.
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Table NVB4: Equipment itinerary and associated noise breakout levels

No.	Reference	Sound Power Level dB(A)
5	CU1 P600	73.5*
3	CU2 P450	70.5*
7	CU3 P200	67.0*
1	AHU1	57
1	AHU2	57
2	EF	73.5*

*- Calculated from measured sound pressure level at a reference distance as a point source
 radiating in a half sphere (on the ground)

7.3.59 It should be noted that if plant equipment selected for the project changes from that above then the
 noise impact will need to be reassessed.

24 Significance of Effects

7.3.60 Overall significance has been determined by considering both the magnitude of impact sensitivity
 of receptor, using the matrix shown in Table NVB5. Effects of moderate significance or more are
 significant in EIA terms.

¹⁸To Royal HaskoningDHV, From: Long and Partners Email titled RE: Southampton Row Mechanical Building Services. Date: 28th April 2017

Table NVB5	Significance	Matrix
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Sensitivity/Value	Magnitude of Effect				
of Receptor	High	Medium	Low	Negligible	
High					
(England/ UK/ International)	Major	Major/ Moderate	Moderate	Negligible	
Medium	Major/ Madarata	Madarata	Madarata / Minar	Negligible	
(County Region)	Major/ Moderate	Moderate		Negligible	
Low					
(Local/ Unitary Authority	Moderate	Moderate/ Minor	Minor	Negligible	

2 Existing Conditions

Noise Survey Results

- 7.3.61 The noise levels were measured on an unattended basis over 24hours. All measured levels are
 presented as free field. Measured levels have been reduced by 3dB to account for façade
 reflections.
- 7 7.3.62 Appendix NVB2 contains the unedited baseline noise data.

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Table NVB6: Summary of measured free field noise levels

Period	Time	L _{Aeq} (dB)	L _{Amax} (dB)	L _{A10} (dB)
Day	1400 - 1900	67.5	91.2	66.7
Evening	1900 - 2300	65.1	93.0	65.9
Night	2300 - 0700	63.1	91.5	63.5
Day	0700 - 1400	65.8	90.9	66.6

7.3.63 In accordance with LBC Policy DP28 measured noise levels fall within the criteria detailed within
 Table A. However, measured noise levels exceed the criteria detailed within Table B indicating that
 planning will only be granted if suitable attenuation measures are applied.

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Table NVB7: Summary of calculated free field noise levels

Period	Time	L _{Aeq} (dB)	L _{Amax} (dB)	L _{A10} (dB)
Day	16 hours	66.3	93.0	65.9
Night	8 hours	63.1	91.5	63.5

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7.3.64 During the daytime period the noise climate in the vicinity of the site is dominated by road traffic,
 pedestrians and construction works.

7.3.65 During the night time period the noise climate in the vicinity of the site is dominated by road traffic
 and pedestrians.

1 Vibration Survey Results

2 7.3.66 Measured baseline vibration levels are presented in Table NVB8.

Table NVB8: Baseline vibration level summary

Vibration Dose Value Day	Vibration Dose Value Night	Peak Particle Velocity
VDV, _{16hr} (ms ^{-1.75})	VDV, _{8hr} (ms ^{-1.75})	PPV (ms ^{-1.75})
0.044	0.037	

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7.3.67 Measured vibration dose values indicate that, in accordance with BS56472, there is a less than low
 probability of adverse comment. Additionally, measured peak particle velocity levels are below the
 most stringent threshold stated in BS7385 transient vibration guidelines for cosmetic damage.
 Measured vibration dose values are also below the LBC requirements detailed in Table C of Policy
 DP28. Further assessment is therefore not considered within this report.

10 Effects During Construction

7.3.68 It is inevitable that there are usually some impacts from construction works which have the potential to be of Major Significance; however these impacts are short term and temporary. Mitigation measures are required and should include good practice construction management to reduce impacts from the noise generated by the construction phase of the Proposed Development.

15 Mitigation

16 Noise Management Plan

- 7.3.69 The Control of Pollution Act and BS 5228 define a set of Best Practice working methods and
 mitigation measures, referred to as Best Practicable Means (BPM). Examples of these measures
 are:
- Where possible, locating plant so that it is screened from receptors by on-site structures, such as site cabins;
 - Using mobile screening to shield receptors from particularly noisy equipment/activities;
 - Using modern, quiet equipment and ensuring such equipment is properly maintained and operated by trained staff;
 - Applying silencers/enclosures to particularly noisy equipment where possible;
 - Ensuring that mobile plant is well maintained such that loose body fittings or exhausts do not rattle or vibrate;
 - Ensuring plant machinery is turned off when not in use;
 - Provide local residents with 24-hour contact details for a site representative in the event that disturbance due to noise from the construction works is perceived;
 - To inform local residents about the construction works, including the timing and duration of any
 particularly noisy elements, and provide a contact telephone number to them;
 - Try to avoid operating particularly noisy equipment at the beginning and end of the day;
 - Carry out piling using the quietest methods available, i.e. augured piling instead of driven piling; and
 - Keep noisy deliveries, such as skips and concrete, to the middle of the day where possible.

7.3.70 It is also recommended that a Construction Management Plan (CMP) is provided to cover construction working practices which can reflect "Best Practicable Means", to minimise noise from construction works. A draft CMP is included at INT3 of the Volume 2 of this ES.

1 7.3.71 Although the effect of adopting such methods cannot be precisely quantified, it is expected that 2 these methods would reduce noise levels by a further 5 - 10dB.

3 Management Structure and Responsibilities

- 4 7.3.72 The main contractor will be responsible for robust implementation of noise mitigation measures.
- 5 7.3.73 The key management roles with regard to the design and implementation of noise control at the 6 construction site are to be defined and their roles should be detailed in the site CMP.

7 Training

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- 8 7.3.74 The Site induction programme and site rules must include good working practice instructions for 9 site staff, managers, visitors and contractors to help minimise noise whilst working on the Site.
- Good working practice guidelines/instructions could include, but not be limited to, the following points:
- Avoid unnecessary revving of engines;
 - Plant used intermittently should be shut-down between operational periods;
- Avoid reversing wherever possible;
 - Drive carefully and within the site speed limit at all times;
 - Report any defective equipment/plant as soon as possible so that corrective maintenance can be undertaken; and
 - Handle material in a manner that minimises noise.

19 Maintenance

- 7.3.75 Maintenance of plant should be carried out routinely and in accordance with the manufacturers' guidance.
- 22 7.3.76 A regular inspection of all plant and equipment could be undertaken as a minimum to ensure that:
 - all plant is in a good state of repair and fully functional;
- any plant found to be requiring interim maintenance has been identified and taken out of use;
 - acoustic enclosures fitted to plant are in a good state of repair;
 - doors and covers remain closed during operation; and
 - any repairs are being undertaken by a fully qualified maintenance engineer.

28 **Construction vibration mitigation**

- 7.3.77 Best management practice for vibration should be implemented to minimise vibration impacts,
 including;
 - choosing alternative, lower impact equipment or methods where possible;
 - scheduling the use of vibration-causing equipment at the least sensitive time of day;
- routing, operating or locating high vibration sources as far away from sensitive areas as
 possible;
 - sequencing operations so that vibration-causing activities do not occur simultaneously;
 - isolating the equipment causing vibration on resilient mounts; and
- keeping equipment well maintained.

1 Effects on Operation

BS8233 Internal Habitable Room Noise Levels

- An assessment was undertaken to predict noise effects at the proposed hotel from road traffic generated noise. A noise model of the proposed layout of the Site was created within SoundPLAN and calibrated to the measured daytime and night-time LAeq,T at the Site based on the existing layout. A further model was then created of the proposed layout of the Site using the calibrated noise levels and hence predictions made of the LAeq,T at the façade of the Proposed Development. The site layout used to create the model was provided by Dexter Moren Associates Limited, the appointed architects for the project.
- 7.3.79 In order to conduct an assessment according to BS 8233:2014 noise calculations were undertaken
 for each façade to determine the sound insulation performance required to achieve internal noise
 levels specified in BS8233:2014.
- 7.3.80 The results of the SoundPLAN modelling are provided in Table NVB9. All results are displayed as
 free field.

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Facade Floor Daytime LAeq,16hr Night time LAeq,8hr 61.0 57.8 GF 61.3 58.1 F1 61.1 57.9 F2 60.7 57.6 F3 North 57.1 60.3 F4 59.9 56.7 F5 59.4 56.2 F6 58.9 55.7 F7 52.5 49.4 GF 53.0 49.9 F1 53.2 50.0 F2 53.3 50.1 F3 North West 50.0 53.2 F4 53.0 49.9 F5 52.8 49.7 F6 52.6 49.5 F7 GF 56.0 52.8 52.7 55.9 F1 52.6 55.7 South F2 55.6 52.4 F3 55.3 52.1 F4

Table NVB9: Summary of Calculated Facade Noise Levels, dB(A)

Facade	Floor	Daytime L _{Aeq,16hr}	Night time L _{Aeq,8hr}
	F5	55.0	51.9
	F6	54.7	51.5
	F7	54.4	51.2
	GF	69.9	66.7
	F1	69.6	66.4
	F2	68.7	65.6
West	F3	67.9	64.7
vvesi	F4	67.1	63.9
	F5	66.3	63.1
	F6	65.6	62.5
	F7	65.0	61.9

17.3.81Based upon an assumed 15dB attenuation from an open window, the calculated noise levels2indicate that mitigation measures will be required in order to ensure a satisfactory internal noise3climate throughout the building. The sound reduction performance required of the external building4fabric has been calculated to ensure that the internal noise levels specified in BS8233:2014 are5achieved.

7.3.82 The overall sound reduction performance of a building façade is normally determined by the glazing or ventilation components as these are typically the acoustically weakest elements. Table NVB10 details the sound reduction performance requirements for the hotel to ensure that the internal noise levels specified in BS8233:2014 are achieved.

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Table NVB10: Required Sound Insulation Performances, dB

Façade	Floor	Period	Calculated Noise Level	BS8233 Specified Limit	Required Sound Insulation Performance R _{,tra}
		Daytime LAeq,16hrs	61.0	35	26.6
	GF	Night-time L _{Aeq,8hrs}	57.8	30	27.6
	F1	Daytime LAeq,16hrs	61.3	35	26.3
		Night-time L _{Aeg,8hrs}	58.1	30	28.1
		Daytime LAeq,16hrs	61.1	35	26.1
North	F2	Night-time L _{Aeq,8hrs}	57.9	30	27.9
North		Daytime LAeq,16hrs	60.7	35	25.7
	F3	Night-time L _{Aeq,8hrs}	57.6	30	27.6
		Daytime LAeq,16hrs	60.3	35	25.3
	F4	Night-time L _{Aeq,8hrs}	57.1	30	27.1
		Daytime LAeq,16hrs	59.9	35	24.9
	F5	Night-time L _{Aeq,8hrs}	56.7	30	26.7
Façade	Floor	Period	Calculated Noise Level	BS8233 Specified Limit	Required Sound Insulation Performance R _{,tra}
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		Daytime LAeq,16hrs	59.4	35	24.4
F6		Night-time L _{Aeq,8hrs}	56.2	30	26.2
		Daytime LAeq,16hrs	58.9	35	23.9
	F7	Night-time L _{Aeq,8hrs}	55.7	30	25.7
		Daytime LAeq,16hrs	52.5	35	17.5
	GF	Night-time L _{Aeq,8hrs}	49.4	30	19.4
		Daytime LAeq,16hrs	53.0	35	18.0
	F1	Night-time L _{Aeq,8hrs}	49.9	30	19.9
	50	Daytime LAeq,16hrs	53.2	35	18.2
	F2	Night-time L _{Aeq,8hrs}	50.0	30	20.0
		Daytime LAeq,16hrs	53.3	35	18.3
North West	F3	Night-time L _{Aeq,8hrs}	50.1	30	20.1
NOTIT WEST	_	Daytime LAeq,16hrs	53.2	35	18.2
	F4	Night-time L _{Aeg,8hrs}	50.0	30	20.0
	F5	Daytime LAeq,16hrs	53.0	35	18.0
		Night-time L _{Aeq,8hrs}	49.9	30	19.9
		Daytime LAeq,16hrs	52.8	35	17.8
	F6	Night-time L _{Aeq,8hrs}	49.7	30	19.7
		Daytime LAeq,16hrs	52.6	35	17.6
	F7	Night-time L _{Aeq,8hrs}	49.5	30	19.5
	05	Daytime LAeq,16hrs	56.0	35	21.0
	GF	Night-time L _{Aeq,8hrs}	52.8	30	22.8
	_	Daytime LAeq,16hrs	55.9	35	20.9
	F1	Night-time L _{Aeq,8hrs}	52.7	30	22.7
		Daytime LAeq,16hrs	55.7	35	20.7
	F2	Night-time L _{Aeq,8hrs}	52.6	30	22.6
South	50	Daytime LAeq,16hrs	55.6	35	20.6
	F3	Night-time L _{Aeg,8hrs}	52.4	30	22.4
		Daytime LAeq,16hrs	55.3	35	20.3
	F4	Night-time L _{Aeg,8hrs}	52.1	30	22.1
		Daytime LAeq,16hrs	55.0	35	20.0
	F5	Night-time L _{Aeq,8hrs}	51.9	30	21.9
	F6	Daytime LAeq,16hrs	54.7	35	19.7

Façade	Floor	Period	Calculated Noise Level	BS8233 Specified Limit	Required Sound Insulation Performance R _{,tra}
	_	Night-time L _{Aeq,8hrs}	51.5	30	21.5
		Daytime LAeq,16hrs	54.4	35	19.4
	F7	Night-time L _{Aeq,8hrs}	51.2	30	21.2
		Daytime LAeq,16hrs	69.9	35	34.9
	GF	Night-time L _{Aeq,8hrs}	66.7	30	36.7
	_	Daytime LAeq,16hrs	69.6	35	34.6
	F1 F2	Night-time L _{Aeq,8hrs}	66.4	30	36.4
		Daytime LAeq,16hrs	68.7	35	33.7
		Night-time L _{Aeq,8hrs}	65.6	30	35.6
		Daytime LAeq,16hrs	67.9	35	32.9
West	F3	Night-time L _{Aeq,8hrs}	64.7	30	34.7
West		Daytime LAeq,16hrs	67.1	35	32.1
	F4	Night-time L _{Aeq,8hrs}	63.9	30	33.9
		Daytime LAeq,16hrs	66.3	35	31.3
	F5	Night-time L _{Aeq,8hrs}	63.1	30	33.1
	_	Daytime LAeq,16hrs	65.6	35	30.6
	F6	Night-time L _{Aeq,8hrs}	62.5	30	32.5
		Daytime LAeq,16hrs	65.0	35	30.0
	F7	Night-time LAeg 8brs	61.9	30	31.9

- 7.3.83
 Table NVB10 has indicated that glazing and ventilation components will need to reduce the external noise level up to by 36.7dB to ensure that LAeq, 8hrs noise levels are within the specified limit.
- 5 7.3.84 Windows do not reduce noise equally across the entire frequency spectrum, so the frequency 6 content of the sound will influence the overall sound reduction performance of a given window and, 7 by extension, the resulting noise levels within the receiving room.
- 7.3.85 Many glazing manufacturers test their products under laboratory conditions using a typical road traffic noise frequency spectrum source. The resultant measured noise attenuation, in dB, gives a very useful guide to in-situ sound reduction performance of the window for situations where road traffic noise dominates. This performance index is known as the R,tra. It is considered more appropriate to use this index rather than the Rw (the weighted sound reduction index) as road traffic noise is the dominant noise source affecting the Site.
- 147.3.86As an example of a glazing unit that could achieve a 37dB R,tra performance requirement, the
glazing manufacturer Saint Gobain states that its 8(14)12.8 double glazed unit has an R,tra of
37dB. The 8(14)12.8 notion refers to two panes of glass one 8mm thick, one 12.8mm thick
separated by a 16mm air gap.

- 7.3.87 Other units may be suitable and it is the responsibility of the glazing manufacturer to recommend and provide appropriate systems. The above analysis is provided to demonstrate that a design solution is feasible at the site for the purposes of a planning application and not for the purposes of plot-by-plot design or glazing procurement.
- 7.3.88 The detailed design of the proposed properties will affect both the required sound reduction
 performance and the appropriate selection of glazing units. The aspects of the detailed design that
 are important are the room dimensions, room finishes, window dimensions and the sound
 reduction performance of non-glazing elements. Further consideration of the glazing components
 will be required by the eventual developer of the Site once the plot-by-plot design is confirmed.
- 107.3.89Internal noise levels should be considered in the context of room ventilation requirements. Where11the required sound insulation performance in Table RVB9 is greater than 15 dB the target internal12noise levels will only be achieved when windows are closed. An alternative means of ventilation will13therefore be required to comply with the ventilation requirements of the Building Regulations14Approved Document F.
- 15 7.3.90 The Building Research Establishment (BRE) has published an Information Paper on the acoustic performance of such passive ventilation systems. IP4/99: Ventilators: Ventilation and Acoustic 16 Effectiveness (October 1999) details a study into the sound reduction performance of fourteen 17 different window mounted trickle ventilators and seven different through-wall passive ventilators. 18 The measured sound reduction performance, after taking into account flanking sound paths (i.e. 19 sound paths that do not travel directly through the vent) and the effective area of the ventilator, 20 ranged from 14 to 46dB. Passive vents are available that meet or exceed the sound reduction 21 required by the glazing elements. 22
- 7.3.91 Adherence to the above required sound insulation performances for LAeq noise levels will also
 ensure that internal LAmax noise levels within bedrooms at night do not regularly exceed 45dB.
- 7.3.92 It must also be noted that the above presents a worst case assessment of noise levels at the
 Proposed Development.

27 External Noise Levels

- 28 7.3.93 An assessment of the external amenity spaces around the Proposed Development was undertaken.
- 7.3.94
 7.3.94
 Table NVB9: Summary of Calculated Facade Noise Levels details predicted noise levels at external amenity areas such as balconies, it can be seen that external noise levels are predicted to be in excess of the WHO and BS8233 threshold categories.
- 7.3.95 However, in a planning context BS8233:2014, paragraph 7.7.3.2 recognises that the WHO
 aspirational noise targets are not achievable in all situations:
- "For traditional external areas that are used for amenity space, such as gardens and patios, it is 34 desirable that the external noise level does not exceed 50 dB L_{Aeq,T}, with an upper guideline value 35 of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized 36 that these guideline values are not achievable in all circumstances where development might be 37 desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic 38 transport network, a compromise between elevated noise levels and other factors, such as the 39 convenience of living in these locations or making efficient use of land resources to ensure 40 development needs can be met, might be warranted. ' 41
- 42 7.3.96 In addition paragraph 7.7.3.2 of BS8233:2014 suggests;
- 43 "In such a situation, development should be designed to achieve the lowest practicable levels in 44 these external amenity spaces, but should not be prohibited"
- 45

2 Operational Site Noise

7.3.97 The baseline measurement location is considered representative of the existing receptors closest to the Site. The receptors are listed in Table NVB11 and shown on Appendix NVB1, Figure A1.

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Table NVB11: Noise receptor location

Descritor	Description	Location		
Receptor	Description	X	Υ	
NSR1	St Martins College of Art and Design and the University of Westminster (Façade 1)	530511.18	181614.92	
NSR2	St Martins College of Art and Design and the University of Westminster(Façade 2)	530539.39	181636.73	

7.3.98 St Martins College of Art and Design and the University of Westminster have been identified as having a medium sensitivity in accordance with Table NVB5.

8 Plant Noise

- 9 7.3.99 The results of the modelling exercise are presented in **Table NVB12** and **NVB13**.
- 10 7.3.100 To obtain a rating level a penalty of +6dB for tonality was applied.

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Table NVB12: Predicted noise impact of proposed fixed plant - Daytime

Receptor	Floor	Calculated fixed plant rating level, free field, dB L _{Aeq,1hr}	Background noise level at receptor dB L _{A90}	BS 4142 Assessment	Magnitude of Effect
	GF	33.7	58.8	No Impact	Negligible
	F1	33.2	58.8	No Impact	Negligible
	F2	33.9	58.8	No Impact	Negligible
NSR1	F3	34.7	58.8	No Impact	Negligible
	F4	35.3	58.8	No Impact	Negligible
	F5	36.4	58.8	No Impact	Negligible
	F6	37.8	58.8	No Impact	Negligible
	F7	39.6	58.8	No Impact	Negligible
	F8	41.8	58.8	No Impact	Negligible
	F9	44.0	58.8	No Impact	Negligible
	F10	45.9	58.8	No Impact	Negligible
NSR2	GF	35.9	58.8	No Impact	Negligible

F1	37.3	58.8	No Impact	Negligible
F2	38.3	58.8	No Impact	Negligible
F3	39.0	58.8	No Impact	Negligible
F4	39.6	58.8	No Impact	Negligible
F5	40.1	58.8	No Impact	Negligible
F6	41.2	58.8	No Impact	Negligible
F7	42.7	58.8	No Impact	Negligible
F8	44.4	58.8	No Impact	Negligible
F9	46.0	58.8	No Impact	Negligible
F10	46.8	58.8	No Impact	Negligible

Table NVB13: Predicted noise impact of proposed fixed plant – Night time

Receptor	Floor	Calculated fixed plant rating level, free field, dB L _{Aeq,15min}	Background noise level at receptor dB L _{A90}	BS 4142 Assessment	Magnitude of Effect
	GF	30.6	53.5	No Impact	Negligible
	F1	30.2	53.5	No Impact	Negligible
	F2	30.9	53.5	No Impact	Negligible
	F3	31.7	53.5	No Impact	Negligible
	F4	32.2	53.5	No Impact	Negligible
NSR1	F5	33.4	53.5	No Impact	Negligible
	F6	34.8	53.5	No Impact	Negligible
	F7	36.6	53.5	No Impact	Negligible
	F8	38.7	53.5	No Impact	Negligible
	F9	41.0	53.5	No Impact	Negligible
	F10	42.9	53.5	No Impact	Negligible
	GF	32.9	53.5	No Impact	Negligible
	F1	34.3	53.5	No Impact	Negligible
	F2	35.2	53.5	No Impact	Negligible
NSR2	F3	36.0	53.5	No Impact	Negligible
	F4	36.6	53.5	No Impact	Negligible
	F5	37.1	53.5	No Impact	Negligible
	F6	38.2	53.5	No Impact	Negligible
	F7	39.7	53.5	No Impact	Negligible

F8	41.4	53.5	No Impact	Negligible
F9	43.0	53.5	No Impact	Negligible
F10	43.8	53.5	No Impact	Negligible

- 7.3.101 The BS 4142 assessment detailed in Tables NVB12 and NVB13 determined that operation of the fixed external plant next to the hotel and retail area would have no Impact on nearby sensitive receptors during both the daytime and night time periods. Furthermore, in accordance with Table NVB5 considering the medium sensitivity of the receptor the likely effect would be of negligible significance.
- 6 **Residual Effects**
- 7 7.3.102 Incorporation of Best Practice working methods and mitigation measures would ensure that the
 8 likely residual effect at the medium sensitivity receptor identified in Table NVB11 would be of
 9 negligible significance.
- 10 Conclusions
- 11 7.3.103 The assessment has considered the suitability of the Site for a hotel development.
- 12 **7.3.104** The assessment concluded that the site is suitable for use as a hotel, subject to the provision of 13 appropriate mitigation measures.
- 147.3.105Using the recommended sound insulation performances detailed for assessment purposes, the
30dB LAeq,8hr internal night time noise level in bedrooms and the 35 dB LAeq,16hr internal
daytime noise level are achieved, ensuring that internal LAmax noise levels in bedrooms at night
do not regularly exceed 45dB. It was concluded that openable windows cannot be relied upon as a
suitable means of background ventilation for hotel rooms while protecting the amenity of the
occupiers and meeting the BS8233 LAeq,T and LAmax criteria and alternative measures were
proposed.
- 7.3.106 A BS4142 assessment was carried out to predict the impact of the noise from plant equipment on
 the neighbouring sensitive receptors. The assessment concluded that the operation of fixed plant
 would have No Impact at nearby sensitive receptors during both the daytime and night time periods.
- 7.3.107 The detailed calculation procedure presented in Section G.2 of BS8233:2014 should be carried out
 at the detailed design stage to ensure that the sound insulation of the building envelope is
 adequate to protect the amenity of future occupiers and will meet the BS8233:2014 LAeq and
 LAmax criteria.
- 28 7.3.108 **Table NVB14** contains a summary of the likely significant effects of the Proposed Development.



Potential Effect	Nature of Effect (Permanent/ Temporary)	Significance (Major/ Moderate/ Minor) (Beneficial/ Adverse/ Negligible)	Mitigation	1	G UK	eograpi	nical Imp R	oortance C	* B	L	Residual Effects
Determination of suitability of internal spaces for future patrons of hotel	Permanent	Site found to be suitable	Modelling process has predicted a range of noise levels for the Proposed Development façades. Recommendations are made for suitable sound insulation to achieve internal noise levels in accordance with BS 8233							*	Site found to be suitable
Operational plant noise impacting on existing sensitive receptors	Negligible	n/a	n/a						*	*	Negligible

1 7.4 Air Quality

2 Technical references and illustrations for this topic are reproduced in Appendix AQT to this 3 ES.

Introduction

4

- 5 7.4.1 This chapter assesses the impact of the Proposed Development on ambient Air Quality. In 6 particular, it considers the suitability of the development based on exposure to air pollutant 7 concentrations including Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀). The assessment 8 also considers the potential for dust impacts during the construction phase and emissions from the 9 operation of the combined heat and power (CHP) units and gas-fired boilers on local air quality at 10 sensitive receptor locations. The assessment was undertaken in accordance with Local Air Quality 11 Management Technical Guidance provided by Defra¹⁹.
- 7.4.2 The chapter describes the methods used to assess the baseline conditions at existing receptor
 locations, the potential direct and indirect impacts of the development arising from the construction
 and operational phases, potential exposure of future users to elevated pollutant concentrations and
 the mitigation measures required to prevent, reduce, or offset the impacts and the residual impacts.
 The report was prepared by Royal HaskoningDHV.
- 17 Legislative Framework and Planning Policy

18 National Legislation

- 19 The Air Quality Strategy
- Air pollution can have adverse effects on the health of humans and ecosystems. European Union 7.4.3 20 (EU) legislation forms the basis for UK air quality policy. The EU Air Quality Framework Directive 21 96/62/EC on Ambient Air Quality Assessment and Management entered into force in September 22 1996. This was a framework for tackling air quality through setting European-wide air quality limit 23 values in a series of Daughter Directives, prescribing how air quality should be assessed and 24 25 managed by the Member States. Directive 96/62/EC and the first three Daughter Directives were 26 combined to form the new EU Directive 2008/50/EC20 on Ambient Air Quality and Cleaner Air for Europe, which came into force June 2008. 27
- 7.4.4 The 1995 Environment Act²¹ required the preparation of a national Air Quality Strategy (AQS)
 which set air quality standards and Objectives for specified pollutants. The Act also outlined
 measures to be taken by local planning authorities in relation to meeting these standards and
 Objectives (the Local Air Quality Management (LAQM) system).
- 7.4.5 The UK AQS was originally adopted in 1997²² and has been reviewed and updated in order to take
 account of the evolving EU Legislation, technical and policy developments and the latest
 information on health effects of air pollution. The strategy was revised and reissued in 2000 as the
 AQS for England, Scotland, Wales and Northern Ireland²³. This was subsequently amended in
 2003²⁴ and was last updated in July 2007^{25.}

²³ Department of the Environment, Transport & the Regions (DETR) (2000) 'UK Air Quality Strategy'. London:HMSO.

¹⁹ Department for the Environment Food and Rural Affairs (2016) 'Local Air Quality Management Technical Guidance Document LAQM.TG (16)', London: Defra.

²⁰ European Parliament (2008) Council Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe.

²¹ HMSO (1995) 'The Environment Act 1995 (c.25)', London:TSO.

²² Department of the Environment (DoE) (1997) 'The UK National Air Quality Strategy', London: HMSO.

²⁴ DETR (2003) 'UK Air Quality Strategy- Addendum'. London:HMSO.

²⁵ Department for Environment, Food and Rural Affairs (Defra) (2007) 'The Air Quality Strategy for England, Scotland, Wales and Northern Ireland', London:HMSO.

- 17.4.6The standards and Objectives relevant to the LAQM framework have been prescribed through the2Air Quality (England) Regulations (2000) 26, and the Air Quality (England) (Amendment)3Regulations 200227; the Air Quality Standards Regulations 2010 set out the combined Daughter4Directive limit values and interim targets for Member State compliance28.
- 7.4.7 The current air quality standards and Objectives (for the purpose of LAQM) are outlined in Table
 AQT 1. Pollutant standards relate to ambient pollutant concentrations in air, set on the basis of
 medical and scientific evidence of how each pollutant affects human health. Pollutant Objectives
 however incorporate future dates by which each standard is to be achieved, taking into account
 economic considerations, practicability and technical feasibility.
- 7.4.8 Where an air quality Objective is unlikely to be met by the relevant deadline, local authorities must designate those areas as Air Quality Management Areas (AQMAs) and take action, along with others, to work towards meeting the Objectives. Following the designation of an AQMA, local authorities are required to develop an Air Quality Action Plan (AQAP) to work towards meeting the Objectives and improve air quality locally.
- 7.4.9 Possible exceedences of air quality Objectives are usually assessed in relation to those locations
 where members of the public are likely to be regularly present and are likely to be exposed for a
 period of time appropriate to the averaging period of the Objective.
- 187.4.10The annual mean objectives for NO_2 and PM_{10} are applicable at the façades of residential19properties, schools, hospitals, and should generally not apply at hotels unless people live there as20their permanent residence. The 24-hour objective for PM_{10} is considered to applies at the same21locations as the annual mean objective, and at hotel developments and gardens of residential22properties. The 1-hour mean objective for NO_2 applies wherever members of the public might23regularly spend 1 hour or more.
- 24 25

Table AQT 1: Air Quality Strategy Objectives (England) for the Purpose of Local Air Quality Management

Pollutant		To be	
Fondant	Concentration	Measured as*	Achieved by
Nitrogen dioxide	200µg.m ⁻³	1 hour mean not to be exceeded more than 18 times per year	31/12/2005
(NO ₂)	40µg.m⁻³	Annual mean	31/12/2005
Dorticles (DM)	50µg.m⁻³	24-hour mean not to be exceeded more than 35 times per year	31/12/2004
	40µg.m ⁻³	Annual mean	31/12/2004
Particles (PM _{2.5})	25µg.m⁻³	2020	
	15% (2010 - 2020	

26 Note: * how the Objectives are to be measured is set out in the UK Air Quality (England) Regulations (2000)

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²⁶ HMSO (2000) 'Statutory Instrument 2000 No. 928, The Air Quality (England) Regulations 2000', London:HMSO.

²⁷ HMSO (2002) 'Statutory Instrument 2002 No. 3043, The Air Quality (England) (Amendment) Regulations 2002', London:HMSO.

²⁸ HMSO (2010) 'Statutory Instrument 2010 No. 1001, Air Quality Standards (England) Regulations, 2010'. London:HMSO.

1		National Policy Guidance
2		National Planning Policy Framework
3 4 5	7.4.11	The National Planning Policy Framework ₂₉ (NPPF) was adopted in March 2012 and refers to the Local Air Quality Management process by recognising that:
6 7 8		"Planning policies should sustain compliance with and contribute towards EU limit values or national Objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas."
9 10 11	7.4.12	The NPPF identifies that local planning authorities should maintain consistency within the Local Air Quality Management process and states that:
12 13		"Planning decisions should ensure that any new development within Air Quality Management Areas is consistent with the local Air Quality Action Plan."
14		Planning Practice Guidance
15 16	7.4.13	The government's Planning Practice Guidance provides guidance on how the planning process can take account of the impact new development may have on air quality.
17 18	7.4.14	The guidance states that air quality may be relevant to a planning application where:
19 20		• Traffic in the vicinity of the development may be affected by increasing volume or congestion or altering the fleet composition on local roads;
21		 New point sources of air pollution are to be introduced;
22		 People may be exposed to existing sources of pollution;
23		 Potentially unacceptable impacts (such as dust) may arise during construction; and
24		Biodiversity may be affected.
25		Regional Planning Guidance
26		London Plan 2015
27 28 29	7.4.15	In 2015, the Mayor of London adopted the Further Alterations to the London Plan ³⁰ (FALP) document. The FALP policies are operative from March 2015 and form part of the development plan for Greater London.
30 31	7.4.16	Policy 7.14 'Improving Air Quality' of the FALP document states: "Development proposals should:
32 33 34 35 36		a) minimise increased exposure to existing poor air quality and make provision to address local problems of air quality (particularly within Air Quality Management Areas (AQMAs) and where development is likely to be used by large numbers of those particularly vulnerable to poor air quality, such as children or older people) such as by design solutions, buffer zones or steps to promote greater use of sustainable transport modes through travel plans;

 ²⁹ Department for Communities and Local Government (DCLG) (2012) National Planning Policy Framework
 ³⁰ Further Alterations to the London Plan, 2015, available at URL: http://www.london.gov.uk/priorities/planning/londonplan/further-alterations-to-the-london-plan

- b) promote sustainable design and construction to reduce emissions from the demolition and construction of buildings following the best practice guidance in the GLA and London Councils' 'The control of dust and emissions from construction and demolition':
 - c) be at least 'air quality neutral' and not lead to further deterioration of existing poor air quality (such as areas designated as Air Quality Management Areas (AQMAs));
- d) ensure that where provision needs to be made to reduce emissions from a development, this is 6 usually made on-site. Where it can be demonstrated that on-site provision is impractical or inappropriate, and that it is possible to put in place measures having clearly demonstrated 8 equivalent air quality benefits, planning obligations or planning conditions should be used as 9 appropriate to ensure this, whether on a scheme by scheme basis or through joint area-based 10 approaches; and 11
- e) where the development requires a detailed air quality assessment and biomass boilers are 12 13 included, the assessment should forecast pollutant concentrations. Permission should only be 14 granted if no adverse air quality impacts from the biomass boiler are identified."
- 7.4.17 A Supplementary Planning Guidance (SPG) 'The Control of Dust and Emissions During 15 Construction and Demolition was produced by the Greater London Authority (GLA) which requires 16 an assessment of the impacts of construction works on air quality, using the Institute of Air Quality 17 Management methodology (IAQM, 2016). 18

Local Planning Policy Guidance 19

- The London Borough of Camden Council (LBCC) Core Strategy³¹ sets out the key elements of the 20 7.4.18 vision for the borough, and is a central part of the Local Development Framework. The policy in 21 the Core Strategy relevant to air quality is detailed below: 22
- "Policy CS 16 Improving Camden's health and well-being 24
- The Council will seek to improve health and well-being in Camden. We will: 26
- [...] 27

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- 28 e) recognise the impact of poor air quality on health and implement Camden's Air Quality Action Plan which aims to reduce air pollution levels." 29
- Methodology 30

Data Sources 31

7.4.19 The assessment was undertaken with reference to information from a number of sources, as 32 detailed in Table AQT 2. 33

Table AQT 2: Key Information Sources 34

Data Source	Reference
Department for Environment Food and Rural Affairs (Defra)	Defra (2016) Local Air Quality Management Technical Guidance $TG(16)^1$
Defra LAQM Support Tools	Local Air Quality Management 1km x 1km grid background pollutant maps ³²

³¹ Camden Council (2010); Camden Core Strategy 2010 – 2025, Local Development Framework.

³² Defra Local Air Quality Background Maps, available at URL: http://laqm.defra.gov.uk/review-and-assessment/tools/backgroundmaps.html

Data Source	Reference
Greater London Authority (GLA) (2014)	GLA (2014); The Control of Dust and Emissions During Construction and Demolition, Supplementary Planning Guidance, London Plan 2011 ³³
London Borough of Camden Council	2015 Updating and Screening Assessment for London Borough of Camden, April 2015
Institute of Air Quality Management (IAQM)	IAQM (2016) Guidance on the Assessment of Dust from Demolition and Construction v1.1 ³⁴
IAQM and Environmental Protection UK (EPUK)	IAQM & EPUK (2017): Land-use Planning & Development Control: Planning for Air Quality v1.2 ³⁵

1 Consultation

7.4.20 The Proposed Development lies within the administrative area of LBC. Consultation was undertaken with the LBCC Sustainability team to agree the appropriate methodology of assessment³⁶.

5 Baseline Air Quality Conditions

7.4.21 Background air pollutant concentrations corresponding to the 1km x 1km grid squares covering the study area were obtained from the LAQM support tools provided by Defra³⁷ for use in air quality assessments. Background concentrations for the Base Year (2014) were obtained to establish baseline air quality conditions at the receptor locations identified.

10 Construction Phase Assessment

- 11 Construction Phase Dust and Fine Particulate Matter
- 7.4.22 An assessment of potential impacts associated with the construction phase was undertaken in accordance with the IAQM³⁴ and GLA³³ guidance. A summary of the assessment process is provided below:
- 15 7.4.23 Construction phase assessment steps:
 - 1. Screen the need for a more detailed assessment;
- 17 2. Separately for demolition, earthworks, construction and trackout:
 - A. determine potential dust emission magnitude;
 - B. determine sensitivity of the area; and
 - C. establish the risk of dust impacts.
- 21 **3**. Determine site specific mitigation; and

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³³ Greater London Authority (2014): The Control of Dust and Emissions During Construction and Demolition, Supplementary Planning Guidance, London Plan 2011

³⁴ Institute of Air Quality Management (2016): Guidance on the Assessment of Dust from Demolition and Construction, January 2016 v1.1

³⁵ IAQM & EPUK (2017): Land-use Planning & Development Control: Planning for Air Quality v1.2 January 2017. Institute of Air Quality Management and Environmental Protection UK.

³⁶ Consultation was undertaken with LBCC Environmental Health and Consumer Sustainability by email on 24 – 28 April 2017

³⁷ Background maps, provided by Defra as part of the LAQM support tools, http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html

- 4. Examine the residual effects to determine whether or not additional mitigation is required.
- 7.4.24 It should be noted that trackout is defined as the transport of dust and dirt from the construction site onto the public road network. Full details of the assessment methodology are provided in Appendix AQT1.

5 Construction Phase Road Traffic Emissions

- 7.4.25 Construction phase road traffic movements were compared to the screening criteria detailed in the IAQM and EPUK guidance³⁵ which determines whether a detailed air quality assessment is required. The number of construction phase vehicle trips over the 24 month construction period was estimated using the UK Industry Performance Report³⁸, Department for Transport (DfT) guidance³⁹, the TRICS and JMP Report⁴⁰ and the Construction Site Transport document⁴¹.
- 11 Operational Emissions Assessment
- 12 Air Quality Assessment
- 7.4.26 The operational phase assessment considered the impact of traffic on the existing road network at
 proposed receptor locations within the development site, and the impact of emissions from the
 CHP units and gas-fired boilers at both existing and proposed receptors.
- 7.4.27 The Atmospheric Dispersion Modelling System for Roads (ADMS-Roads) v4.1.1.0 was used to assess the suitability of the site for the proposed land use, and the impact of emissions from the proposed CHP units and gas-fired boilers. Concentrations of NO₂ and PM₁₀ were predicted at the existing receptors and future locations where members of the public may be exposed to pollutant concentrations.
- 21 7.4.28 In accordance with LAQM TG.16 guidance, annual mean air guality Objectives should generally not apply at hotels unless they are to be used for permanent residence. As it is anticipated that 22 neither staff nor quests will permanently live at the hotel, the assessment considered that the 23 annual mean Objectives do not apply on the basis that there would be no public exposure over an 24 annual timescale. However, the short term air quality objectives, such as the 1-hour mean objective 25 for nitrogen dioxide NO₂ and 24-hour mean Objective for PM₁₀ do apply as there will be public 26 exposure over these time periods. Predicted concentrations were therefore compared to the 1-27 hour mean objective for NO₂ and 24-hour mean Objective for PM₁₀. 28
- 7.4.29 A detailed air dispersion modelling assessment is not straightforward for short term concentrations.
 Due to short-lived peak values, exceedances of the 1-hour objective are variable throughout the
 year, and dispersion models are poorer at predicting short-term than annual mean concentrations.
 Defra guidance (LAQM T.G.16) states that exceedances of the NO₂ 1-hour mean are unlikely to
 occur where the annual mean is below 60µg.m⁻³.
- 7.4.30 Where the model predicted that the annual mean NO₂ concentrations were greater than 60µg.m-3,
 further dispersion modelling was undertaken using the Chemistry Module in ADMS-Roads to
 determine if there would be exceedances of the 1-hour NO₂ objective. Modelled short-term NO₂
 99.79th percentile results were predicted using ADMS-Roads.
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³⁸ UK Industry Performance Report (2016), Based on UK Industry Key Performance Indicators, Glenigan, Constructing Excellence, CITB, Department for Business, Energy and Industrial Strategy.

³⁹ Department for Transport (2007); Guidance on Transport Assessment, Communities and Local Government, March 2007.

⁴⁰ TRICS (2008), Construction Traffic Research Report, JMP

⁴¹ BRE (2003), Construction Site Transport, April 2003, available at URL: http://www.bre.co.uk/pdf/constructiontraffic.pdf

2 3 4 5	7.4.31	The Proposed Development is not anticipated to generate operational phase traffic movements above the IAQM screening criteria. As such, scenarios considering impacts associated with road vehicle exhaust emissions both 'without' and 'with' the development in place were not included in the assessment. The assessment therefore considered the following scenarios:
6		 Scenario 1 – Base Year (2014);
7		 Scenario 2 – Opening Year (2019) 'without energy plant; and
8		 Scenario 3 – Opening Year (2019) 'with energy plant'.
9 10 11	7.4.32	A Base Year of 2014 was utilised in the assessment, as this is the most recent full calendar year available for ambient air quality monitoring data on the LBC webpages. The Opening Year of the Proposed Development is anticipated to be 2019.
12		Traffic Data
13 14 15 16	7.4.33	24 hour Annual Average Daily Traffic (AADT) flows and Heavy Duty Vehicle (HDV) percentages were obtained from the DfT traffic count database. The 2014 traffic data were adjusted to provide the 2019 (Opening Year) scenario using the Trip End Model Presentation Program (TEMPro). Data were provided for the following roads for use in the assessment:
17		A40 Bloomsbury Way
18		A40 Charing Cross Road;
19		A40 High Holborn;
20		A40 New Oxford Street;
21		A40 Proctor Street;
22		A40 St Giles High Street;
23		A40 Vernon Place;
24		A400 Tottenham Court Road;
25		A400 Bloomsbury Street;
26		A401 Theobalds Road;
27		A401 Shaftesbury Avenue
28		A4200 Kingsway;
29		A4200 Southampton Row; and
30		Southampton Place.
31 32	7.4.34	The road network utilised in the assessment is detailed in Figure AQT1 . Traffic speeds were modelled in accordance with Defra guidance ¹⁹ and included in the dispersion model as follows:
33 34		 Traffic speeds for free flowing sections of roads considered in the assessment were modelled at national speed limits;
35 36 37		• Queues were included on entry to junctions where traffic lights were present and were modelled at 20kph on roads where there are two-way flows, to account for acceleration from one side; and
38		Queues on one-way streets were modelled at 5mph.
39	7.4.35	Traffic data used in the air quality assessment, are provided in Appendix AQT2 .

Assessment Scenarios

1

1 Energy and Heat Generation

- 7.4.36 As part of the development, three 39kWh CHP units and three 200kWh gas-fired boilers are proposed to provide electricity and heating for the Proposed Development. The plant will be situated on the ground floor of the Proposed Development, with the exhaust flues situated above the roof level of the Proposed Development.
- 7.4.37 Emissions from the proposed CHP units and gas-fired boilers were included in the ADMS-Roads model. Emission data was calculated from the manufacturer's technical data sheets and information provided by Long and Partners. As the fuel for the CHP units and gas-fired boilers will be natural gas, emissions of particulate matter are assumed to be negligible due to the efficient combustion of a gas phase fuel. The energy facilities were predicted to be in operation at 100% load and for the full duration of the year to provide a conservative assessment.
- 12 7.4.38 The model input parameters are detailed in Table AQT 3.

Table AQT 3: Model Input Parameters for CHP

Parameter	CHP Units	Gas-fired Boilers
Fuel	Natural gas	Natural gas
Release Height (m)	29.84	29.84
Stack diameter (m)	0.13*	0.26*
Efflux velocity (m.s ⁻¹)	5.08	7.39
Exhaust Temperature (°C)	120	65
NO_X Content at 5% O_2 (mg/kWh)	77	37
NO _X Emission Rate (g/s)	0.001	0.002

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* This is an effective stack diameter by siting of the three flues within a combined 400mm shield.

15 Meteorological Data

- 7.4.39 2014 meteorological data from the London City recording station was used in the ADMS-Roads
 model. This is the closest, most representative recording station to the development site and the
 use of this data was agreed with LBC during the consultation period.
- 19 Model Verification
- 7.4.40 Model verification is the process of adjusting model outputs to improve the consistency of
 modelling results with respect to available monitored data. In this assessment, model uncertainty
 was minimised following Defra¹⁹ and IAQM and Environmental Protection UK (EPUK) guidance³⁵.
 Adjustment of the air dispersion model NOx outputs was undertaken using 2014 monitoring data
 obtained from LBCC for the following two monitoring locations:
- CD3 Shaftesbury Avenue automatic monitoring station; and
 - CA21 Bloomsbury Street diffusion tube.
- 27 7.4.41 Details of the model verification process are provided in **Table AQT 4**.
- 28 29 30 31

Table AQT 4: Model Verification Process

Model Verification Procedure	NO ₂ Monitor	ring Locations
	CD3	CA21
2014 Background NO _x (µg.m ⁻³)*	103.5	97.1
2014 Background NO ₂ (µg.m ⁻³)*	53.9	51.2
Monitored Road Contribution NO _x (total - background) (μg.m ⁻³)	41.7	87.4
Modelled Road Contribution NO _x (excludes background) (µg.m ⁻³)	35.9	82.6
Ratio of Monitored Road Contribution NO _x / Modelled Road Contribution NO _x	1.06	1.16
Adjustment Factor for Modelled Road Contribution	1.0	7316
Adjusted Modelled Road Contribution NO_x (µg.m ⁻³)	38.6	88.7
Adjusted Modelled Total NOx (including background NO _x) (μ g.m ⁻³)	142.0	179.8
Modelled Total NO ₂ (based on empirical NO _x / NO ₂ relationship) (μ g.m ³)	61.5	77.5
Monitored Total NO ₂ (µg.m ⁻³)	69.0	81.2

- * Background NOx and NO₂ concentrations were obtained from the latest 2013 based background maps. Background
 concentrations during the verification process were not adjusted with the removal of primary A-Roads, as described in
 paragraph 93.

9 Street Canyon

- 107.4.43Street canyons were included in the ADMS-Roads model where required in the vicinity of the11Proposed Development and the monitoring locations used in the verification process. A street12canyon can be defined as a narrow street where the height of buildings on both sides of the road is13greater than the road width. The ADMS-Roads street canyon module was utilised in the14assessment, which takes account of the additional turbulent flow patterns occurring inside a street15with relatively tall buildings (i.e. a street canyon).
- 7.4.44 In the assessment, the road width was measured as the building facade to building façade height in accordance with CERC guidance⁴². The average street canyon height was included in the ADMS-Roads model as 18m on Southampton Row, and 15m on Bloomsbury Street.
- 19 Emission Factors
- 7.4.45 Emission factors were obtained from the Emission Factor Toolkit v7.0 provided by Defra^{43.} Vehicle
 emissions are expected to improve with increased take up of more modern and cleaner vehicles
 however there is uncertainty regarding the rate of reduction in emissions for future assessment

⁴² Cambridge Environmental Research Consultants Ltd, AMDS-Roads User Guide

⁴³ Emission Factor Toolkit (2016) version 7.0, provided by Defra as part of the LAQM support tools http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html#eft

- years. To provide a conservative assessment, emission factors for the 2014 Base Year were used in all of the scenarios considered in the air quality assessment.
- 3 Conversion of NOx to NO₂
- 7.4.46 NOx concentrations were predicted using the ADMS-Roads model. The modelled road contribution of NOx at the identified receptor locations was then converted to NO₂ using the NOx to NO₂ calculator v5.144, in accordance with Defra guidance^{19.}
- 7 Relationship between the Annual Mean and 24-hour Mean PM₁₀ Concentrations
- 8 7.4.47 The relationship between the annual mean and the number of 24-hour mean exceedences of PM_{10} 9 is detailed in Defra guidance¹⁹ and uses the calculation:
- 11 Number of 24-Hour Mean Exceedences = $-18.5 + 0.00145 * Annual Mean^3 + (206 / Annual Mean)$
- 7.4.48 This method was used in the assessment to predict the number of 24-hour mean exceedences of
 the relevant PM₁₀ Objective.
- 14 Background Concentrations
- 7.4.49 The air quality assessment requires the derivation of background pollutant concentration data that are factored to the year of assessment, to which contributions from the assessed roads are added.
 LBC does not undertake background pollutant monitoring within the study area. Background NO₂, PM_{2.5} and PM₁₀ concentrations were therefore obtained for the 1km x 1km grid squares covering the study area. This was agreed with LBC during the consultation process³⁶.
- 20 Operational Phase CHP Emissions Assessment
- 7.4.50 Emissions from the proposed CHP units and gas-fired boilers were included in the ADMS-Roads
 model as point sources. The dispersion model was used to predict the impacts to the annual
 mean and hourly mean NO₂ concentrations as a result of the operation of the gas-fired boilers CHP
 plant.
- 25 ADMS-Roads Chemistry Module
- A detailed dispersion modelling exercise was carried out to determine if there were exceedances of 26 7.4.51 the short term-1 hour Objective for NO₂ at receptor locations where annual mean concentrations 27 were above 60µg.m-³. The Chemistry Module of ADMS-Roads was utilised to predict if there were 28 exceedances of the short term 1-hour Objective for NO_2 . The percentage of NOx emissions assumed as NO_2 of 22.5%⁴⁵ was used in the assessment. This was consistent with the approach 29 30 provided in the ADMS-Roads user guide. Background concentrations of ozone (O3) were 31 obtained from the London Bloomsbury monitoring station, which is the closest to the site. The 32 ADMS-Roads model was re-verified using NO₂ concentrations in the model with the same 33 monitoring locations CD3 and CA21. Full details of the verification process and the methodology 34 for the ADMS-Road chemistry module are provided in Appendix AQT3. 35
- 36

⁴⁴ NO_x to NO₂ calculator V 5.1 (2016) provided by Defra as part of the LAQM support tools http://laqm.Defra.gov.uk/tools-monitoringdata/no-calculator.html.

⁴⁵ The value for 'All London Traffic' for 2014 from the NAEI Primary NO₂ factors spreadsheet, available at URL: http://naei.defra.gov.uk/resources/PrimaryNO2%20factors_NAEIBase_2013_v1.xls

1 Assessment Significance Criteria

- 2 Construction Phase Dust and Fine Particulate Matter
- 7.4.52 In assessing the significance of construction dust impacts using the IAQM³⁴ and GLA³³ guidance documents, the dust emission magnitude was combined with the sensitivity of the area to determine the risk of impacts prior to mitigation. Full details are provided in Appendix AQT1. Once appropriate mitigation measures were identified, the significance of construction phase impacts was determined.
- 8 Road Traffic Emissions Assessment
- 7.4.53 The potential impact of emissions associated with construction and operational phase traffic on local air quality was considered using the methodology detailed in the latest IAQM and EPUK guidance³⁵. The document sets out a two-stage approach of criteria relating to increases in traffic flows and HDV movements, above which a detailed assessment of air quality impacts may be required. If the size and scale of the development, and increases in traffic flows and HDV movements, are below the criteria, there are unlikely to be any significant air quality impacts as a result of the development. The assessment criteria are detailed in Table AQT 5.
- 16

Table AQT 5: Air Quality Assessment Criteria

Stage	Criteria				
	10 or more residentia	al units or a site area of more than 0.5ha			
	More than 1,000m ² of floor space for all other uses or a site area greater than 1ha				
Stage 1	Coupled with either of the following:				
	The development has more than 10 parking spaces				
	The development will have a centralised energy facility or other centralised combustion process				
Stage 2	Light Duty Vehicles (LDVs)	A change in annual average daily traffic (AADT) of more than 100 within or adjacent to an AQMA, or more than 500 elsewhere			
	HDVs	An increase in HDV movements of more than 25 per day within or adjacent to an AQMA, or more than 100 elsewhere			

- 177.4.54It is anticipated that during the 24 month construction phase, there will be an average increase in
total vehicle movements of 19 per day. This was calculated using anticipated construction volume
of the project, and the 2016 construction vehicle key value of 18.1 vehicles per £100,00046. The
increase in road traffic vehicle movements is therefore below the Stage 2 criteria detailed in AQT
Table AQT 5.
- 7.4.55 During the operational phase, the development is also not anticipated to generate traffic
 movements above the IAQM screening criteria detailed in Table AQT 5.

⁴⁶ CITB (2016) UK Industry Performance Report, Based on the UK Construction Industry Key Performance Indicators, Glenigan, Construction Excellence, CITB and Department for Business, Energy and Industrial Strategy

7.4.56 Therefore, the impact of both construction and operational phase development-generated traffic on existing sensitive receptor locations is not expected to be significant, and therefore a detailed assessment was not required in accordance with IAQM and EPUK guidance³⁵.

4 Existing Receptors

5 7.4.57 Guidance is provided by the IAQM and EPUK³⁵ to determine the significance of a development's 6 impact on local air quality. **Table AQT** 6 details the impact descriptors at identified individual 7 receptors that take account of the magnitude of changes in pollutant concentrations, and the 8 concentration in relation to the air quality Objectives. The impact of emissions from the CHP units 9 and gas-fired boilers as part of the Proposed Development was predicted using the impact 10 descriptors in **Table AQT** 6.

11 Table AQT 6: Impact Descriptors for Individual Receptors

Long Term Average Concentration at Receptor	% Change in Concentration Relative to the Air Quality Assessment Level (AQAL)					
in Assessment Year	1	2 - 5	6-10	>10		
75% or less of AQAL	Negligible	Negligible	Slight	Moderate		
76-94% of AQAL	Negligible	Slight	Moderate	Moderate		
95-102% if AQAL	Slight	Moderate	Moderate	Substantial		
103-109 of AQAL	Moderate	Moderate	Substantial	Substantial		
110% or more of AQAL	Moderate	Substantial	Substantial	Substantial		

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Note: Figures are to be rounded up to the nearest round number. Any value less than 1% after rounding (effectively less than 0.5%) will be described as "Negligible".

- 7.4.58 Further to the determination of the impact at individual receptors, the guidance recommends that
 assessment is made of the overall significance of the impact from a development on local air
 quality. The overall significance should take into account the following factors:
 - The existing and future air quality in the absence of the development;
 - The extent of current and future population exposure to the impacts; and
 - The influence and validity of any assumptions adopted when undertaking the prediction of impacts.
- 7.4.59 The guidance also states that a judgement of the significance should be made by a competent
 professional who is suitably qualified. This air quality assessment and determination of the
 significance of the development on local air quality was undertaken by members of the IAQM.
- 24 Proposed Receptors
- 25 7.4.60 Predicted NO₂ and PM₁₀ concentrations at future receptors at the Proposed Development were 26 compared to the 1-hour mean objective for NO₂ and 24-hour mean Objective for PM₁₀.
- 7.4.61 Defra guidance (TG16) states that exceedances of the NO₂ 1–hour mean are unlikely to occur where the annual mean is below 60µg.m-³. Where the model predicted that the annual mean NO₂ concentrations were greater than 60µg.m-³, further dispersion modelling was undertaken using the Chemistry module in ADMS-Roads to determine if there would be exceedances of the 1-hour NO₂ objective.

1 Existing Conditions

2 Local Air Quality Management

- 3 7.4.62 The Proposed Development site is situated within the borough wide Camden AQMA. The AQMA was designated for exceedences of the annual mean NO_2 and 24-hour mean PM_{10} .
- 5 Air Quality Monitoring
- 7.4.63 LBC undertakes ambient air quality monitoring using a network of automatic monitoring sites and NO₂ diffusion tubes. The closest monitoring locations to the development site are two roadside site, the continuous analyser CD3, Shaftesbury Avenue, and diffusion tube CA21 on Bloomsbury Street. Monitoring data from 2010 2014 for these diffusion tubes are detailed in Table AQT 7.
 Exceedences of the annual mean Objectives are shown in bold text

11 Table AQT 7: Diffusion Tube Monitoring Data for Monitoring Locations in the Vicinity of the 12 Site

Diffusion	Location	Site Type	Year				
Tube Reference			2010	2011	2012	2013	2014
	Ann	ual Mean NO ₂	Concentra	tions (µg.n	n ⁻³)		
CD3	Shaftesbury Avenue	Roadside	89	76	71	74	69
CA21 Bloomsbury		Roadside	41	77	72	76	81
	Number of E	xceedances o	of 1-hour N	O₂ Mean (>	200µg.m ⁻³)		
CD3	Shaftesbury Avenue	Roadside	21	15	12	6	1
	Anni	ual Mean PM ₁₀	o Concentra	tions (µg.n	n ⁻³)		
CD3	Shaftesbury Avenue	Roadside	29	32	29	29	25
	Exceedances of the PM ₁₀ 24-hour mean Objective (> 50µg.m ⁻³)						
CD3	Shaftesbury Avenue	Roadside	29	27	18	17	16

- 137.4.64The monitoring data show that there were exceedences of the annual mean NO2 air quality14Objective of $40\mu g.m^{-3}$ at the monitoring locations within the study area from 2010 2014. There15were no exceedances of the 1-hour mean NO2 objective from 2010 2014, despite recorded16annual mean concentrations above $60\mu g.m^{-3}$. There were no exceedances of the 24-hour or17annual mean air quality Objectives for PM10 at the CD3 monitoring location from 2010 2014.
- 18 Background Concentrations
- 197.4.652014 background concentrations of NO2 and PM10 were obtained from the air pollutant20concentration maps provided by Defra37 for the grid squares covering the study area.201421background concentrations were used for all future year scenarios to provide a conservative22assessment.To avoid 'double counting' pollution sources, the background pollutant contribution23from primary A-roads was removed from the total concentrations as these sources were included24within the dispersion model, using the NOx to NO2 Sector removal tool provided by Defra.25adjusted background concentrations for the assessment years are detailed in Table AQT 8.
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Table AQT 8: 2014 Background Pollutant Concentrations (µg.m-³) Obtained for 1km x 1km Grid Squares Covering the Study Area

Grid Square	Pollutant	2014 Background Concentration (µg.m ⁻³)*
520500 191500	NO ₂	47.25
529500, 161500	PM ₁₀	23.09
	NO ₂	46.85
550500, 181500	PM ₁₀	23.07

* All background concentrations obtained from the latest 2013 based background maps

- 5 7.4.66 Background concentrations of NO₂ within the study area are above the annual mean air quality 6 Objective of 40μ g.m⁻³ for NO₂. PM₁₀ concentrations are below their respective annual mean air 7 quality Objectives.
- 8 Identification of Receptor Locations

9 Construction Phase Assessment

- 107.4.67The IAQM34 and GLA33 guidance states that a Detailed Assessment is required if there are human11receptors located within 350m and ecological receptors within 50m of the site boundary. There are12no designated ecological sites within 50m of the site boundary. However, there are a number of13human receptors to construction phase works are located within 350m of the site boundary. These14are categorised as places of work, where users would expect to enjoy a reasonable level of15amenity. A Detailed Assessment was therefore required.
- 16 7.4.68 The distance boundaries for the construction phase assessment are detailed in Figure AQT2.
- 17 Operational Phase Assessment
- 18 Existing Receptors
- 7.4.69 Receptors were included in the dispersion model at existing receptor locations in the vicinity of the 19 Proposed Development, to assess the potential impacts of emissions from the CHP units and gas-20 fired boilers. The sensitive receptor locations were selected based on their proximity to the stack 21 locations, where the potential effect of emissions on local air pollution would be most significant. 22 Receptors were modelled at a height of 1.5m to represent human exposure, and subsequently 23 every 5m to a height of 31.5m to consider the potential impacts across the full height of the existing 24 building facades in the vicinity of the site. The sensitive receptor locations are detailed in Table 25 AQT 9 and in Figure AQT3. 26
- Table AQT 9:

 Table AQT 9: Existing Sensitive Receptor Locations

Receptor	Receptor Location Grid Reference		ference
R1	Sicilian House, 17 Southampton Row	530481	181585
R2	1 Fisher Street	530517	181624
R3	23 Proctor Street	530544	181623
R4	Globalcig, Lion House, 25 Proctor Street	530560	181625
R5	Kingsgate House, 3 Catton Street	530455	181584

1 Proposed Receptors

- 7.4.70 Proposed on-site receptor locations were included in the assessment to determine the suitability of
 the site for the Proposed Development. Pollutant concentrations were calculated at these locations
 to determine whether future users of the Proposed Development would be exposed to elevated
 pollutant levels. Proposed receptors were situated around the perimeter of the proposed building
 to determine the exposure at each façade.
- 7 7.4.71 The proposed receptor locations are shown in **Figure AQT3**.
- 9 7.4.72 Pollutant concentrations were modelled up to Floor Level 8, using cumulative floor heights of the 10 Proposed Development. Receptors on the ground level were modelled at a height of 1.5m to 11 represent human exposure, and the subsequent floor heights were added to represent each floor 12 level. The following floor heights were therefore modelled for each proposed receptor location:
- 14 Ground Floor 1.50m
- Floor Level 1 6.99m
- Floor Level 2 10.24m
- 17 Floor Level 3 13.00m
- 18 Floor Level 4 15.94m
- 19 Floor Level 5 18.70m
- 20 Floor Level 6 21.64m
- Floor Level 7 24.49m
 - Floor Level 8 27.34m
- 7.4.73 The ground floor of the Proposed Development contains separate lobbies for the hotel and
 restaurant, and a bar. The first floor contains a restaurant in the west section of the Proposed
 Development, with hotel room situated in the east section. Hotel rooms will be located on all
 remaining floor levels in the Proposed Development.

27 Baseline Emissions Assessment

7.4.74 The ADMS-Roads model was used to estimate annual and short term NO2 and PM10
 concentrations for the Base Year (2014) and the Opening Year (2019) 'without energy plant'
 scenarios considered in the assessment.

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- 33 7.4.7534 7.4.76
- 35 **7.4.77**
- 7.4.78 Table AQT 10 provides the results of the baseline assessment for the ground floor of the existing
 receptors considered in the assessment. Exceedences of the air quality Objectives are shown in
 bold text.
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Table AQT 10: Predicted Baseline NO ₂ and PM ₁₀ Concentrations (µg.m- ³) a	at Existing
Receptor Locations	

		Scenario 1:			Scenario 2:	
		Base Year (2014	!)	Without Energy Plant (2019)		
Receptor	NO₂ (µg.m⁻³)	ΡΜ ₁₀ (µg.m ⁻³)	Number of Exceedances of the 24- hour Mean PM ₁₀ Objective	NO₂ (µg.m⁻³)	ΡΜ ₁₀ (µg.m ⁻³)	Number of Exceedances of the 24- hour Mean PM ₁₀ Objective
R1	66.41	25.40	13	67.70	25.57	14
R2	60.31	24.60	11	61.21	24.71	12
R3	58.87	24.44	11	59.69	24.54	11
R4	59.53	24.54	11	60.39	24.64	12
R5	59.99	24.56	11	60.87	24.67	12

- 47.4.79Annual mean NO2 concentrations are predicted to exceed the annual mean NO2 Objective at all
identified sensitive receptors for the 'Base Year' (2014) and Opening Year 'without energy plant'
(2019) scenarios. This is consistent with the Camden borough-wide AQMA designation where
elevated pollutant concentrations are anticipated and Defra predicted background NO2
concentrations for the area. In accordance with Defra guidance¹⁹, there is potential for
exceedences of the 1-hour mean Objective for NO2 at receptors R1, R2, R4 and R5, as the
predicted annual mean concentrations are above than 60µg.m-3.
- 117.4.80The results of the baseline assessment for the 'Base Year' (2014) and Opening Year 'without12energy plant' (2019) scenarios predict that concentrations of PM_{10} are well below the annual mean13Objectives at the receptor locations assessed. The short term PM_{10} Objective was predicted to be14met at all modelled locations with fewer than 35 exceedences of the daily mean Objective of15 $50\mu g.m.^3$.
- 16 Effects During Construction

17 Construction Phase Assessment

- 18 Construction Phase Dust and Fine Particulate Matter
- 7.4.81 A qualitative assessment of construction phase dust and PM₁₀ emissions was carried out in accordance with the IAQM³⁴ and GLA³³ guidance documents. Full details of the methodology and dust assessment undertaken are provided in **Appendix AQT1**.
- 7.4.82 The construction works associated with the Proposed Development have the potential to impact on
 local air quality conditions:
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- Dust emissions generated by demolition, excavation, construction and earthwork activities associated with the construction of the Proposed Development, have the potential to cause nuisance to, and soiling of, sensitive receptors;
- Emissions of exhaust pollutants, especially NO₂ and PM₁₀ from construction traffic on the local road network, have the potential to adversely impact upon local air quality at sensitive receptors situated adjacent to the routes utilised by construction vehicles; and

- Emissions of NO₂ and PM₁₀ from non-road mobile machinery (NRMM) operating within the Proposed Development site, have the potential to adversely impact local air quality at sensitive receptors in close proximity to the works.
- 7.4.83 The potential for sensitive receptors to be affected will depend on where within the application site
 the dust raising activity takes place, the nature of the activity and controls, and meteorological
 dispersion conditions.
- 7 7.4.84 If construction operations were un-mitigated, the effects of dust during dry and windy conditions, could lead to an increase in the 24-hour mean PM₁₀ concentration immediately surrounding the 8 Proposed Development site. However, the maximum background PM₁₀ concentration, for the 1km 9 x 1km grid squares covering the study area, was 23.09µg.m-3 in 2016, based on 2013 mapped 10 background estimates. Therefore, the mapped background concentrations are 'well below' the 11 annual mean PM₁₀ Objective of 40µg.m-³. It is highly unlikely that the short-term construction 12 operations would cause the annual mean or short-term Objectives to be exceeded within the 13 vicinity of the Proposed Development. 14
- 15 **7.4.85** A qualitative assessment of construction phase dust and PM₁₀ emissions was carried out in accordance with the IAQM and GLA guidance documents.
- 17 Step 1: Screen the Need for a Detailed Assessment
- 187.4.86The IAQM and GLA guidance documents¹⁶ state that a Detailed Assessment is required if there19are human receptors located within 350m and ecological sites within 50m of the site boundary and20the first 500m of the construction vehicle routes. There are no designated ecological sites within2150m of the site boundary but human receptors are present within 350m. A Detailed Assessment22was therefore undertaken.
- 23 Step 2A: Define the Potential Dust Emission Magnitude
- 7.4.87 The IAQM guidance recommends that the dust emission magnitude is determined for demolition,
 earthworks, construction and trackout. The dust magnitudes for these activities were determined
 from assumptions confirmed by the client team, and in accordance with the IAQM methodology
 (see Appendix AQT1), and are summarised in Table AQT 11.

28 Table AQT 11: Dust Emission Magnitude for the Site

Activity	Dust Emission Magnitude
Demolition	Small
Earthworks	Medium
Construction	Medium
Trackout	Medium

- 7.4.88 The risk of potential impact of construction phase dust and PM₁₀ emissions during earthworks, construction and trackout is used to recommend appropriate mitigation measures. The dust magnitude for construction activities was categorised as 'Medium' for earthworks, construction and trackout, and 'Small' for demolition.
- 33 Step 2B: Define the Sensitivity of the Area
- 7.4.89 The sensitivity of human receptors to dust soiling and health effects of PM₁₀ associated with
 earthworks, construction and trackout activities during construction of the Proposed Development
 were determined and are summarised in Table AQT 12.

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Table AQT 12: Outcome of Defining the Sensitivity of the Area

Potential	Sensitivity of the Surrounding Area					
Impact	Demolition	Earthworks	Construction	Trackout		
Dust Soiling	Medium	Medium	Medium	Medium		
Human Health	Low	Low	Low	Low		

- 7.4.90 The site is located within 20m of more than ten places of work, and the background PM₁₀
 concentrations are less than 24µg.m-³. Therefore the sensitivity of the area to demolition
 earthworks, construction and trackout activities was 'Medium' for dust soiling and 'Low' for human
 health.
- 8 Step 2C: Define the Risk of Impacts
- 7.4.91 The dust emission magnitude detailed in Table AQT 11 is combined with the sensitivity of the area detailed in Table AQT 12 to determine the risk of impacts with no mitigation applied. The risks concluded for dust soiling and human health are provided in Table AQT 13.

Table AQT 13: Summary Dust Risk Table to Define Site-specific Mitigation

Potential	Risk					
Impact	Demolition	Earthworks	Construction	Trackout		
Dust Soiling	Medium Risk	Medium Risk	Medium Risk	Low Risk		
Human Health	Negligible	Low Risk	Low Risk	Low Risk		

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7.4.92 The risk of impacts during the construction phase was therefore described as medium risk for construction and earthwork activities and low risk for trackout, which would be anticipated from a site of this nature. The dust Details of Step 3: Site Specific Mitigation and Step 4: Determining Significant Effects are provided in the mitigation section of this chapter.

18 Mitigation

- 19 Construction Phase Assessment
- 20 Step 3: Site-Specific Mitigation
- 7.4.93 Step three of the IAQM³⁴ and GLA guidance documents identifies appropriate site-specific
 mitigation. These measures are related to the site risk for each activity.
- 7.4.94 The dust assessment determined that there was a risk of impacts resulting from construction activities without the implementation of mitigation measures. Additional guidance has been provided by the IAQM in relation to dust and air mitigation measures. It is recommended that the good practice measures outlined in the IAQM guidance are followed.
- 7.4.95
 The recommendations below should be detailed in a Dust Management Plan (DMP) to prevent or minimise the release of dust entering the atmosphere and/or being deposited on nearby receptors.
 Particular attention should be paid to operations which must unavoidably take place close to the site boundary. The effective implementation of the DMP will ensure that any potential dust releases associated with the construction phase will be reduced.

1 2 3 4	7.4.96	The GLA and London Councils guidance ¹⁷ recommends that monitoring is undertaken prior to, and during, the construction phase works. Monitoring requirements would be agreed with the LBC prior to the start of the construction works and the monitoring methodology could be detailed within the DMP.						
5		Hi	Highly Recommended Mitigation Measures					
6		Mi	tigation Measures for All Demolition and Construction Activities					
7		Sit	te Management					
8 9		•	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.					
10		•	Develop a Dust Management Plan.					
11 12		•	Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.					
13		•	Display the head or regional office contact information.					
14		•	Record and respond to all dust and air quality pollutant emissions complaints.					
15		•	Make a complaints log available to the local authority when asked.					
16 17 18		•	Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.					
19 20 21		•	Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.					
22 23		•	Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.					
24		Pr	eparing and Maintaining the Site					
25 26		•	Plan site layout so that machinery and dust causing activities should be located away from receptors.					
27 28		•	Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.					
29 30		•	Fully enclosure site or specific operations where there is a high potential for dust production and the site is active for an extensive period.					
31		•	Avoid site runoff of water or mud.					
32		•	Keep site fencing, barriers and scaffolding clean using wet methods.					
33		•	Remove materials from site as soon as possible.					
34		•	Cover, seed or fence stockpiles to prevent wind whipping.					
35		•	Agree monitoring locations with the Local Authority.					
36		•	Where possible, commence baseline monitoring at least three months before phase begins.					
37 38		•	Put in place real-time dust and air quality pollutant monitors across the site and ensure they are checked regularly.					
39		Op	perating Vehicle/Machinery and Sustainable Travel					
40		•	Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.					
41 42		•	Ensure all non-road mobile machinery (NRMM) comply with the standards set within the GLA and London Councils guidance.					

1	 Ensure all vehicles switch off engines when stationary – no idling vehicles.
2 3	 Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.
4 5	 Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
6 7	 Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).
8	Operations
9 10 11	 Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
12 13	 Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).
14	 Use enclosed chutes, conveyors and covered skips.
15 16	 Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
17 18	• Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
19	Waste Management
20	 Reuse and recycle waste to reduce dust from waste materials
21	 Avoid bonfires and burning of waste materials.
22	Measures Specific to Demolition
23	 Ensure water suppression is used during demolition operations.
24	 Avoid explosive blasting, using appropriate manual or mechanical alternatives.
25	 Bag and remove any biological debris or damp down such material before demolition.
26	Measures Specific to Construction
27 28 29	 Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
30	Measures Specific to Trackout
31 32	 Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site.
33	Avoid dry sweeping of large areas.
34 35	 Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.
36	 Record all inspections of haul routes and any subsequent action in a site log book.
37 38	 Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems and regularly cleaned.
39 40	 Inspect haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
41 42	 Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

1 2		• Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.					
3		 Access gates to be located at least 10m from receptors where possible. 					
4		Desirable Mitigation Measures					
5		Measures for All Demolition and Construction Activities					
6		Preparing and Maintaining the Site					
7 8		 Install green walls, screens or other green infrastructure to minimise the impact of dust and pollution. 					
9 10		 Carry out regular dust soiling checks of buildings within 100m of site boundary and cleaning to be provided if necessary. 					
11		Operating Vehicle/Machinery and Sustainable Travel					
12 13 14 15		• Impose and signpost a maximum-speed-limit of 10mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).					
16		Measures Specific to Demolition					
17 18		• Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).					
19		Measures Specific to Earthworks					
20		 Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces. 					
21		• Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil.					
22		Only remove secure covers in small areas during work and not all at once.					
23		Measures Specific to Construction					
24		 Avoid scabbling (roughening of concrete surfaces) if possible 					
25 26 27		• Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.					
28 29		• For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.					
30		Measures Specific to Trackout					
31 32		 Apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site 					
33		Measures Specific to Non Road Mobile Machinery (NRMM)					
34 35	7.4.97	From 1st September 2015, the GLA are implementing emission standards, based on engine emissions standards set in EU Directive 97/68/EC for NRMM ⁴⁷ of net power between 37kW and					

⁴⁷ Non-Road Mobile Machinery is defined as any mobile machinery, transportable industrial equipment or vehicle fitted with an internal combustion engine not intended for passenger or goods transport by road. Explanatory Memorandum to the UK Non Road Mobile Machinery (Emissions of Gaseous & Particulate Pollutants) (Amendment) Regulations (2006).

- 560kW operating in London. This applies for both variable and constant speed engines for both 1 NO_2 and PM_{10} . The emission standards include: 2 NRMM used on the site of any major development within Greater London will be required to 3 meet Stage IIA of the EU Directive 97/68/EC as a minimum. 4 7.4.98 In addition, the following NRMM best practice measures should be implemented. 5 Non Road Mobile Machinery⁴⁸ (NRMM) and plant would be well maintained. If any emissions of 7.4.99 6 dark smoke occur then the relevant machinery should stop immediately and any problem rectified. 7 In addition, the following controls should apply to NRMM: 8 All NRMM should use fuel equivalent to ultralow sulphur diesel (fuel meeting the specification 9 within EN590:2004); 10 All NRMM should comply with regulation (EU) 2016/1628 of the European Parliament and of 11 the European Council; 12 All NRMM will be fitted with Diesel Particulate Filters (DPF) conforming to defined and 13 demonstrated filtration efficiency (load/duty cycle permitting); 14 The ongoing conformity of plant retrofitted with DPF, to a defined performance standard, 15 should be ensured through a programme of onsite checks; and, 16 Fuel conservation measures should be implemented, including instructions to (i) throttle down 17 or switch off idle construction equipment; (ii) switch off the engines of trucks while they are 18 waiting to access the site and while they are being loaded or unloaded and (iii) ensure 19 equipment is properly maintained to ensure efficient fuel consumption. 20 **Effects on Operation** 21 22 Existing Receptor Locations
- 7.4.100 Predicted NO₂ concentrations for the Opening Year (2019) 'with energy plant' scenario are detailed
 in Table AQT 14. Concentrations for the 'without energy plant' scenario and the predicted change
 in NO₂ concentrations, as a result of the operation of the CHP units and gas-fired boilers, are also
 shown for comparison purposes. Exceedences of the annual mean Objective are shown in bold
 text.

28Table AQT 14: Predicted Annual Mean Pollutant Concentrations and Impact of Development29for the Opening Year (2019) Scenario at Existing Receptor Locations

	Predicted Annual Mean NO ₂ Concentrations 2019						
Receptor	Receptor Height	Without Energy Plant (µg.m ⁻³)	With Energy Plant (μg.m ⁻³)	Change (µg.m ⁻ ³)	Percentage Change Relative to Objective (%)*	Impact Descriptor	
	1.5	67.70	67.71	+0.01	0	Negligible	
R1	6.5	58.22	58.22	0.00	0	Negligible	
	11.5	52.65	52.65	0.00	0	Negligible	
	16.5	50.33	50.33	0.00	0	Negligible	

	Predicted Annual Mean NO ₂ Concentrations 2019)
Receptor	Receptor Height	Without Energy Plant (µg.m ⁻³)	With Energy Plant (μg.m ⁻³)	Change (µg.m ⁻ ³)	Percentage Change Relative to Objective (%)*	Impact Descriptor
	21.5	49.11	49.12	+0.01	0	Negligible
	26.5	48.41	48.43	+0.02	0	Negligible
	31.5	47.98	48.02	+0.04	0	Negligible
	1.5	61.21	61.21	0.00	0	Negligible
	6.5	57.53	57.53	0.00	0	Negligible
	11.5	53.26	53.26	0.00	0	Negligible
R2	16.5	50.63	50.63	0.00	0	Negligible
	21.5	49.22	49.23	+0.01	0	Negligible
	26.5	48.45	48.49	+0.04	0	Negligible
	31.5	47.99	48.09	+0.10	0	Negligible
	1.5	59.69	59.69	0.00	0	Negligible
	6.5	56.47	56.47	0.00	0	Negligible
	11.5	52.90	52.90	0.00	0	Negligible
R3	16.5	50.64	50.65	+0.01	0	Negligible
	21.5	49.31	49.33	+0.02	0	Negligible
	26.5	48.51	48.56	+0.05	0	Negligible
	31.5	48.03	48.10	+0.07	0	Negligible
	1.5	60.39	60.39	0.00	0	Negligible
	6.5	56.55	56.55	0.00	0	Negligible
	11.5	52.82	52.82	0.00	0	Negligible
R4	16.5	50.62	50.62	0.00	0	Negligible
	21.5	49.31	49.33	+0.02	0	Negligible
	26.5	48.54	48.58	+0.04	0	Negligible
	31.5	48.06	48.12	+0.06	0	Negligible
R5	1.5	60.87	60.87	0.00	0	Negligible

		Predicted Annual Mean NO ₂ Concentrations 2019					
Receptor	Receptor Without Energy Height Plant (µg.m ⁻³)		With Energy Plant (μg.m ⁻³)	Change (µg.m ⁻ ³)	Percentage Change Relative to Objective (%)*	Impact Descriptor	
	6.5	57.56	57.56	0.00	0	Negligible	
	11.5	52.76	52.76	0.00	0	Negligible	
	16.5	50.46	50.47	+0.01	0	Negligible	
	21.5	49.19	49.20	+0.01	0	Negligible	
	26.5	48.46	48.47	+0.01	0	Negligible	
	31.5	48.01	48.04	+0.03	0	Negligible	

* The percentage change in NO₂ concentrations was rounded to the nearest number in accordance with the significance criteria provided in the IAQM and EPUK guidance³⁵

- 7.4.101 The results of the assessment predict that annual mean concentrations of NO₂ were predicted to be above the annual mean Objective, both without and with the energy plant in place. A change of less than 0.5% of the air quality Objective was predicted at all receptor locations considered. In accordance with the IAQM and EPUK guidance³⁵ the maximum level of change corresponds to 'negligible' impact magnitude descriptor. These results indicate that the emission height of 29.84m is adequate for the dispersion of pollutant concentrations.
- 7.4.102 Receptors R1, R2, R4 and R5 on the ground floor, were predicted to have an annual mean NO₂ concentrations of above 60µg.m-³ both 'without' and 'with' the development in place, and therefore there is potential for exceedances of the short-term 1-hour NO₂ Objective.
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Proposed Receptor Locations

147.4.103Predicted concentrations were compared to the 1-hour mean objective for NO2 and 24-hour mean15Objective for PM10. The predicted annual mean NO2 concentrations and exceedances of the 24-16hour mean PM10 concentrations on the ground and first floor of the proposed building in the17Opening Year (2019) scenario are detailed in AQT Table AQT 15. The results for all other ground18levels considered in the assessment are detailed in Appendix AQT4. Exceedences of the annual19mean Objective are shown in bold text.

20Table AQT 15: Predicted Annual Mean NO2 and PM10 Pollutant Concentrations for the21Opening Year (2019) 'With Energy Plant' Scenario on the Ground and First Floor at the22Considered Proposed Receptor Locations

Receptor	Annual Mean NO ₂ Co	ncentrations (µg.m ⁻³)	Number of Exceedances of the 24-hour Mean PM ₁₀ Objective		
	Ground Floor	First Floor	Ground Floor	First Floor	
PR1	67.23	58.19	14	11	
PR2	67.35	58.31	14	11	

Receptor	Annual Mean NO ₂ Co	ncentrations (µg.m ⁻³)	Number of Exceedances of the 24-hour Mean PM ₁₀ Objective		
	Ground Floor	First Floor	Ground Floor	First Floor	
PR3	67.55	58.48	14	11	
PR4	64.55	58.17	13	11	
PR5	64.02	57.83	13	11	
PR6	61.92	57.36	12	11	
PR7	60.53	56.87	12	11	
PR8	59.95	56.63	11	10	
PR9	59.71	56.46	11	10	
PR10	60.21	56.77	11	11	
PR11	60.95	57.15	12	11	
PR12	62.27	57.62	12	11	
PR13	61.86	57.41	12	11	

- 17.4.104Predicted NO2 concentrations were predicted to be above $60\mu g.m.^3$ on the ground floor at2receptors PR1 PR7, and PR10 PR13. Therefore, there is potential for exceedances of the 1-3hour mean NO2 Objective, in accordance with Defra guidance¹⁹. These receptors are situated4within the ground floor lobby areas and bar. Predicted NO2 concentrations at all other proposed5receptors were predicted to be below $60\mu g.m.^3$ and therefore, in accordance with Defra6guidance19, the 1-hour mean NO2 Objective is unlikely to be exceeded. This includes all areas7where there are hotel rooms as part of the Proposed Development.
- ⁸ 7.4.105 The short term PM_{10} Objective is predicted to be met at all future receptors with fewer than 35 exceedances of the daily mean objective of 50µg.m-³.

10 Detailed Dispersion Modelling

7.4.106 Detailed dispersion modelling using the Chemistry Module of ADMS-Roads was undertaken to
 determine the short-term NO₂ 99.79th percentile concentrations in the Opening Year (2019) 'with
 energy plant' scenario. Results for receptors where annual mean NO₂ concentrations exceeded
 60µg.m-³ are provided in AQT Table AQT 17 and AQT Table AQT 17 for existing and proposed
 receptors respectively..

16Table AQT 16: Predicted Short-Tem Mean Pollutant Concentrations for the Opening Year17(2019) 'With Energy Plant' Scenario for the Ground Floor of the Considered Existing18Receptors

Receptor	NO ₂ 99.79 th Percentile Concentrations (μg.m ⁻³) Ground Floor
R1	168.18
R2	139.65

Receptor	NO ₂ 99.79 th Percentile Concentrations (μg.m ⁻³) Ground Floor
R3	120.31
R4	120.49
R5	131.56

Table AQT 17: Predicted Short-Tem Mean Pollutant Concentrations for the Opening Year(2019) 'With Energy Plant' Scenario on the Ground and First Floor at the ConsideredProposed Receptor Locations

	NO ₂ 99.79 th Percentile Concentrations (µg.m ⁻³)				
Receptor	Ground Floor	First Floor			
PR1	164.25	108.54			
PR2	165.38	108.59			
PR3	166.13	108.69			
PR4	155.10	110.64			
PR5	155.39	110.67			
PR6	145.60	112.67			
PR7	138.76	112.39			
PR8	133.67	111.99			
PR9	132.65	111.39			
PR10	133.55	112.63			
PR11	139.40	112.94			
PR12	145.58	112.78			
PR13	145.18	112.84			

7.4.107 The results indicate that the short-term 1-hour NO₂ Objective would be met at all of the existing and proposed receptor locations. The modelled 1-hour mean 99.79th percentile results were all below 200µg.m-³, therefore the 1-hour air quality Objective is likely to be met. This is consistent with monitoring data from the CD3 automatic monitoring which showed that there were no exceedences of the hourly NO₂ air quality Objective despite recorded annual mean concentrations exceeding 60ugm-³.

11 Impact Significance

- 1 7.4.108 This assessment concludes that development traffic impacts upon local air quality are not significant based upon:
 - A change of less than 0.5% of the annual mean NO₂ air quality Objective was predicted at all existing receptor locations considered in the assessment;
 - Annual mean NO₂ concentrations were predicted to be below 60µg.m-³ at all hotel rooms as part of the Proposed Development, therefore in accordance with Defra guidance, the 1-hour mean Objective is unlikely to be exceeded;
- Where annual mean concentrations were predicted to be exceedance of 60µg.m-³, further detailed dispersion modelling was undertaken using the chemistry module in ADMS-Roads.
 The 1-hour air quality Objective for NO₂ was predicted to be met at all of the receptor locations considered;
 - A conservative approach to the assessment was taken, with the use of 2014 emission factors in the 2019 opening year assessment scenarios; and
 - The assessment predicted that the CHP units and gas-fired boilers would be in operation at 100% load for the full year.
- 16 Mitigation

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17 Construction Phase

7.4.109 With the implementation of the mitigation measures detailed in the IAQM and GLA guidance documents, the residual impacts from the construction phase of the Proposed Development are considered to be not significant, in accordance with IAQM guidance³⁴.

21 Operation Phase

7.4.110 The operational phase emissions assessment predicted that the impact of the CHP units and gas fired units was not significant, and the future use of the Proposed Development were considered to
 be suitable with regard to air quality. Therefore we do not propose any specific air quality mitigation
 measures to be included in the scheme.

26 Residual Effects

7.4.111 A summary of the residual effects of the Proposed Development are provide in AQT Table AQT 18
 and AQT Table AQT 19 for the construction and operational phases respectively.

Receptors	Effect	Magnitude of Effect	Nature of Effect	Duration	Significance of Effect without Mitigation	Significance of Effect with Mitigation	Residual Effects
Human receptors within 350m of the site boundary	Dust soiling and human health impacts	N/A	N/A	Temporary	Not significant	Not significant	Not significant

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Table AQT 19: Effects Summary Table – Operational Phase

Table AQT 18: Effects Summary Table – Construction Phase

Receptors	Effect	Magnitude of Effect	Nature of Effect	Duration	Significance of Effect without Mitigation	Significance of Effect with Mitigation	Residual Effects
Human receptors in the vicinity of the stacks for the proposed CHP plant and gas-fired boilers	Human health impacts	Negligible	N/A	Throughout the operational phase	Not significant	Not significant	Not significant
Members of the public using bar, restaurant and hotel	Human health impacts	Negligible	N/A	Throughout the operational phase	Not significant	Not significant	Not significant

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1 7.5 Sunlight and Daylight

Technical references and illustrations for this topic are reproduced in Appendix SUN to this ES.

4 Introduction

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- 7.5.1 This section of the ES, written by GL Hearn, presents an assessment of the effects of the development at 1 Fisher Street and 8-10 Southampton Row, London WC1R 4QA ('the Proposed Development') on the daylight, sunlight amenity of neighbouring buildings. It also assesses the light received to the proposed habitable rooms within the Proposed Development.
- 7.5.2 1 Fisher Street and 8-10 Southampton Row currently comprises part of an established urban block at Southampton Row. The Site is bounded by Fisher Street to the north, Catton Street to the south and Southampton Row to the west. The site is, in part, occupied by a seven storey building on Southampton Row with the rear part of the building having been demolished to make way for a Crossrail excavation ('the Site').
- 147.5.3This Chapter considers the daylight, sunlight and overshadowing characteristics in the existing15condition ('the Baseline Scenario') and with the Development complete ('the Proposed Scenario').16This Chapter contains a description of the relevant planning policy, the methods used to assess the17effects, the baseline conditions currently existing at the Site and in its immediate vicinity, the18potential effects associated with daylight, sunlight and overshadowing and any relevant mitigation19measures and residual effects. The Chapter is supported by a number of appendices as follows:
 - Appendix SUN7.4.1: Drawings of the baseline and proposed situations;
 - Appendix SUN7.4.2: Drawings of the analysis receptors and contour results;
 - Appendix SUN7.4.3: Drawings of the Proposed Development contour results;
 - Appendix SUN7.4.4: Results of the daylight and sunlight tests to the surrounding buildings; and
 - Appendix SUN7.4.5: Results of the daylight and sunlight tests to the Proposed Development.
- 25 Local Planning Policy
- 7.5.4 Camden Council's Development Policies 2010-2025 adopted on 8 November 2010 state in Policy
 DP26:
- ²⁸ *"DP26 Managing the impact of development on occupiers and neighbours*
- The council will protect the quality of life of occupiers and neighbours by only granting permission for development that does not cause harm to amenity. The factors we will consider include:
- a) visual privacy and overlooking;
- 32 b) overshadowing and outlook;
- 33 c) sunlight, daylight and artificial light levels"
- 34 7.5.5 Paragraph 26.3 within DP26 states :
- "A development's impact on visual privacy, overlooking, overshadowing, outlook, access to daylight
 and sunlight and disturbance from artificial light can be influenced by its design and layout, the
 distance between properties, the vertical levels of onlookers or occupiers and the angle of views.

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These issues will also affect the amenity of the new occupiers. We will expect that these elements are considered at the design stage of a scheme to prevent potential negative impacts of the development on occupiers and neighbours. To assess whether acceptable levels of daylight and sunlight are available to habitable spaces, the Council will take into account the standards recommended in the British Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice."

- 7 7.5.6 The following documents were used in the preparation of this assessment and Chapter:
 - Dexter Moren Associates' scheme received 10th April 2017
 - Maltby Surveys' 3D model received 11th January 2017
- 7.5.7 The BRE Report focuses on the daylight and sunlight amenity within residential properties and
 those properties where natural light is considered desirable (i.e. hospitals and schools). In line with
 the BRE Report guidance the assessment has undertaken daylight and sunlight analysis of the
 nearest residential properties to the Site identified by a site inspection and a desktop study.
- 7.5.8 The location of the receptors is identified in the drawings contained in Appendix 7.4.1 with the only
 identified property being the proposed hotel at 2-6 Southampton Row. All other surrounding
 properties are commercial with no attributable daylight or sunlight expectations; therefore they
 have not been assessed for daylight and sunlight.
- 7.5.9 Information on the room use and internal arrangements of the proposed hotel was gathered using
 drawings downloaded from the Council's planning database and verified through external
 observation.
- 7.5.10 The technical study undertaken used a three-dimensional computer model of the Baseline and
 Proposed Scenarios and analysed both conditions using bespoke software. The assessment was
 based on a visual inspection, the information detailed above and estimates of relevant distances,
 dimensions and levels which are as accurate as circumstances allow.
- 25 Daylight
- 26 7.5.11 In summary, the BRE Report states that:
- "If any part of a new building or extension, measured in a vertical section perpendicular to a main
 window wall of an existing building from the centre of the lowest window, subtends an angle of
 more than 25 degrees to the horizontal, then the diffuse daylighting of the existing building may be
 adversely affected.
- 7.5.12 However, this preliminary test is most appropriate for low density developments such as new sub urban housing schemes and often it is not a particularly useful tool for assessing urban and brown
 field sites.
- 34 Vertical Sky Component (VSC)
- 7.5.13 The VSC test measures the amount of available skylight, received at a particular window,
 measured on the outside face. The VSC value is expressed as a percentage as it is the ratio
 between the amount of sky visible at the particular window compared to the amount of light that
 would be available from a totally unobstructed sky.
- 7.5.14 The VSC test measures the amount of skylight available on a vertical wall or window. The test compares the skylight available on a horizontal plane to that available on a vertical plane, both of which are placed about the centre of the receptor or window. Surrounding structures provide a barrier to sky light and a comparison can be drawn between the available before and after a

- 1 structure is erected. The 'standard overcast sky' is applied and the ratio between the two is 2 expressed as a percentage.
- 7.5.15 The maximum VSC value is a little under 40% for a completely unobstructed vertical wall or window. The target figure for VSC recommended by the BRE is 27% at which level an area lit by a typical window would have a relatively good level of daylight. However, this level is often difficult to achieve on secondary elevations and in built-up urban environments. For comparison, a window receiving 27% VSC is approximately equivalent to a window that would have a continuous obstruction opposite at an angle of 25 degrees i.e. the same results as would be found using the 25 degree line test.
- 10 **7.5.16** The VSC calculation only measures light reaching the outside plane of the window under 11 consideration, so this is potential light rather than actual.
- 12 Daylight Distribution test (DD)
- 137.5.17Where interior layouts are known the BRE Report recommends a further test is applied. Daylight14Distribution or the 'No Sky Line' test is a measure of the distribution of daylight at the 'working15plane' within a room.
- 167.5.18The test considers the position of the No Sky Line, which is the line that divides the points on the
working plane (0.7m from floor level in offices and 0.85m in dwellings) which can and cannot see
the sky. The BRE Report suggests that areas beyond the NSL may look dark and gloomy
compared with the rest of the room and should be kept to no more than 20% of the room. Similar
to the VSC test, the Report recommends that reductions in the DD values should be kept to no
more than 20% or 0.80 times the existing value.
- 22 7.5.19 Appendix C of the BRE Report states that:
- ²³ "If a significant area of the working plane (normally more than 20%) lies beyond the no sky line (i.e.
- it receives no direct skylight) then the distribution of daylight in the room will look poor and
- 25 supplementary electric lighting will be required."
- 26 Average Daylight Factor test (ADF)
- 7.5.20 The ADF test takes account of the interior dimensions and surface reflectance within the room
 being tested as well as the amount of sky visible from the window. For this reason it is considered
 a more detailed and representative measure of the adequacy of light. The minimum ADF values
 recommended in BS8206 Part 2 are: 2% for family kitchens (and rooms containing kitchens); 1.5%
 for living rooms; and 1% for bedrooms. This is a test used in assessing new developments or
 Proposed Developments.
- Appendix C of the BRE Report provides details of BS 8206: Part 2 British Standard for Daylighting 7.5.21 33 and the Chartered Institution of Building Services Engineers (CIBSE) Applications Manual: 34 35 Windows Design which provide advice and guidance on interior daylighting. The BRE Report is intended to be used in conjunction with these documents, and its guidance is intended to fit-in with 36 their recommendations. The British Standard and the CIBSE manual put forward three main 37 criteria for interior daylighting, one of which is the use of the ADF calculation. Essentially, the 38 documents recommend that, if supplementary electric lighting is provided, a Daylight Factor (df) 39 value of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms should be attained. 40
- 41 "Use of the ADF for loss of light to existing buildings is not generally recommended. The use of the 42 ADF as a criterion tends to penalise well-daylit existing buildings, because they can take a much
- 43 bigger and closer obstruction and still remain above the minimum ADFs recommended in BS 8206-
- 44 2. Because BS 8206-2 guotes a number of recommended ADF values for different gualities of

daylight provision, such a reduction in light would still constitute a loss of amenity to the rooms.
 Conversely if the ADF in an existing building were only just over the recommended minimum, even
 a tiny reduction in light from a new development would cause it to go below the minimum,
 restricting what could be built nearby." (F6 and F7)

5 Summary

6 7.5.22 The BRE Report states that:

"If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building from the centre of the lowest window, subtends an angle of more than 25 degrees to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:

- 11 the vertical sky component ['VSC'] measured at the centre of an existing main window is less than 12 27%, and less than 0.8 times its former value; or
- the area of the working plane (0.85m above floor level in residential properties) in a room which
 can receive direct skylight is reduced to less than 0.8 times it former value.
- The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, store rooms, circulation areas and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices."
- 7.5.23 When assessing the daylight received to the proposed habitable rooms within the Development, in
 line with the BRE Report recommendations, the ADF and DD tests have been applied.

23 Sunlight

- 7.5.24 The BRE Report advises that new development should take care to safeguard access to sunlight
 for existing buildings and any non-domestic buildings where there is a particular requirement for
 sunlight. The Report discusses the expectation of sunlight amenity being restricted to those
 windows that face within 90 degrees of due south as windows facing predominantly north will be
 restricted to sunlight access in the very early morning and late afternoon / evening when the sun is
 at its closest to the horizon. In summary, the report states:
- "If a living room of an existing dwelling has a main window facing within 90 degrees of due south,
 and any part of a new development subtends an angle of more than 25 degrees to the horizontal
 measured from the centre of the window in a vertical section perpendicular to the window, then the
 sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of
 the window:
- receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable
 sunlight hours between 21 September and 21 March and
 - receives less than 0.8 times its former sunlight hours during either period and

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- has a reduction in sunlight over the whole year greater than 4% of annual probable sunlight 2 hours."
- 7.5.25 The BRE Report recommends using the Annual probable Sunlight Hours test (APSH) to assess the 3 impact from development on neighbouring properties. 4
- 7.5.26 The BRE Report also states that: 5

"...It is suggested that all main living rooms of dwellings, and conservatories, should be checked if 6 they have a window facing within ninety-degrees of due south. Kitchens and bedrooms are less 7 important, although care should be taken not to block too much sun. In non-domestic buildings any 8 spaces which are deemed to have a special requirement for sunlight should be checked; they will 9 normally face within ninety-degrees of due south anyway." (3.2.3) 10

- 7.5.27 The BRE Report also gives valuable guidance on assessing the effect of balconies and overhangs 11 12 to existing buildings:
- "Balconies and overhangs above an existing window tend to block sunlight, especially in summer. 13 Even a modest obstruction may result in a large relative impact on the sunlight received. One way 14 to demonstrate this would be to carry out an additional calculation of the APSH, for both the 15 existing and proposed situations, without the balcony in place. For example, if the proposed APSH 16 with the balcony was under 0.8 times the existing value with the balcony, but the same ratio for the 17 values without the balcony was well over 0.8, this would show that the presence of the balcony, 18 rather than the size of the new obstruction, was the main factor in the relative loss of sunlight." 19 (3.2.9)20
- When assessing the sunlight received to the proposed habitable rooms within the Proposed 7.5.28 21 Development, in line with the BRE Report recommendations, the ADF and DD tests have been 22 applied. 23
- **Existing Conditions** 24

Introduction 25

- 26 7.5.29 The study undertaken used a three-dimensional computer model of the Site and the surrounding buildings, both in the current configuration (baseline) and in the proposed configuration (the 27 Development). The effect of the Development on the daylight and sunlight amenity received by the 28 neighbouring buildings and on the Development was then analysed using bespoke software. The 29 assessment is based on a visual inspection, the information detailed above and estimates of 30 relevant distances, dimensions and levels which are as accurate as circumstances allow. 31
- 7.5.30 The assessment was carried out in accordance with the guidance given in the BRE Report 'Site 32 Layout Planning for Daylight and Sunlight - A Guide to Good Practice' (2011) (The BRE Report). 33 The assessment includes an analysis at all windows serving residential accommodation where 34 they overlook the Development. Additionally, where information was available, daylight analysis of 35 the rooms served by the windows was undertaken. 36
- 7.5.31 Where internal arrangement data obtained from the local planning database has been used, further 37 external observation has been undertaken to determine the accuracy of the information and to 38 39 validate if the planning information correctly reflects the internal conditions. Access to the neighbouring properties has not been sought. 40

1 Sensitive Receptors

- 7.5.32 For the daylight and sunlight studies sensitive receptors have been identified using the criteria outlined in the BRE Report.
- 4 7.5.33 Paragraph 2.2.2 of the report states that:

"The guidelines given here are intended for use in adjoining dwellings where daylight is required,
 including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms,
 circulation areas and garages need not be analysed. The guidelines may also be applied to any
 existing non-domestic building where the occupants have a reasonable expectation of daylight; this
 would normally include schools, hospitals, hotels and hostels, small workshops and some offices."

10 7.5.34 Paragraph 2.2.5 within the BRE Report contains the following guidance:

"... a modified form of the procedure adopted for new buildings can be used to find out whether an 11 existing building still receives enough skylight. First, draw a section in a plane perpendicular to 12 each affected main window wall of the existing building. Measure the angle to the horizontal 13 subtended by the new development at the level of the centre of the lowest window. If this angle is 14 less than 25° for the whole of the development then it is unlikely to have a substantial effect on the 15 diffuse skylight enjoyed by the existing building. If, for any part of the new development, this angle 16 is more than 25°, a more detailed check is needed to find the loss of skylight to the existing 17 building." 18

- 7.5.35 Using the above guidance the neighbouring properties that transgress the 25° line test and have a
 specific requirement for daylight amenity have been identified.
- 7.5.36 The location and receptors used for each of these buildings are identified in the drawings contained
 in Appendix 7.4.1.

23 Location of sensitive receptors

- 7.5.37 Table 7.4.1 below provides a summary of the daylight and sunlight analysis results within 2-6
 Southampton Row for the baseline conditions, detailed results are provided in Appendix 7.4.2 and
 7.4.4.
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Table SUN 7.4.1 Baseline Conditions Table – BRE Report compliance

	Daylight Tests		Sunlight Tests (APSH)		
Receptor	VSC 27% or above	DD 80% or above	Annual 25% or above	Winter 5% or above	
2-6 Southampton Row	16 of the 45 windows tested	16 of the 16 rooms tested	4 of the 5 rooms tested	4 of the 5 rooms tested	

7.5.38 The results summarised in the table above highlight the urban nature of the area adjacent to the
 site. Daylight and Sunlight amenity is consistent with urban expectations.

17.5.39The tested building is a consented hotel scheme located to the south of the Development. Detailed2internal arrangement information was obtained from the local planning database which has allowed3room uses and dimensions to be determined. In line with BRE Report guidance both VSC and DD4tests have been applied to the habitable rooms. As determined by the BRE Report guidance only5those rooms with windows facing within 90° of due south have been tested for sunlight amenity.

6 Effects During Construction

- 7.5.40 The level of effect on daylight and sunlight availability at 2-6 Southampton Row would vary 7 throughout the construction phase depending on the level of obstruction, following the initial 8 clearing of the Site to create temporary unobstructed daylight and sunlight. The effects would 9 steadily increase in magnitude as the superstructure is built. Any temporary accommodation or 10 equipment such as cranes would have a temporary, minor effect on the daylight and sunlight levels 11 to the surrounding properties. Those daylight and sunlight effects that would be perceptible as the 12 superstructure and cladding progress would be similar to those of the completed Development 13 which are set out below. 14
- 7.5.41 Having regard to the above, the effects upon daylight and sunlight to existing receptors in the vicinity of the Site during the construction stage of the Proposed Development are considered to be short-term, local, adverse and of negligible to minor significance.
- 18 Mitigation
- 7.5.42 Effects due to construction will be temporary and fluctuating as the construction is undertaken. Any
 effects over and above those seen in operation will be alleviated once construction is complete.
 Mitigation will not be required.

22 Effects on Operation

- 7.5.43 This section details the daylight and sunlight effects that would exist with the Proposed
 Development in place upon 2-6 Southampton Row. Also discussed are the daylight and sunlight
 analysis results within the Proposed Development.
- 7.5.44 Results spreadsheets for the daylight and sunlight assessment of the neighbouring properties are
 provided in Appendix 7.4.4. A summary is given below in Table 7.4.

Table SUN 7.4.2 Operation Conditions Table (Daylight) – BRE Report compliance

	•			
Receptor	VSC 27% or above or	DD 80% or above or	Annual	Winter
	retention of 0.8 times	retention of 0.8 times	25% or above or	5% or above or
	baseline value	baseline value	retention of 0.8 times	retention of 0.8
			former value	times existing
				value
2-6 Southampton Row	25 of the 45 windows tested	9 of the 16 rooms tested	5 of the 5 rooms tested	5 of the 5 rooms tested

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- 7.5.45 VSC analysis shows that 24 of the 45 windows tested will comply with the BRE Report guidance of
 achieving a 27% VSC value or retaining in excess of 0.8 times their former value. 11 of these will
 retain VSC values in excess of 27%.
- 7.5.46 DD Analysis shows that 9 of the 16 bedrooms analysed would see little or no modification to their
 existing lit areas and would be BRE Report compliant.
- 7.5.47 The BRE Report considers daylight amenity within bedrooms to be of a lesser significance that
 within main living spaces. It should also be remembered that the analysed rooms are hotel
 bedrooms where occupancy will be intermittent. Given the room types and usage patterns, coupled

- with the urban location and the retained daylight values, the effect of the Proposed Development
 on the daylight amenity of 2-6 Southampton Row would be limited to a **Minor Adverse** effect.
- 7.5.48 Turning to sunlight amenity, all of the rooms with south only facing windows and with a reasonable
 expectation for sunlight will meet the BRE recommendations. The effect of the Proposed
 Development on the sunlight amenity would be **negligible**.

6 Light received within the Development

- 7.5.49 This section details the daylight and sunlight effects that would exist within the Development.
 Daylight amenity has been assessed using the ADF and DD tests discussed above. For the ADF
 testing we have applied a glazing transmittance value of 0.68 and an internal reflectance value of
 0.5 as recommended in the BRE Report. Sunlight has been assessed using the APSH test.
 Results spreadsheets for the daylight and sunlight assessment are provided in Appendix 7.5.
- 12 7.5.50 Using the ADF test shows that 114 (92%) of the 124 hotel bedrooms meet the recommended 13 minimum target value.
- 7.5.51 DD analysis shows that of the 124 rooms tested, 90 (73%) would see daylight penetration to over
 80% of the room area, in line with BRE recommendations.
- 7.5.52 Turning to sunlight amenity, the majority of rooms with windows facing in a northerly direction will
 not meet the BRE Report recommendations, it should be noted that the BRE Report states:
- "The BS 8206-2 criterion applies to rooms of all orientations, although if a room faces significantly
 north of due east or west it is unlikely to be met."
- 207.5.53Of the rooms with windows orientated in a southerly direction, 63 of 79 (80%) windows assessed21would meet the BRE recommendations for total annual sunlight. With reference to winter sunlight,2245 of the 79 (57%) would meet the BRE recommendations although the winter sun target in urban23areas is very hard to achieve.
- 7.5.54 It should be noted that the Proposed Development is a hotel and as stated previously, the main use of these rooms would be at night.
- 26

Table SUN 7.4.3 Summary of likely and residual effects Operational Phase

	Daylight			Sunlight		
Receptor	Pre- Mitigation Effects	Mitigation measures	Residual Effect - Post- Mitigation	Pre- Mitigation Effects	Mitigation measures	Residual Effect - Post-Mitigation
2-6 Southampton Row	minor adverse	No further mitigation required	minor adverse	negligible	No further mitigation required	negligible

27 Mitigation

7.5.55 Given the urban location of the Development, its varied building heights and the levels of daylight
 and sunlight amenity retained by 2-6 Southampton Row, no mitigation measures would be required.

30 Residual Effects

7.5.56 The likely residual effects would be the same as the likely significant effects; a summary of these
 effects are given in Table 7.4.3 above.

1 8 Conclusions

- 8.1.1 The ES explains and describes in full the environmental effects likely to be associated with the
 Proposed Development and places the Council in possession of all the necessary environmental
 information required by both statute and policy.
- 8.1.2 Significant environmental effects have been avoided in the design of the Proposed Development.
 Each of the topic chapters have assessed the likely significant effects and where necessary have
 made recommendations for mitigation to reduce those effects.
- 8 8.1.3 This therefore enables a decision to be made on the accompanying planning application with 9 appropriate provision to be made for environmental mitigation.