Environmental Statement : Volume 1 – Non Technical Summary
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1 Introduction

An Environmental Statement (ES) has been prepared on behalf of King Street Developments (Hammersmith) Ltd (the Applicant). The preparation of the document and the Environmental Impact Assessment (EIA) that it reports on, were carried out in accordance with the statutory procedures set out in the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, as amended by the Town and Country Planning (Environmental Impact Assessment) (Amended) Regulations 2006 (SI 2006/3295) and most recently as amended by the Town and Country Planning (Environmental Impact Assessment) (Amendment) Regulations 2008 (SI 2008/2093). It is submitted in support of a detailed planning application (the Application) made to the London Borough of Hammersmith and Fulham (LBHF) for a mixed use scheme comprising:

- approximately 320 private residential units with pedestrian access to the River Thames (via a new footbridge over the A4),
- 10,863 m² (GIA) of a new Civic Office;
- a food retail unit of 1,840 m² (GIA) and additional smaller A1, A3 and A4 retail units totalling 895 m² (the ‘Proposed Development’);

As shown in Figure 1 the site of the Proposed Development (‘the Site’) is located within Hammersmith in west London.

![Figure 1: Site Location](image-url)
The Applicant was selected by the LBHF in a competition as preferred developer for the redevelopment of the Site, which currently accommodates LBHF offices, the Cineworld Cinema, various retail and commercial premises, Nigel Playfair Avenue Council car park, residential accommodation, Friends Meeting House; and a part of Furnival Gardens to the south of the A4 Great West Road.

Figure 2 shows the existing layout of the Site and the extent of the proposed planning application boundaries.
This document is the Non-Technical Summary (NTS) of the ES for the Proposed Development. The aim of the NTS is to summarise the content and the main findings of the ES in a clear and concise manner to assist the public in understanding what the environmental impacts of the development proposals are likely to be. It therefore provides:

- a summary of the history and context of the Site;
- a summary of the main characteristics of the physical, natural and built environment of and surrounding the Site;
- a summary of the Proposed Development;
- a summary of the likely significant environmental impacts arising from the proposals; and
- a summary of the measures that will be adopted to avoid, reduce or control any significant impacts and the main resulting (or residual) impacts.

The full ES and its supporting technical appendices provide a more detailed description of the application area, the characteristics of the development proposals, and the findings of the Environmental Impact Assessment.

The ES documents comprise three documents:

- a Non Technical Summary (in this document Volume 1);
- the Main ES Report (in Volume 2); and
- supporting Technical Appendices (in Volume 3A and 3B).

The ES documents, together with the Application and associated documents (including the Design and Access Statement, Energy Statement, Sustainability Statement) will be available for viewing at the address below.

For viewing: London Borough Hammersmith and Fulham
Town Hall Extension
King Street
London
W6 9JU

Copies of this NTS are available free of charge at the reception of the LBHF’s office (address above). Copies of the main report and supporting technical appendices are available at a cost of £250 for paper copies and £10 for an electronic version on CD, from ENVIRON UK Ltd, 5 Stratford Place, London, W1C 1AX.
2 EIA Process and Methodology

The NTS summarises the content of the ES, which in turn reports on the undertaking and findings of an Environmental Impact Assessment (EIA). EIA aims to ensure that potential environmental impacts of a new development are taken into account when considering a planning application.

2.1 EIA Scoping and Consultation

Scoping is the term used in the Regulations whereby the applicant can request an opinion from the local planning authority on the content of the ES and the extent of the information to be considered in the assessment. A formal scoping process was undertaken with an EIA Scoping Report submitted to LBHF on 15th December 2009. The EIA Scoping Report was accompanied by a formal request for an EIA Scoping Opinion. The EIA Scoping Report set out a description of the development proposals, the likely significant environmental impacts and effects to be considered as part of the EIA, as well as, the proposed scope of and methodology to be followed within each technical assessment of the ES. An EIA Scoping Opinion was provided by LBHF on 25th January 2010.

Consultation was also carried out with both statutory and non-statutory consultees during the course of the EIA scoping process and the EIA. Consultee responses were received from:

- London Borough of Hammersmith and Fulham;
- Transport for London (TfL);
- Natural England (NE);
- British Airports Authority (BAA);
- Port of London Authority;
- Thames Water;
- Commission for Architecture and the Built Environment (CABE);
- Civil Aviation Authority; and
- Health and Safety Executive.

Following completion of the EIA Scoping process the key issues which needed to be assessed in the EIA were identified as:

- Planning and Land Use;
- Socio Economics;
- Archaeology;
- Built Heritage;
- Townscape and Visual Impact;
- Daylight, Sunlight and Overshadowing;
- Wind;
- Ground Conditions;
- Water Resources and Flood Risk;
- Transport;
- Air Quality;
- Noise;
- Ecology;
- Waste;
- Telecommunication; and
- Cumulative Impacts.

Accordingly, aviation, solar glare and light spill were scoped out of the ES as the Proposed Development was considered unlikely to generate significant effects on these issues.
2.2 Approach

The EIA was undertaken in accordance with accepted best practice as set out within the Institute of Environmental Management and Assessment’s Guidelines for Environmental Impact Assessment and government guidance. A consistent approach to the presentation of the EIA findings in the ES has been adopted for each of the technical areas, including:

- a review of policy and legislative requirements, as well as, planning standards of relevance to the specific technical area, on national, regional and local level;
- an explanation of the information gathering and assessment methodology, including significance criteria;
- a description of the baseline conditions including the identification of sensitive receptors;
- a description of the mitigation that has been incorporated into the Proposed Development's design and other proposed measures and management controls;
- the identification of the potential impacts arising during the demolition and construction works of the Proposed Development and once the Proposed Development has been completed;
- an assessment of the environmental effects these impacts are expected to cause and an evaluation of their significance against defined criteria;
- a description of additional opportunities for mitigation to further reduce the significance of any adverse environmental effects, including the requirements for post-development monitoring; and
- the identification of cumulative impacts and effects.

2.3 Baseline

The purpose of the EIA is to predict how environmental conditions may change as a result of the Proposed Development. This requires that the environmental conditions now (or at least in the near future, before construction of the Proposed Development gets underway) and in the future assuming no development, are established. This is referred to as the baseline and is usually established through a combination of desk-based research, site survey and empirical studies and projections. Together these describe the current and future character of the site and the value and vulnerability of key environmental resources and receptors.

The baseline for this EIA has been taken as the 'current' brownfield character of the Site and its surroundings (with the exception of the greenfield Furnival Gardens).

'Future' baselines can also be defined, reflecting a projected environmental condition at some point in the future, should the current site conditions be subject to change and the future baseline provides a more appropriate and relevant reference condition to undertake the assessment from. In regards to this EIA, consideration was given within the transport modelling to future baseline conditions with predicted traffic growth in the year 2016.
2.4 Sensitive Receptors

The immediate surroundings of the Site including the buildings, roads, uses within buildings and open areas, together with the people who reside in, access and use them, will be most at risk of being exposed to likely impacts.

Existing land uses at and around Site that may be sensitive to likely environmental impacts on account of the Proposed Development that have been considered within the EIA, include:

- Existing residents on-site;
- Future residents on-site;
- Residents surrounding the Site;
- Register office;
- The Grade II Listed Town Hall (of which the northern and western facades are in the Site);
- Other buildings of merit;
- Furnival Gardens, a Site of Importance for Nature Conservation (SINC);
- On-site and off-site (historical) conservation areas; and
- The River Thames, a Site of Metropolitan Importance (SBI).

2.5 Cumulative Effects

Two types of cumulative impacts have been considered within the ES:

- ‘impact interactions’ which are the combined effects of different types of impact, for example noise and dust and visual impacts resulting together from demolition and construction works; and
- ‘in combination impacts’ which are the combined impacts from other planned developments together with the Proposed Development which individually might be insignificant, but when considered together could amount to a significant cumulative impact, for example, combined townscape and visual impacts from two or more (proposed developments).

The identification of other developments was led through the use of selection criteria and discussions with LBHF and resulted in two schemes being considered, namely Hammersmith Grove London Underground Limited (LUL) Station Building and Hammersmith Palais. Further information on these schemes and the cumulative assessment is given in Section 7.16 of this NTS.
3 Planning Context and History of the Site

Planning policy relevant to the Site is contained within national planning policy set out in government circulars, Planning Policy Guidance Notes (PPGs) and Planning Policy Statements (PPSs), regional and local planning policy documents.

National policies which of particular relevance to this Proposed Development are those relating to the delivery of archaeology; sustainable development, housing; transport; flood risk; biodiversity and geological conservation; pollution; noise; open space, sport and recreation.

At a regional level, policy framework is set out in the London Plan (consolidated with alterations since 2004) published in February 2008 and relevant Supplementary Planning Guidance (SPGs). The London Plan sets out a strategic framework for land use planning in London. ‘Planning for a Better London’ sets out the Mayor of London’s emerging priorities for strategic planning policy prior to the alteration of the London Plan or preparation of supplementary guidance.

The relevant Statutory Development Plan for the Site, comprises the London Plan, as well as the ‘saved’ local policies in the Hammersmith and Fulham Unitary Development Plan (UDP).

Consideration has also been given to the Draft London Replacement Plan, 2009 which sets out an integrated economic, social, environmental and transport framework for the development of London over the next 20-25 years and aims to replace The London Plan, 2008, as well as the emerging LBHF Local Development Framework (LDF) which when published, will replace the Hammersmith and Fulham Adopted UDP. In October 2010 LBHF published its Proposed Submission Core Strategy Development Planning Document which sets out LBHF’s long-term vision for the development of the Borough and its proposed core strategic policies. The Site is specifically mentioned in the Proposed Submission Core Strategy under its section on Regeneration Area Strategies with specific mention of ‘regeneration of the western part of the town centre around the Town Hall’ in Strategies Policy HTC.
4 Description of the Site

4.1 Site Location and Context

The Proposed Development will be carried out on land centred on Ordnance Survey (OS) National Grid Reference (NGR) TQ 226 784 within LBHF. The Site is bound to the north by King Street (from 181 King Street to 217 King Street) and extends southwards across the A4 (Great West Road) into Furnival Gardens, a green amenity space located to the north of the River Thames. The southern boundary of the Site is formed by the existing cycle and footpath that cuts across Furnival Gardens from east to west; the western boundary by residential uses along Cromwell Avenue; and the eastern boundary by residential, retail and commercial uses, as well as the Grade II listed Hammersmith Town Hall in Nigel Playfair Avenue.

Figure 3 shows the Site’s wider context with key features being:

- the Grade II Listed Town Hall;
- Conservation Area including King Street (East) and the Mall;
- The A4 Great West Road three-lane urban motorway;
- Hammersmith underground station that provides access to the Piccadilly and District lines and Ravenscourt Park underground station;
- the terminus station of the Hammersmith and City line, on Beadon Road;
- the River Thames
- the Broadway shopping centre; and

The Site has good public transport accessibility, being located approximately 800 m to the west of one of west London’s key transport hubs (which includes two London Underground stations, bus stations and a road network node) at Hammersmith Broadway.
4.2 Site Description

The area within the Site boundary extends to 20,415 m² with current Site uses including:

- LBHF offices within an extension to the Grade II listed Town Hall building;
- The northern and western facades of the Grade II Listed Town Hall building;
- Cineworld Cinema;
- various retail and commercial premises;
- Nigel Playfair Avenue Council car park (a surface level car park with 73 spaces);
- residential accommodation (along the eastern side of Cromwell Avenue adjacent to the Cinema on King Street, plus Thomas Pocklington House);
- Register Office;
- Friends Meeting House; and
- on the south side of the A4, part of the amenity landscaped area of Furnival Gardens – a designated Site of Local Importance for Nature Conservation, area of open space and part of the Thames Policy Area.

The Grade II listed Town Hall and its later Extension building situated to the north of the listed building are both located within the King Street (East) Conservation Area. The remainder of the Site to the west borders this same Conservation Area.

The southern extent of the Site within Furnival Gardens is located within The Mall Conservation Area, which is bounded to the north by the central reservation of the A4 (Great...
West Road). In addition, the Cineworld cinema and adjacent buildings on King Street no. 209-217 appear on LBHF’s register of Buildings of Merit.

The Site is located (in part) within two designated Archaeological Priority Areas. The northern part of the Site lies in an Archaeological Priority Area (APA) designated by LBHF covering the King Street area of historic settlement, whilst the southern part of the Site lies in the APA for Hammersmith Creek including the area by the River Thames foreshore, draw docks, inlets and the Chelsea Creek.

The Site is located within a designated Air Quality Management Area (AQMA) due to exceedances of the annual mean nitrogen dioxide and PM$_{10}$ objective limit throughout the borough.

Whilst Furnival Gardens in the south of the Site is a locally designated Site of Importance for Nature Conservation (SINC), including some landscaped public garden, other vegetation is limited to lines of early mature and semi-mature trees, strips of lawn and planted flower/shrub beds.

In common with most of Hammersmith and parts of London that lies immediately adjacent to the River Thames, the Site lies in Flood Zone 3, which means that there is a high probability of river flooding or flooding from the sea. The Site however benefits from flood defences in the area, with the nearest approximately 100 m to the south of the Site.
5 Design Evolution and Alternatives

The overarching aim of the development proposals for the Site are to replace the unsightly Town Hall Extension which detracts from the listed Town Hall and to regenerate the western end of King Street. This will improve the shopping offer, create a new Civic Square and area of public open space, provide residential accommodation, create a new civic campus for all LBHF council services and improve local connectivity in this part of Hammersmith.

In accordance with EIA Regulations and guidance, the ES included a discussion of the alternative development options and various constraints and opportunities which influenced the ultimate design of the Proposed Development.

5.1 Opportunities and Constraints

A key part of the design process undertaken was a review of relevant land use policies and the identification of key strategic environmental and transport development considerations. Throughout this process, feedback (such as initial population modelling and projected demand on services, likely glazing specifications, play space requirements, orientation of units to minimise noise levels) was given to the design team and Applicant with design recommendations where appropriate. Additionally key development constraints and opportunities were identified such as:

- avoiding/limiting potential adverse impacts on Furnival Garden SINC located in the south of the Site;
- local townscape sensitivities such as the Listed Town Hall, King Street (East) Conservation Area, the Mall Conservation Area, and other locally listed buildings; and
- ensuring existing and future local residents would not be adversely affected by a loss of day or sunlight.

5.2 Alternatives

Guidance on the preparation of an EIA suggests that the evolution of a site in the absence of specific proposals should be addressed, which can be described as the ‘Do Nothing’ alternative. The ‘Do Nothing’ scenario is a hypothetical alternative conventionally considered, albeit briefly, in EIA as a basis for comparing the development proposal under consideration. In the absence of the redevelopment proposals not coming forward it is likely that the Site’s buildings and spaces will continue to function as currently and will over time fall into disrepair, although the Site is identified for regeneration in local planning policy.

5.3 Design Evolution Process

The Proposed Development has undergone a detailed masterplanning design process which has considered a wide range of design principles and alternative development layouts and built forms. The process was informed by design principles developed at the onset of the project when proposals were developed for the competition selection process.

LBHF conducted a competition to select a development team for the re-development of the Site. This design competition process resulted in three design submissions, each of which provided a range of land uses within the new development but with varied emphasis on the quantum of each land use. Through this process LBHF was able to consider three designs.
for the Site that placed primary focus upon retail use, residential use, and a balance of uses. Consequently, the Applicant was selected as the development team to bring forward the proposed regeneration.

The key objectives of the Proposed Development can be summarised as following:

- The creation of a new Civic Square with the Town Hall as its centre piece;
- The creation of a single civic centre with the Listed Town Hall as its focus, by providing a new civic office building directly connected to the existing Town Hall, including a Residents Direct facility;
- The provision of a food store fronting King Street together with restaurants and cafes fronting the new Civic Square to improve the area, acting as a stimulus to King Street and enhancing the quality and choice available to the community;
- The provision of 320 new homes with pedestrian access to the river;
- The creation of pedestrian friendly surfaces and traffic calming measures to Cromwell Avenue;
- The creation of a seamless pedestrian walk from the new Civic Square via a footbridge over the A4 to the River Thames waterfront and footpath, and a re-landscaped Furnival Gardens; and
- The provision of a sustainable development that delivers economic, social and environmental benefits for the whole community.

The emerging development proposals were subject to design review by the Applicant’s EIA team to identify any likely adverse environmental effects in the emerging design and proposed alternative design solutions to avoid and reduce potential adverse effects. For example, likely Daylight, Sunlight and Overshadowing impacts to properties to the west of the Site have been addressed by providing gaps between the residential and office blocks, compared with the previous continuous elevation onto Cromwell Avenue.

The preferred option and development proposals for this Site have been developed with due consideration of various design options and alternatives, as well as, comments received from LBHF.

The resulting development proposals represent an appropriate response to the Site location, context and environmental constraints and opportunities. Figure 4 provides an annotated aerial perspective of the Proposed Development.
6 Project Description

6.1 General Overview

The Proposed Development comprises the following:

- a new Civic Square in front of the Grade II listed Town Hall along with the reinstatement of the steps to the northern facade and amenity space; a civic centre housing LBHF offices and associated facilities totalling 10,863 m² (GIA);
- a food retail unit of 1,840 m² (located on the King Street frontage and additional smaller A1, A3 and A4 retail units totalling 895 m²);
- 320 residential units for private ownership including a range of sizes;
- soft landscaping to courtyards, pedestrian routes, terracing and hard landscaping in a pedestrian friendly zone along Cromwell Avenue; and
- a pedestrian walk from the new Civic Square via a new pedestrian bridge over the A4 motorway to Furnival Gardens and the River Thames waterfront.

Particular emphasis has been placed on the delivery of a high quality landscape and public space within the Proposed Development. The resulting landscape masterplan (shown in Figure 5) maximises opportunities for recreational, visual amenity and biodiversity enhancement.

The Proposed Development would bring forward a 0.88 ha open space network at the Site. The network comprises:

- Public amenity space which covers all of the areas of the Site accessible to the public, namely:
  - civic square 3,470 m²;
  - pedestrian route 1,230 m²;
  - pedestrian bridge across the A4 295 m²; and
  - new terracing, access Furnival Gardens 2,625 m²;
- Residential amenity space:
  - Including both private and shared located adjacent to all ground floor units and the soft landscaped residential courtyards 1,185 m²; and
  - Cromwell Avenue pedestrian friendly zone 980 m².

Local Areas of Play (LAPs) will be included in all of the communal courtyard areas. These areas will incorporate play features for small children.

Balconies will also be provided as private amenity space and are provided in three styles depending on façade location, with ‘clip-on’ enclosed winter garden balconies to ensure the provision of suitable indoor air quality and noise attenuation for units in Block S2, the lower units of Block S1 and highest tower units in Blocks S1 and N1. Private patio areas are also provided to some residential units adjacent to the patio areas either at roof level or along
discrete edges to some facades at lower levels. In addition, 2,151 m$^2$ of green roofs will be provided.

Figure 5: Proposed Development Masterplan
The Proposed Development’s is illustrated in Figure 6 and includes:

- three residential blocks: the south block (S1-S3), north block (N1-N4) and east block (E1) four - fourteen storeys high;
- civic centre and office: four - seven storeys high; and
- a pedestrian bridge over the A4.
Figure 6: Proposed Uses and Amount within the Development

- Pedestrian Bridge over A4
- One Stop Shop for Civic Office
- Reinstated Town Hall Steps
  - Town Hall Square: 3470 m²

- Civic Office: 10803 m² for 1000+ employees

- Residential Accommodation: 320 Homes
- Residential Cycle parking beneath north podium for 322 spaces

- Basement car park access from Cromwell Avenue - 126 public and 100 residential spaces
- Food Retail Unit 2600 m² GIA with retail trading area of 1840 m²

- 5 no. A1/A3/A4 Retail Units totalling 895 m² retail trading area
Building heights across the development range between four and fourteen storeys in height with taller elements located at the corners of Blocks N1 and S1 as shown in Figure 7.
Residential accommodation is distributed across the Proposed Development in three identifiable zones; north residential, south residential and east residential as shown in Figure 6.

Residential accommodation for 320 private residential apartments will be provided in a mixture of sizes: studio (3%), 1 bed (43%), 2 bed (45%), 3 bed (4%) and penthouse (6%). All residential units within have been designed in accordance with Lifetime Homes.

Figure 8: Residential Blocks

6.2 Application Details
The description of the Proposed Development as stated on the Application form is:

“Comprehensive redevelopment comprising; demolition of existing buildings to provide a civic square, a civic office with ‘one stop shop’ for residents; 320 residential dwellings, a neighbourhood food store, five retail units within Use Classes A1, A3 and A4, a pedestrian bridge link to Furnival Gardens and associated landscaping, car parking, servicing access and other works.”

The schedule of floor space for the Proposed Development is summarised in Table 1.
### Table 1: Schedule of Floorspace

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<td>22,775</td>
<td>22,771</td>
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<tr>
<td>Civic Office</td>
<td>-</td>
<td>10,863</td>
<td>8,312</td>
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<tr>
<td>Food Retail Store</td>
<td>-</td>
<td>2,680</td>
<td>1,840</td>
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<td>Retail (A1, A3 &amp; A4)</td>
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<td>932</td>
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### 6.3 Sustainability and Energy Provision

Due to the scale of the Proposed Development, detailed consideration has been given to the Proposed Development’s sustainability and energy supply, with a Sustainability Appraisal and an Energy Strategy developed in line with London Plan policy – the latter with particular regard to the Energy Hierarchy and Renewable Energy target. Both separate Sustainability and Energy Statements have been prepared and are submitted with this planning application.

The Proposed Development has been designed to achieve a ‘Very Good’ Building Research Environmental Assessment Method rating for the civic offices and a Level 4 rating under the Code for Sustainable Homes benchmarking standard for the residential units. Key sustainability features inherent in the design of the Proposed Development include:

- installation of water efficient devices;
- provision of a Green Travel Plan for each land use to promote the use of public transport and installation of secure, sheltered cycle stores;
- use of sustainable urban drainage systems and rainwater harvesting;
- provision of biodiversity improvements on-site in the form of roof gardens, green and brown roofs;
- waste recycling initiatives; and
- commitments to sustainably source, recycle, re-use building materials where possible and sign up to the Considerate Constructors Schemes.

In order to reduce carbon dioxide emissions design and energy efficiency measures have also been incorporated. These measures include:

- A minimum of 75% energy efficient lighting fittings in all apartments;
- High-efficiency condensing gas fired central boilers;
- Residences designed such that mechanical ventilation and cooling is not required;
• A community energy system (Combined Heat and Power (CHP)) to supply heating to the Proposed Development; and

• A single Energy Centre that will provide heating (space heating and hot water) to the whole development.

The following technologies will be implemented:

• a CHP which should deliver a 14% CO₂ reduction compared to the existing development (including unregulated emissions); and

• 240m² of photovoltaics (PVs) on the roof areas at the top of the two taller blocks (N1 and S1) will be used for 240 m².

In terms of CO₂ emissions the scheme has been designed such that overall total CO₂ emissions are expected to show a 29% improvement over the existing buildings on-site through a combination of design and energy efficiency, CHP and on-site renewable energy systems.

Overall, it is proposed that 20% of the Proposed Development’s energy supply will be from on-site renewable sources.

6.4 Waste Management

Within each block’s undercroft or basement areas, refuse chambers will be provided in convenient locations close to main entrances and circulation cores. The refuse chambers will be provided with general waste containers, as well as, recycling containers to accord with LBHF requirements.

Individual residential units will be provided with internal waste storage facilities to enable separation of waste at source. Thereafter residents will be required to transfer waste to centralised waste chambers within their respective block.

6.5 Releases, Residues and Wastes

The Site’s drainage strategy has been developed to meet the requirements of Planning Policy Statement 25 (PPS25) in consultation with the Environment Agency (EA). Peak discharge rates have been established for the existing site and the new drainage network will ensure that the new peak discharge rates will be less than the current condition. This will be achieved by the introduction of SUDS features namely green and brown roofs and underground storage (i.e. oversized pipes) structures. The drainage network is designed to contain the 1 in 100 year storm event (plus an allowance for climate change) without causing on-site flooding.

In relation to sewage releases, the Proposed Development will be limited to peak foul water flows. On-site foul drainage will be designed to accord with Building Regulations or Sewers for Adoption, current at the time that detailed design proceeds.
7 Summary of Potential Impacts

7.1 Construction and Environmental Management of the Proposed Development

The development programme comprises the demolition of all existing buildings, and construction of the Proposed Development. For the purpose of this EIA, based on an assumed commencement of demolition, excavation and any required remediation works in Quarter 3, 2011, the remaining development works are anticipated to be undertaken over a four year and six month period, with completion scheduled for Quarter 1, 2016.

Given the scale of the Proposed Development, it is proposed to divide the Site into two main zones as shown in Figure 9.

![Figure 9: Zoning of the Proposed Development’s Demolition and Construction Works](image)

Works to be undertaken within the Main Block would include:

- demolition of the existing cinema, the Friends Meeting House and housing along Cromwell Avenue including Cromwell Mansions; and
- formation of the new basement structure, envelope and finishes for the main new built elements of the Proposed Development.
Works to be undertaken within the East Residential Block would include:

- the demolition of the existing 1970s Town Hall Extension and buildings at 181-187 King Street; and
- the construction of a new eight storey retail and residential block.

The demolition of the Main Block's existing buildings is expected to take six months, followed by a further five months to demolish the existing Town Hall Extension to make way for the proposed East Residential Block's, once the new civic office has been constructed.

Following demolition, construction of the substructure for the Main Block, the works would then proceed from north to south, with piling works followed by excavation concrete slabs and walls, and the formation of the 'podium' level slab, which forms the springing point for the north residential block and tower, the civic centre office block and the south residential block and tower. The construction of the north residential block and civic centre and office block would proceed concurrently, with the south residential block following on from the completion of the frame of the civic centre and office block.

After completion of the civic centre and office block, demolition of the existing 1970s Town Hall Extension building and 181-187 King Street in the East Residential Block would proceed, followed by construction of the new eight storey retail and residential block.

Demolition and construction activities in the absence of mitigation measures and controls have the potential to generate temporary, short term adverse impacts. Examples of such mitigation measures to be deployed include watering to control dust and use of noise attenuation plant. These measures will be under the control of the Main Contractor who will be required, by planning condition, to adhere to management controls and measures detailed in a site specific Code of Practice which will contain a Construction Environmental Management Plan (CEMP).

The CEMP will define responsibilities and procedures for the management of the potential impacts on the environment arising during demolition, site preparation, excavation and construction. A monitoring programme of the environmental effects of demolition and construction will be implemented to accord with local authority requirements. Additionally, the Main Contractor will be required to register the Site under the Considerate Constructors Scheme.

A Method Statement will provide full details of the control and mitigation measures which will be adopted and implemented at the Site, following recommendations in Best Practice Guidance, these measures will include undertaking dust particulates (PM10) monitoring to gauge levels of dust, speed and direction.

A Site Waste Management Plan will also be prepared and submitted for approval as required by the Site Waste Management Plans Regulations (2008).
7.2 Socio-economics

A socio-economic assessment has been undertaken in line with current planning policy to assess the likely impact of the Proposed Development on the local and regional economy. In particular, it considered the potential effects of the Proposed Development on housing provision, on local social and community facilities (i.e. anticipated population increase demands on healthcare, education and community resources), employment opportunities and local spending.

The baseline analysis has reviewed existing socio-economic conditions at the Site and the provision of existing services such as healthcare (see Figure 10) and education. According to the Indices of Multiple Deprivation (2007), the output area of the Site is ranked 6,925 of 32,483 in England, where a ranking of one indicates the most deprived. Employment rates in the area are lower than the rest of the LBHF, with generally higher rates of unemployment and economic inactivity. The Site currently supports LBHF council offices, a small number of retail units (including a cinema) and a small number of residential units along Cromwell Avenue.

![Figure 10: Existing Primary Healthcare Facilities within 1 km of the Site](image-url)
The demolition and construction phase of the Proposed Development has the potential to generate employment opportunities. The demolition and construction phase for the Proposed Development is estimated to generate 125 permanent full time equivalent (FTE) jobs. This was expected to have a **minor beneficial** impact at the local level and a **negligible beneficial** impact at the borough level.

The main socio-economic impact arising from the Proposed Development is the provision of new housing. All the proposed residential units will be designed to meet Lifetime Homes standards. Some of the 320 units will be replacing existing units on-site but overall, there will be a net increase of 266 units. This was assessed as being a **major beneficial** impact at the local level and a **negligible beneficial** impact at the borough level. The quality of the new residential units would be substantially higher than those currently located at the Site.

These new homes will increase the size of the residential population on-site by between 487 and 433 (39 of which will be children (0 to 15 years of age)) and will generate new demands on existing healthcare, education and community facilities.

In terms of school places, as there is existing capacity for pre-school and secondary school places, the Proposed Development was considered to have **negligible** impacts at the local and borough levels. As primary schools within the area are currently operating at or over capacity, demand for primary school places from the Proposed Development is expected to generate minor adverse impact at the local and borough level in the absence of mitigation. Accordingly a mitigatory contribution towards additional teaching will be paid as part of the Section 106 agreement and will ensure the residual impact is **negligible**.

With an increase of new residents within the Proposed Development, demand will be generated for around third of a GP. At the borough level, this was considered to be a **negligible** impact.

In addition, the Proposed Development would create around 122 net additional jobs in the retail sector. This would constitute a **moderate beneficial** impact at the local level and a **minor beneficial** impact at the borough level.

The provision of 320 units in the Proposed Development would be expected to result in local spending by the new residents of around £7.9 million a year in household spending. A proportion of this will be retained within the local area and this was assessed to be a **minor beneficial** impact at the local level and **negligible** at the borough level.

In terms of Equalities opportunities, the homes, retail and community facilities within the Proposed Development will be provided to modern design standards, including full compliance with the Disability Discrimination Act 1995. These modern design standards offer significant improvements in accessibility and will benefit potential future residents or visitors with disabilities, older people with mobility difficulties and other groups such as parents with children. Overall, the Proposed Development was considered to have a **minor beneficial** impact at the local level and **negligible** impact at the borough level.

The Proposed Development includes provision for the creation of 0.88 ha of open space. This will include a new Civic Square, a pedestrian route and bridge, as well as, new terracing
The provision of further public open space within the Proposed Development will help to create a high quality and attractive landscape. In addition, it will create a high quality open space in the heart of the Hammersmith and improve linkages between the town centre and the River Thames. This was considered a moderate beneficial impact at the local level.

7.3 Archaeology

An archaeological assessment of the Proposed Development’s impact on potential buried heritage assets (archaeological remains) has been undertaken, informed by a walkover survey and a desk-based assessment on the known archaeology within the Site and surrounding study area. The assessment has been carried out in accordance with the standards specified by Planning Policy Statement 5: Planning for the Historic Environment (2010), Institute for Archaeologists (IfA 2001), English Heritage (EH 1998, 1999), and the Association of Local Government Archaeological Officers.

The Site does not contain any nationally designated (protected) sites, such as Scheduled Monuments or Registered Parks and Gardens. The northern part of the Site lies in a LBHF designated Archaeological Priority Area (APA) covering the King Street area of historic settlement. The southern part of the Site lies in the APA for Hammersmith Creek including the area by the Thames foreshore, draw docks, inlets and the Chelsea Creek (see Figure 11).

The Site is considered to have high potential for buried heritage assets although existing buildings and basements will have affected part of the Site. There is also potential for settlement activity along King Street in the northern part of the Site, possibly from the Roman period.

The greatest impact from the Proposed Development would come from the construction of basements, which would remove any remaining buried heritage assets from within its footprint. Piling would take place prior to the basement excavation, and any buried heritage assets would be removed from within the footprint of each pile. Demolition of the existing buildings, along with new service trenches and landscaping/planting could potentially also have archaeological impacts.

It is not anticipated that any nationally important buried heritage assets are likely to be present. If required, an Archaeological Mitigation Strategy will be agreed and adopted. This is likely to involve preservation by record. The resulting residual impacts will be negligible.
Figure 11: Archaeological Features Map
7.4 Built Heritage

As required by Planning (Listed Buildings and Conservation Areas) Act and the Planning Policy Statement 5 Historic Environmental Planning Practice Guide: Conservation Principles, the likely impacts of the Proposed Development on above ground built heritage assets at the Site and within the surrounding area (as well as the setting of such resources) were considered such as:

- the Grade II listed Town Hall;
- the Grade II listed Salutation Inn (154 King Street);
- the Grade II* listed Sussex House (12 & 14 Upper Mall);
- the Grade II* listed 13 & 15 Upper Mall;
- King Street (East) Conservation Area;
- The Mall Conservation Area; and
- the Cineworld Cinema (207-209 King Street) and Cromwell Mansions (211-217 King Street), both on LBHF’s Register of Buildings of Merit.

Consideration was also given to potential impacts of the Proposed Development on a number of other buildings – none of which are ‘heritage assets’ – in the vicinity of the Site.

Figure 12: Heritage Designations at and Surrounding the Site
There is a potential risk of accidental damage to the listed Town Hall during the demolition of the Town Hall Extension which would be mitigated by the provision of a Method Statement which would be submitted to and approved by LBHF’s. The residual impact of this potential risk is therefore considered to be **negligible to minor adverse**.

The identified Built Heritage impacts and the significance of the residual impacts are set below:

- the reinstatement of the northern entrance steps and the new Civic Square were considered to have a **major beneficial** impact;
- the demolition of the detracting Town Hall Extension and 181-187 King Street properties were considered to be a **major beneficial** impact;
- the demolition of the Town Hall Extension, 181-187 King Street and creation of the new civic square was considered to have a **moderate beneficial** impact on the setting of the listed Salvation Inn and character and appearance of the King Street (East) Conservation Area and on views into and out of it;
- the banking of the bridge at its southern end was considered to have a **minor beneficial** impact on views of the Town Hall from the South, a **moderate adverse** impact on the setting of Sussex House (nos. 12 & 14 Upper Mall) and a **minor adverse** impact on the setting of nos. 13 & 15 Upper Mall;
- the partial obscuring of the Town Hall's western elevation was considered to have a residual **moderate adverse** impact, although the creation of new views from the new pedestrian bridge and Furnival Gardens are also considered to generate a minor beneficial impact;
- the introduction of a pedestrian bridge over the A4 and the southern elements of the buildings were considered to generate a **moderate adverse** impact on the character and appearance of The Mall Conservation Area and a **moderate adverse** impact on views out of it; and
- the demolition of the Cineworld Cinema and Cromwell Mansions, Friends' Meeting House and Register Office was considered to have a **minor adverse** impact.

### 7.5 Townscape and Visual Impact

The Townscape and Visual Impact assessment included an assessment of the appropriateness of the scale, massing, materials and articulation of the Proposed Development in relation to the existing and proposed physical fabric of the immediate locality and the broader Hammersmith area in its metropolitan context. The issues considered by the Townscape and Visual Assessment include the potential impacts of the Proposed Development on the streetscape, local skyline and open landscape including the River Thames.

The methodology applied was based on the EIA guidance, and reflects in broad terms guidance set out in the Guidelines for Landscape and Visual Impact Assessment, as well as, the London Plan’s London View Management Framework (LVMF) Supplementary Planning Guidance (SPG) and included consideration of listed buildings, conservation areas, character areas and visual amenity.
To assess the potential impacts on visual amenity 21 views were selected and agreed with LBHF. Through the views assessment, the potential impacts of the Proposed Development on the character of the local and wider townscape and historic environment were considered in the round and under different lighting conditions.

Existing views to the Site were professionally photographed and a Visually Verified model (VVM) overlaid onto the photographs to create images of the Proposed Development. Example images showing the Existing and with Proposed Development Views are provided in Figures 13, 14 and 15.

![Existing View](image1)

**Existing View**

![Proposed View](image2)

**Proposed View**

*Figure 13: View – from Hammersmith Bridge – Panorama – centre, looking north west*
Existing View

Proposed View

Figure 14: Night-time View from Furnival Gardens, southwest corner, looking north
Existing View

Proposed View

Figure 15: View from King Street, north side looking south
Assessed in the round, the potential impact on the local and wider townscape, and on the historic buildings within the townscape, were judged to be **beneficial** and of **minor to major** significance. These considerations were determined on the basis of the high design quality of the Proposed Development by:

- recognition that the character of the Conservation Areas in London is one of contrasts, of historic and modern buildings, and that modern buildings of high design quality do not harm the settings of historic buildings; and that

- the King Street Regeneration Project as a whole will enhance the visual appearance of the King Street (East) Conservation Area and surrounding streets and places.

### 7.6 Daylight, Sunlight and Overshadowing

This assessment considered the impacts of daylight, sunlight and overshadowing that will occur if the Proposed Development is completed. Analysis was carried out to existing and new future residential receptors.

Relevant policies and guidance including BRE’s Site Layout planning for Daylight and Sunlight: A Guide to Good Practice and BS8206 were identified which informed the criteria and methodology by which the potential impacts were assessed of the effect of the Proposed Development on existing neighbouring properties and future residential properties within the scheme.

The Daylight analysis showed *moderate beneficial* impacts to a number of existing windows which will have increased levels of daylight availability and daylight distribution, whilst there will be some localised *significant adverse* effects where windows’ daylight availability values and daylight distribution reduces by more than 20%. The overall impact issues considered to be *negligible* based upon the number of receptors so affected.

Potential impacts on existing and proposed properties sunlight levels were also assessed for all bedrooms and kitchens that face south. The assessment found that potential impacts were overall *negligible*.

An assessment of permanent overshadowing was also undertaken based on predicted shadow paths at different times of the year, an example of which is shown in Figure 16. This found that the proposed Northern private courtyard would be adversely affected by overshadowing (to a major degree) but overshadowing to the public areas of the new Civic Square and to King Street itself will be lower than the current baseline condition resulting in a *minor beneficial* impact.
Figure 16: Predicted shadowing with the Proposed Development at 1200 Hrs on June 21st

7.7 Wind

As the Proposed Development includes some tall buildings, an assessment of wind microclimate around the existing Site and Proposed Development using wind tunnel testing of the existing Site and Proposed Development was undertaken. The assessment used the well-established Lawson Comfort Criteria to benchmark the wind microclimate for a range of pedestrian activities from sitting (calmest winds required) to transient activities such as crossing the road.

The wind tunnel testing found that existing wind conditions on-site are expected to be suitable for sitting and standing throughout the majority of the Site, apart from two locations along King Street where leisure walking conditions are expected during the windiest season.

Under worst case conditions, during the windiest season, the predicted wind conditions within and around the Proposed Development were found to be suitable for standing/entrance use and sitting at the ground and upper ground levels and leisure walking
at the north-west corner of the Site, along the proposed footbridge and the service corridor along the north façade of the proposed Civic centre and office building. All entrances to the proposed buildings, as well as the existing Town Hall, will experience conditions which are suitable for, or better, than desired even at the windiest times of the year. The local wind microclimate improves in these areas during the summer season.

The wind tunnel testing indicated that the two residential courtyards, situated on the west side of the Site, and the upper level terraces will be suitable for standing and sitting under the worst case conditions and sitting during the summer.

The new Civic Square, when tested with the proposed landscaping, was found to be suitable for sitting or standing throughout the year.

![Figure 17: View in the Wind Tunnel (view from north)](image)

No additional mitigation was therefore considered necessary as all residual impacts were either negligible or beneficial.

With regards pedestrian safety, the wind tunnel testing identified two locations within the Site where there was an exceedence of Baeufort Force 6 for more than one hour per annum. However, these exceedances will occur for less than six hours per year and in areas that are unlikely to be used by the public being service corridors/thoroughfare. Given this low frequency and the proposed use of these locations no mitigation was proposed.
7.8 **Ground Conditions**

Part IIA of the Environmental Protection Act 1990 provides the basis for the current UK contaminated land regime. The legislation provides local authorities with the power to require investigation and remediation of contaminated land. The legislation aims to protect human health, controlled waters, ecosystems and property from the adverse effects of contaminated land thought the use of the source-pathway-receptor model. Only when a complete pollutant linkage is present, is the land deemed to be a significant risk. Further guidance is provided in Planning Policy Statement 23 (PPS23): Planning and Pollution Control (2004) which advocates the use of the precautionary principle and the use of planning conditions/obligations to make any development site suitable for use.

The assessment of ground conditions at the Site included a Phase I Environmental Review of the Site, which involved review of relevant third party and regulators information to assess the Site setting and sensitivity.

Based on current and former activities on and surrounding the Site, there was considered to be a low risk of potential contamination, with the Site predominantly occupied by residential properties and commercial (office/retail use). However, the former Creek in the southern and eastern parts of the Site appeared to have been infilled by the 1930s. Fill materials used at the time are unknown and could represent a potential for contamination. However, from previous investigations in the wider area of Furnival Gardens, Made Ground was not recorded to comprise evidence of contamination.

Geotechnical and environmental investigation will be conducted across the entire Site to further characterise ground conditions as part of the detailed design works. However as part of works to inform the planning application design and EIA, the first stage of the geotechnical and environmental investigation was completed and chemical analyses undertaken. This indicated the presence of elevated concentrations of lead in Made Ground across the Site and hotspots of elevated concentrations of associated (polycyclic aromatic hydrocarbons) PAHs and total petroleum hydrocarbons (TPH) in Made Ground in the south-west and north-east of the Site. These hotspot locations correspond to the proposed basements, so that these materials will be removed during the redevelopment works.

Whilst the demolition, excavation and construction works could introduce new contaminant sources and pathways creating possible links to sensitive receptors, the implementation of controls measures within a CEMP will ensure that no source pathway receptor linkage will be created. Accordingly, it was considered that any impact would be **negligible**.

The Proposed Development would not introduce any potential contamination sources or create any new source-pathway-receptor pollution linkages on-site. Additionally, the creation of basement areas was considered likely to remove a significant quantity of Made Ground (potential source of contaminants) and the introduction of a layer of clean capped soil in landscaped areas (if necessary) would ensure that no source-pathway-receptor linkages are created by the completed development. Accordingly the residual completed development impact was assessed as being either **negligible** or **minor beneficial**.
7.9 Water Resources, Hydrology and Flood Risk

National, regional and local policies were assessed to determine specific issues regarding the management of water resources, flooding and drainage. These policies emphasise the need for new developments to: protect and improve water quality; reduce and minimise water consumption; utilise sustainable drainage where practical; and prevent an unacceptable risk of flooding either on-site or elsewhere.

An assessment of water resources and flood risk was undertaken in accordance with current government guidance on EIA. The assessment included a review of baseline information such as a Landmark Envirocheck report, EA records, a Phase 1 Environmental Review completed by ENVIRON UK Ltd; local topography; consideration of possible effects on water quality and hydrology likely to arise during development works (demolition and construction) and once the Proposed Development is complete.

The Site is underlain by a minor aquifer but does not lie within an Environment Agency designated Source Protection Zone nor a Nitrate Vulnerable Zone. Previous site uses were predominantly residential buildings and associated gardens, whilst off-site uses include some potential off-site sources of contamination that could potentially migrate beneath the Site. Investigations undertaken on-site indicate that there are some slightly elevated levels of contaminants in localised hotspots, however as reported above, these hotspots are located in areas of proposed basements and will thus be removed during the development works.

As the Site lies within Flood Zone 3a (annual probability of tidal flooding > 1 in 200 i.e. 0.5%) although it benefits from flood defences, a PPS25 compliant Flood Risk Assessment was undertaken. Compared to existing site conditions the % of impermeable surfaces within the Site will reduce form 86% to 84% with the Proposed Development additionally to help achieve the Mayor of London’s required standard. The Proposed Development will manage surface water runoff using green roofs and oversized pipes (underground storage). Accordingly it was assessed that the Proposed Development would reduce surface water run-off and off-site flood risk resulting in a minor beneficial impact.

During development works, controls to minimise the risk of accidents, ensure safe handling and storage of potentially hazardous materials and prevent pollution will be implemented as part of a CEMP. However, it was anticipated that minor adverse to negligible residual impacts may occur in the event of contamination. No other adverse effects were predicted during demolition and construction works. To reduce the risk of surface water contamination by hydrocarbons once the development is complete, oil interceptors will be incorporated within the drainage systems of car park areas. Compared to existing site controls, the introduction of such features was assessed as a minor beneficial impact.
The Proposed Development will increase the number of occupants using the Site, and will therefore increase the water demand and foul drainage requirements. It is proposed that these increases will be offset by the adoption of a variety of water-saving devices in the residential and office components of the scheme, and rainwater harvesting measures. Separate storm and foul water drainage systems are proposed and studies are currently underway to explore discharging storm water runoff directly to the River Thames. Overall though it was considered that there would be minor adverse impacts increased water consumption and foul drainage demand.

In conclusion, given the location and nature of the nearest, the mitigation measures available and the demonstration of surface runoff attenuation methods, the overall environmental impact of the Proposed Development in relation to water quality, hydrology and flood risk was considered to be negligible.

### 7.10 Transport

A Transport Assessment was prepared to assess the likely transport impacts of the Proposed Development on the surrounding transport network, as well as on pedestrian movement and the public realm. This was undertaken in accordance with Transport for London’s (TfL) ‘Transport Assessment Best Practice’ guidance document and in consultation with Hammersmith and Fulham Council (LBHF) and TfL.
Key existing local transport features include:

- the A4 Great West Road, which is part of the TfL’s road network (TLRN) and a main arterial route into central London from the M4. The A4 3 lane urban motorway also however forms a significant barrier to north-south movement between the main built section of the Site and the River Thames.

- King Street (A315) forming the northern boundary of the Site;

- two London Underground Ltd tube stations within a 10 minute walk of the Site, namely Ravenscourt Park and Hammersmith; and

- six bus routes running along King Street with a further eleven bus routes within a 10 minute walk at Hammersmith bus station.

![Figure 19: Site Location within Strategic Transport Network](image)

The Site is well served by public transport and achieves a Public Transport Accessibility Level (PTAL) of 5 (good) out of 6.

Projected demolition and construction programme and predicted volumes of materials were used to predict the likely demolition and construction traffic flows. The flows show that the peak demolition and construction traffic volume is likely to occur during the excavation and piling phase, which is a seven month period starting in January 2012 based on the projected programme.
Assuming that the estimated demolition and construction traffic flows are entirely made up of heavy vehicles (HGVs), this would represent a 3.8% increase in the existing heavy vehicle flow on King Street and was therefore, considered to be negligible.

The proposed routing of construction traffic will increase the proportion of HGV’s on Rivercourt Road and Weltje Road, however as peak construction traffic flows will not use these roads only demolition traffic, equivalent to four heavy vehicles per day are predicted on each road. Since these are residential streets with very low existing HGV levels the impact was considered to be of major adverse significance, however it is a temporary impact only occurring during demolition and construction.

With regards to predicted completed development impacts, the predicted net increase in peak hour trips on the Underground was assessed to be minor adverse whilst the predicted net increase in peak hour trips by bus and train was assessed to be negligible.

The significance of the residual impact (taking into account the effects of the proposed Green Travel Plan) of the Proposed Development traffic on King Street was considered to be minor adverse. However, on the northern section of Cromwell Avenue, the significance of this residual impact was considered to be major adverse.

The increase in delay per vehicle due to background traffic growth and Proposed Development traffic for junctions was considered to be minor adverse. The impact of increased traffic flows on severance will vary depending on the road, with the impact on Cromwell Road being substantial adverse although the flows are not expected to contribute to pedestrian delay impacts.

In terms of pedestrian movement as there are existing zebra crossings on King Street and Studland Street the impact on pedestrian delay is considered to be negligible. However, the Proposed Development would close Nigel Playfair Avenue and create a new pedestrian bridge over the A4 linking the Site to the River Thames waterfront and long distance path and Furnival Gardens, which will have a substantial beneficial impact on pedestrian delay and Amenity. Finally the creation of the new pedestrian bridge over the A4 will significantly improve local connectivity to the River Thames waterfront and Furnival Gardens.

Impacts of accidents and safety, fear and intimidation due to changes in traffic flows were considered to be negligible.

7.11 Air Quality

An assessment of the likely impacts from the demolition and construction, and completed development phases of the Proposed Development on air quality was undertaken. National legislation and relevant planning policies were reviewed.

The assessment followed the guidance provided by the Institute of Air Quality Management (IAQM) and the London Council, and was carried out in a number of stages. First, existing air quality in the vicinity of the Site was derived from a number of sources of baseline data. This indicated that LBHF has declared the whole borough as an Air Quality Management Area. Second, potential sources of air pollutants were identified and, where relevant, quantified. Third, impacts of the identified emissions arising as a result of the Proposed
Development, on existing air quality, were predicted and their significance evaluated. Finally, where necessary, methods and measures to mitigate predicted significant impacts were proposed.

The detailed air quality modelling approach using ADMS Roads software to predict traffic emissions and emissions from the site-wide Energy Centre was discussed and agreed with LBHF.

During construction and demolition activities, there is the potential for emissions of dust arising from the Site however, typically this will be restricted to within 100 m of the Site boundary. Dust emissions can be effectively controlled by the employment of stringent management practices e.g. the use of ‘just in time’ deliveries to preclude the need for large stockpiles, the use of water sprays and screens and maximising separation distances. The proposals therefore include stringent management measures and controls that will be secured by means of an appropriately worded planning condition and implemented on-site by means of a site-specific Code of Construction Practice agreed with LBHF, as well as, a CEMP. With the implementation of these measures it is anticipated that dust impacts during demolition and construction activities could be mitigated to temporary short-term minor to moderate adverse at all receptors.

The demolition and construction works will generate traffic movements as a result of HGVs and LGVs transporting materials and workers to and from the Site and from demolition and construction plant working on the Site itself.

The effective implementation of proposed construction mitigation measures set out in the London Best Practice Guidance for the Control of Dust and Environment from Construction and Demolition will reduce the impact of the demolition and construction traffic and plant emissions to a minor extent. However a residual level of impact of slight adverse was predicted.

The predicted effect on air quality from both traffic emissions and energy plant associated with the Proposed Development in both nitrogen dioxide and PM$_{10}$ concentrations is considered to be small by reference to the IAQM guidance and plans has been assessed in the absence of mitigation as slight adverse. The implementation of a number of mitigation measures aimed at reducing the number of vehicles generated by the Proposed Development, including secure cycle parking facilities, a car club, a travel plan and a reduction in available vehicle parking will however reduce traffic related impacts. The residual impact was assessed as being negligible.

Furthermore, to ensure future residents are not exposed to unsuitable air quality, a series of design principles have been incorporated into the residential accommodation block designs. These include:

- residential units not being located at lower ground floor level in the blocks facing out onto either the A4 or King Street;
- drawing make up air from the upper floors at the rear of the duplex units in block 53 from within the southern courtyard);
setting back Block S2 from the A4; and

whole house ventilation system for each residential unit, with air being drawn through inlets placed at ceiling level within each upper ground and 1st floor unit on Blocks S1 and S2. Therefore within Blocks S1 and S2 air inlets for the units would be some 6 - 7 m above street level.

The incorporation of these measures to mitigate the impacts from traffic and energy plant emissions will result in the overall residual impact of the development on air quality being slight adverse at two receptors with negligible impacts at all others.

7.12 Noise and Vibration

An assessment of the potential noise and vibration impacts of the Proposed Development during the demolition and construction works was undertaken based on recognised standards and guidelines including BS5228 and Calculation of Road Traffic Noise. The assessment was based on a series of environmental noise measurements undertaken at the Site, with noise modelling and noise predictions carried out.

Noise levels from the demolition and construction of the Proposed Development were predicted at noise-sensitive properties in the vicinity of the Site and on-site and the impact of the noise assessed. Implementation of the proposed mitigation measures contained in the CEMP and secured by an appropriately worded planning condition will ensure noise levels are predicted to remain within the 75 dB (A) target criterion for all works and receptor locations albeit it was considered that there will still be some temporary short-term minor-moderate adverse impacts.

Given the short distance between the Site and the nearest sensitive receptors there is potential for perceptible levels of vibration at receptor locations. However, the adoption of the Best Practicable Means mitigation measures and a proposed monitoring regime will ensure and that the impact of any construction related vibration is adequately monitored and controlled albeit it was considered that there will still be some temporary short-term minor-moderate adverse impacts.

The design of the Proposed Development incorporates a number of mitigation measures including:

- locating non-residential uses on ground floor, with residential units located at Upper Ground or 1st floor (approximately 4.5 to 6.0 m above ground level), with the exception of four ground floor duplex apartments in building S3 which is screened from the A4 and King Street by building S2 and N1 and N2;
- installing Standard Thermal Double Glazing along all facades, with the exception of those requiring a higher acoustic performance;
- identifying suitable glazing specifications on noisy facades; and
- using whole house ventilation.
The suitability of the Site for residential development was assessed in accordance with the guidance contained in PPG24. The impact of ambient noise on the Proposed Development was based on the Future 2016 Baseline with Proposed Development' scenario traffic flows and the recorded results of the noise measurement survey undertaken.

Figure 20 shows the predicted daytime NECs across the Site under the Future 2016 with Proposed Development Scenario

The predicted noise levels indicate that all of the proposed outward facing facades will fall within Noise Exposure Category (NEC) D and NEC C - meaning that noise is a material issue and planning permission should not normally be granted without the implementation of noise and vibration measures. The remaining parts of the Site all fall within NEC B or NEC A. Accordingly, details for possible façade treatments, which when implemented, will ensure internal noise levels below the 30 dB criterion required by LBHF and defined as “good” within BS8233 were identified. The precise façade acoustic glazing treatments will be determined at the detailed design stage.

Changes in traffic flows as a direct result of the Proposed Development have been assessed. Predicted changes in noise level on the existing road network as of result of changes to traffic flows will have a negligible to moderate adverse impact, with the highest predicted increase in noise as a direct result of the development traffic being towards the centre of Cromwell Avenue, where noise levels are predicted to increase by 3.8 dB although...
it should be noted that an increase in 3dB is the minimum perceptible change in noise levels by the human ear under normal conditions.

Target noise criteria have been set for all building services plant. Providing that the rating noise levels from the building services plant do not exceed the stated noise criteria, whether through the application of noise control techniques or otherwise, the impact of noise from such sources is predicted to have **no significant** adverse impact on existing and future sensitive receptors.

### 7.13 Ecology

An ecological assessment was undertaken with reference to the Institute of Ecology and Environmental Management ‘Guidelines for Ecological Impact Assessment in the UK’ (2006). The assessment was undertaken following the completion of a Phase 1 Habitat Survey (incorporating a GiGL database search of relevant records within a 2km study area) and a Bat Survey of the Site.

Figure 12 below shows the results of the Phase 1 Habitat Survey and clearly demonstrates how limited vegetation is on the Site.

All features of the Site north of the Great West Road were considered to be of Site or Negligible importance for nature conservation as the Site generally comprised of both building and hardstanding interspersed with amenity grassland of low suitability for protected species plus some scattered trees. Furnival Gardens, a designated SINC south of the A4 was considered to be of local value. The Site was considered to be of local value for bats and birds.

The Proposed Development has been designed to avoid, reduce or off-set potential adverse ecological impacts through good Site working practices, a suitable lighting strategy to reduce disturbance to bats and a range of compensatory planting. In addition, the scheme will deliver enhancements to Furnival Gardens SINC and create new habitats on-site through a combination of the provision of ‘extensive’ sedum and glass plus ‘biodiverse’ Green Roofs, bird and bat boxes.
Figure 21: Phase 1 Habitat Survey of the Site

The Proposed Development will result in the loss of 52 trees on-site, including some of moderate quality and value. In the short and medium term, the loss of trees and shrubs to facilitate the development and in particular the improved connectivity to the River Thames will result in a probable significant adverse impacts at the Site level. However, 73 replacement trees will be planted, including native species which are subject to habitat and species action plans, such that in the long term once they are semi-mature/mature there will be a significant beneficial impact.

Additionally, the Proposed Development will bring forward a net increase in the amount of soft landscaping on-site through habitat creation within the courtyards, as well as, 2,151 m² of green roofs (consisting of sedum and biodiverse roofs). The preparation of the new habitats as inherent parts of the Proposed Development were considered to generate certain/new certain significant (beneficial) impacts at the local/Site level.
7.14 Waste
A desk study was undertaken to establish the national, regional and local policy context with respect to waste management in LBHF. The desk study also established existing waste generation and disposal facilities within the borough. Industry Building Research Establishment (BRE) benchmarks and BS5906 were used to predict the likely waste generation from the Proposed Development during demolition, excavation and construction operations.

It is anticipated that the demolition of existing buildings at the Site would result in 5,000 m$^3$ of waste, the groundworks (excavation) in 35,500 m$^3$ of waste and the construction works in 5,657.5m$^3$ of waste (an average of 97.62 m$^3$ per month over the approximate four years and nine months construction period.).

The implementation of a Site Waste Management plan which would form part of the site-specific CEMP, would facilitate the minimisation, re-use and recycling of waste to avoid unnecessary landfilling during the demolition and construction works. It was therefore considered that the Proposed Development would accord with the principles of the waste hierarchy. All waste would be managed in accordance with relevant legislation. With the implementation of these mitigation measures, only short-term temporary minor adverse residual impacts were considered likely to arise.

It is anticipated that the total waste to be generated by the Proposed Development once completed would be 381 m$^3$ per week. However with the implementation of proposed mitigation measures, a much higher percentage would be recycled/composted, thus contributing to achievement of future targets. Accordingly, the residual impact of the Proposed Development once completed were considered to be negligible.

Recycling would be encouraged through the provision of external storage facilities for segregated waste which would be easily accessible to all residents and through the integration of internal storage areas for segregated waste within each unit.

7.15 Telecommunication
As tall buildings can affect the reception of broadcast telecommunication services, a Telecommunication Assessment was undertaken to assess the likely impacts and effects to available broadcast services, as a result of the Proposed Development. The assessment included a review of existing service provision in the area surrounding the Site and predictive modelling.

The key findings of the assessment were that the Proposed Development would have:

- no significant impact on the reception of broadcast radio services;
- a negligible impact on satellite TV services;
- a moderate adverse impact in the absence of mitigation measures on terrestrial digital TV services, due to shadowing of terrestrial TV signals, in a number of households in an area immediately northwest of the Site. The use of mitigation measures such as repositioning the existing antenna, installing a higher gain antenna or, if any of these
solutions are unable to restore service, by installing another service will ensure there are negligible residual impacts on terrestrial digital TV services; and

- a negligible impact on terrestrial TV services, due to reflections of terrestrial TV signals.

7.16 Cumulative Impacts

As described in section 2.5 of this NTS a cumulative assessment was undertaken. This focused on two types of cumulative impact ‘impact interaction’ and ‘in combination impacts’.

For ‘impact interaction’ impacts it was considered that the greatest likelihood of impact interaction would occur during the demolition and construction works. However, the CEMP implemented during the demolition and construction works, secured by an appropriate planning condition would provide the mechanism to minimise impacts of demolition and construction works ‘at source’ in order to reduce the potential impacts on internal and external surrounding receptors. Overall, it was considered that any impact interactions that occur would generally be temporary and short-term in nature, albeit there may be some peaks of moderate adverse impacts when works are occurring immediately adjacent to properties.

In relation to ‘in combination’ impacts, two schemes were identified. These are briefly described below, with their locations shown on Figure 17. It is noted that the Hammersmith Palais application has recently expired however, the application is still being considered as a committed development as a proposal is likely to come forward with a similar level development in the near future.

- Hammersmith Grove LUL Station Building - A Car Park site that occupies a prominent position within Hammersmith town centre, situated on Hammersmith Grove and in close proximity to its junction with Beadon Road and the Hammersmith and City Line LUL Station building. With permission for a mixed-use building over basement, ground and eleven upper floors, containing 39,141 m² of office (B1) approximately 100 m² retail floorspace (A1), approximately 1,500 m² restaurant floorspace split into three units (A3) and a cinema (D2); and

- Hammersmith Palais - An application for the redevelopment of the Hammersmith Palias, a nightclub situated on Shepherd's Bush Road within the Town Centre boundary. With permission for a four and five storey stepped mixed-use building including 3,996 m² of leisure floorspace (D2) 225 m² restaurant (A3), 6,747 m² of office floorspace (B1).
Figure 22: Location of Other Development Schemes considered in the Cumulative Impact Assessment

The text below describes the anticipated significant in combination impacts. All other potential impacts are considered insignificant.

**Socio-Economics**

As the identified cumulative schemes do not include any residential elements, there will be **no** cumulative increased demand on local services such as school places and healthcare facilities. Furthermore, as the Proposed Development’s office provision is for consolidation of existing council offices within the borough, it is considered there will be **no cumulative effects**.
There is the potential that the Proposed Development and the identified cumulative schemes, could increase local spending, however due to the distances between the three schemes and existing residential and worker populations any such increases are considered to be minimal and insignificant.

**Archaeology**
Due to the distance between the Site and the consented developments considered within the assessment, no cumulative impact on archaeological resources in the surrounding area is anticipated as a result of the Proposed Development in combination with the consented developments.

**Built Heritage**
Due to the distance between the Site and the consented developments considered within the assessment, no cumulative impact on built heritage in the surrounding area is anticipated as a result of the Proposed Development in combination with the consented developments.

**Townscape and Visual Impact**
As none of the consented schemes identified above, will appear in any of the 21 agreed viewpoints considered in the Views Assessment, no cumulative visual impacts have been identified. Additionally it is noted that due to the location of the Site of the Proposed Development and the cumulative schemes described above, no cumulative townscape impacts have been identified.

**Daylight, Sunlight and Overshadowing**
Due to the distance between the Site and the consented developments considered within the cumulative assessment, no cumulative impact of daylight, sunlight or overshadowing is anticipated as a result of the Proposed Development in combination with such developments.

**Wind**
Given the distances between the sites, and the position of the Proposed Development it is considered unlikely that there would be any likely significant cumulative wind impacts.

**Ground Conditions**
No cumulative impacts are on existing ground conditions in combination with the consented developments are predicted as a result of the Proposed Development and the consented developments.

The consented developments are located at a sufficient distance from the Site that they are not in continuity with the Site, reducing the potential for any impacts to combine. Additionally, any groundworks or creation of possible pollution pathways at the other scheme would be subject to similar regulatory controls and guidance to prevent pollution.

**Water Resources and Flood Risk**
In accordance with Planning Policy Statement 25 all new developments are required to appropriately manage surface water run-off and incorporate water conservation measures.
All the other consented developments would be taking place on previously developed land, most of which have impermeable surfaces. A number of the developments include provision of landscaping which previously did not exist. In addition, there would be measures put in place to attenuate surface runoff prior to discharge into the sewer network. Overall it is considered that the cumulative effects of the Proposed Development in combination with the consented developments will lead to an overall improvement in surface runoff management in the area and beneficic impact.

Both of the consented developments considered have been in use previously. Therefore, they have existing requirements for mains water supply. Based on a review of the developments on the LBHF website it has been determined that the developments would provide office, leisure, retail and restaurant accommodation. Whilst these uses will potentially increase water consumption in the area, these increases can be offset by incorporating water efficiency measures, such that no significant adverse impacts are anticipated.

If any contamination is present on these sites it can be assumed that the sites would be subject to regulatory controls to prevent pollution of surface and ground waters, such that no significant adverse impacts are anticipated.

The Proposed Development may lead to an increase in the demand for water and foul drainage, depending on the outcome of the Foul Drainage Study.

Transport
The Hammersmith Palais Transport Assessment (TA) does not contain any information regarding development traffic flows, however the location of the development is such that it is unlikely to have a significant impact on traffic flows on King Street.

The TA for the Hammersmith Grove development predicts some additional traffic on Beadon Road (partly due to the development and partly due to redistribution of flows to the existing car park), some of which could come from King Street. However the traffic volume is low and has been accounted for in the growth factors that have been applied to the existing traffic flows. Accordingly no significant cumulative transport impacts are anticipated.

Air Quality
Given the location of other consented developments in the area, particularly at Hammersmith Grove and Hammersmith Palais, the size of the Site and the location of sensitive receptors, the only cumulative impact that has potential to arise will be from operational traffic generation.

As set out above, no significant cumulative increases in traffic flows are anticipated that have not been accounted for in the growth factors that have been applied to the existing traffic flows. As set out above, no significant cumulative, air quality impacts are predicted.

Noise and Vibration
Due to the distance between the Site and the consented developments, it is considered that the Proposed Development in combination with the consented developments is unlikely to cause any cumulative effects in regards to plant noise and vibration.
Furthermore as set out above, no significant cumulative increases in traffic are predicted. There will also be no associated cumulative increases in road traffic noise. Accordingly, the impact of these cumulative schemes is considered to be insignificant.

Ecology
Given the distances between the Proposed Development and the consented developments, it is considered unlikely that cumulative ecological impacts would arise.

Waste
It is considered that the consented developments would be developed in line with the same LBHF requirements as the Proposed Development including requirements for maximising re-use and recycling of demolition, excavation and construction waste through a SWMP, meeting of recycling targets for household waste and the implementation of measures included within the Code for Sustainable Homes BREEAM benchmark.

Accordingly, whilst there is likely to be an overall increase in the quantity of waste arising, waste would be managed such that there would be likely a net beneficial contribution to more sustainable waste management.

Telecommunications
Given the distances of the other consented developments from the Site, their bulk and massing as well as, intervening topography and existing built structures, it is not considered that there will be any cumulative impacts on broadcast services.