193-197 High Holborn, Camden

Sustainability Statement

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

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Comments

01 Draft for Comment

02 Planning

Comments

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1. Introduction

1.1. Mactaggart Investment Company Limited (hereafter referred to as the 'Applicant') are seeking to obtain full planning permission for development of 193-197 High Holborn, London, WC1V 7BD (hereafter referred to as the 'Site'). The Site is located within the London Borough of Camden (LBC). The proposed Development comprises a fifth-floor extension to the existing Grade II Listed building, alongside internal alterations which includes the installation of servicing pipework that will provide connections for future heating and cooling equipment. Further details of the proposed Development are provided in Section 2 of this report.

1.2. This Sustainability Statement, prepared by Waterman Infrastructure & Environment Limited (hereafter Waterman IE), describes the approach the design team has taken to integrate and consider sustainability during the design process. The purpose of this report is to assesses to what extent the Development accords with the principles of sustainable development and the relevant planning policy requirements.

1.3. This structure of this reports is as follows:

Section 1: Introduction;

Section 2: Description of Site and Surrounding Area;

Section 3: Methodology;

Section 4: Review of Technical Studies

Section 5: Review Against Relevant Planning Policies; and

Section 6: Conclusions.

2. Description of Development Site and Surrounding Area

Existing Site

2.1. The Site is centred on grid reference TQ 30365 81461 and is located on the south side of High Holborn, London. The Site it is entirely located with the administrative boundary of the London Borough of Camden.

2.2. The application Site comprises the Grade II listed former Holborn Town Hall and Library. The front of the building adjacent to High Holborn comprises four storeys with a double height mansard. Part of this mansard space is occupied at mezzanine level with the remainder comprising a double height fourth floor office space. The rear portion of the building away from High Holborn comprises five storeys above ground level and basement accommodation. The basement and ground floor area of the former Holborn Library at the east of the site is in use as a restaurant with the remainder of the building currently in office use.

Surrounding Area

2.3. The buildings in the surrounding area are predominantly in use as offices at upper floor level, with retail and food / beverage uses at ground floor.

2.4. The surrounding properties comprise a variety of buildings typically ranging from 4 to 11 storeys. A Grade II listed Victorian building is located directly to the east of the site at 199 - 201 High Holborn. The building directly to the west of the site is a modern 9 storey office building with large roof level plant rooms and a 7 storey rear wing onto the Smarts Place frontage. Holborn Tower and Commonwealth House opposite the site are 10 / 11 storey buildings. To the rear of the Site are modern 4-5 storey office buildings which front onto Dragon Lane and Stukeley Street. The closest residential properties are located at 19-33 Stukeley Street and Green Dragon House adjacent to the south east of the site. Further residential properties are located along Newton Street to the rear of Dragon Court approximately 40m southeast of the subject site.

Planning History

2.5. The Site has been subject to a number of previous planning applications and associated listed building consents, most notably for the extension of the rear wing in the early 2000s. A brief history of relevant applications is set out below.

2.6. PS9904342L (and associated listed building consent (LS9904343) | Change of use and conversion of the town hall building and library to office (use class B1) and restaurant (use class A3); the erection of 1, 2 and 5 storey rear extensions (Site A); the erection of a 5 storey building on the Stukeley Street frontage (Site B) for use as a community centre (use class D1) at ground floor level with office (B1) use on the upper floors; associated servicing provision. Granted subject to S106 March 2000. Alterations to the external and internal design of the Development was subsequently approved under planning permission ref: PS9905224 and listed building consents ref: LS9905225 and LS9905317. It should be noted that these permissions cover areas referred to Site A and B. The subject site and adjacent building to the northeast (no. 198) known as 'The Connection' form Site A within the wording above. The neighbouring site to the southwest located at Stukeley Street form Site B within the planning permission wording above. For further clarification see Figure 1 below, Site A is outlined in red, Site B is outlined in blue.

2.7. 2003/1379/P (and associated listed building consent 2003/1405/L) | The installation of plant to roof area, the addition of a mezzanine floor and internal fit-out. Granted December 2003.

2.8. A further three relevant listed building consents were issued in 2004, 2005 and more recently in 2015 (2004/0817/L, 2004/0814/L, 2004/4482/L and 2015/3782/L) for internal and external alterations to the building.

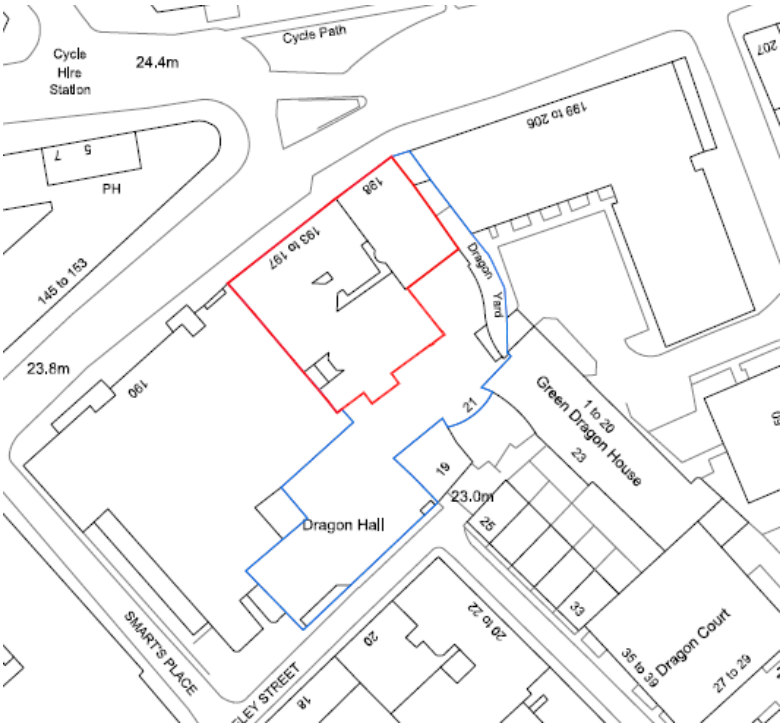
Proposed Development

2.9. The proposed Development comprises external alterations and extensions, including a fifth-floor rear extension and the installation of roof top plant and associated servicing pipework drops contained within black cast iron pipework. Internal alterations will include the installation of servicing pipework that will provide connections for future heating and cooling equipment should this be required, and installed, by a future occupier.

2.10. The proposed fifth floor rear extension would be located on the south western side of the building above the existing 4 storey rear wing to provide additional office floorspace. The rear part of the proposed extension would match the layout of the existing building below, which wraps around the lightwell. This part of the extension would be constructed from materials and windows to match the existing building below, including replicating the existing bay windows. The adjoining front part of the proposed extension would extend over the area presently occupied by the lift overrun to the rear of the existing mansard roof to facilitate the extension of the stair core providing access the new extension and toilet facilities. The extension would provide 86 sq. m of additional office floorspace. A small rear terrace with an area of 8 sq. m would also be provided above the existing rear service core to the rear of the extension.

The planning application boundary is shown in Figure 1

Figure 1. Site boundary



Source: Map by Garnett and Partners

3. Methodology

3.1. The proposals have been designed to minimise the disturbance to the historic fabric and appearance of the Grade II listed building whilst sympathetically improving the space to provide a useable modern office environment, ensuring the heritage asset remains in productive use. The principles of sustainable design have been considered throughout the design process of the Development and have been incorporated where viable without causing undue impact to the fabric and appearance of the Grade II listed building.

3.2. The following sections summarise the activities undertaken during the design process to ensure that sustainability principles were considered at the pre-planning stage (i.e. RIBA Stage 0-1).

The following approach has been used in the preparation of this Sustainability Statement:

- Review of technical studies undertaken as part of the design development.
- Liaison with the design team; and
- Review of the design proposals against national, regional and local policy, including emerging planning policy.

3.3. Details of each of these stages are outlined in further detail in subsequent sections of this report.

4. Review of Technical Studies

4.1. A number of technical assessments have been prepared in support of the planning application. These reports set out important considerations for the Development which impact on sustainability. These have been reviewed and summarised below.

Environmental Noise Survey and Acoustic Design Statement Report

4.2. Noise emissions were assessed from the proposed plant at roof level. It is concluded that the proposed plant should be capable of achieving the proposed environmental noise criteria at the nearest relevant neighbouring window, in this case that of an office. This thereby demonstrates that the proposed plant has a negligible and acceptable impact on surrounding neighbours.

4.3. The report also details how the appropriate levels of internal noise can be achieved in the Development with the incorporation of standard and conventional mitigation measures. These measures would provide an appropriate internal environment for future occupiers of the Development. The mitigation measures include measures to minimise the impact of rainfall noise for lightweight roofs, the incorporation of acoustically appropriate glazing and acoustically attenuated ventilation through the façade.

Daylight and Sunlight report

4.4. The report confirms that in all but one location, the daylight and sunlight availability to the neighbouring buildings would be retained in accordance with the BRE recommendations. The one exception is only marginally below the BRE guidelines. The BRE guidelines are not mandatory requirements but aim to aid designers. These should be interpreted flexibly since natural lighting is only one of many factors in site layout design. The report indicates that this is considered to be a very good outcome within a high-density development site in London.

Built Heritage Statement

4.5. The report has been prepared to provide a baseline assessment of the historical significance of the Site. Based on the proposals for the Site it is considered that there will be no significant impact on the former Holborn Town Hall and Library or to the Bloomsbury Conservation Area as a result of the Development proposals.

Construction Method Statement

4.6. The Construction Method Statement outlines the approach to managing the construction works for the Development. The document includes information on the Site logistics, and the process of managing the Site and surrounding areas of the property. This is to ensure safe working practices and to minimise the impact of construction on the surrounding environment and neighbours.

5. Review Against Relevant Planning Policies

Pertinent planning policies

5.1. In order to ensure the delivery of sustainable development, it is important to identify any current and emerging policy requirements that are relevant. This provides a detailed understanding of the guiding sustainability policy framework relevant to the Site and the Development proposals. A desk-based review of relevant national, regional and local planning policy has therefore been undertaken.

5.2. The National Planning Policy Framework (NPPF) was published in March 2012. The framework sets out the Government's strategy for economic, environmental and social planning policy with the aim of promoting sustainable development in England. The NPPF includes a 'presumption in favour of sustainable development'. It states that, for plan making, the presumption means that local authorities should positively seek opportunities to meet the development needs of their area and that plans should meet objectively assessed needs. Plans should be based upon, and reflect, the presumption in favour of sustainable development, with clear policies that will guide how the presumption should be applied locally.

5.3. In addition to the NPPF, further national legislation incorporating sustainability includes the following:

Planning and Compulsory Purchase Act (2004) – requires under paragraph 39 (2) "the person or body must exercise the function with the objective on contributing to the achievement of sustainable development".

Climate Change Act (2008) – Sets a legally binding target for reducing UK carbon dioxide (CO2) emissions by at least 80% by 2050 (Part 1, Section 1 The Target for 2050, paragraph 1).

Floods and Water Management Act (2010) – Requires that in exercising a flood or coastal erosion risk function, an authority must aim to make a contribution towards the achievement of sustainable development. This act sets out the requirement for sustainable urban drainage systems (SUDS).

Building Regulations – Part L; the conservation of fuel and power (2013 edition with 2016 amendments) and Part G; sanitation, hot water safety and water efficiency (2015 edition with 2016 amendments) set compliance levels for new dwellings for energy and water consumption.

5.4. *Key regional and local relevant planning policy documents:*

London Plan, The Spatial Development Strategy for London consolidated with alterations since 2011 (GLA LP) (March 2016)

Policy 5.3 (Sustainable Design and Construction) of this report in particular outlines key 'sustainable design principles'.

Mayor of London's 'Sustainable design and Construction': Supplementary Planning Guidance' (SPG) (April 2014);

The framework provided by the SPG (2014) outlines both 'Mayor's Priority' (MP) mandatory policy requirements and 'Mayor's Best Practice' (MBP) preferred policy requirements.

London Borough of Camden Council's 'Camden Local Plan' (2017)

The Camden Local Plan sets out the Council's planning policies covering the period 2016 – 2031 (replacing the Core Strategy and Development Policies planning documents adopted in 2007). Key policies include Policy CC1 'Climate Change Mitigation' and Policy CC2 'Adapting to Climate Change'.

Camden Planning Guidance (CPGs) documents

Camden Planning Guidance (CPG) provides advice and information on how Camden aim to implement their planning policies. A number are pertinent when considering sustainability within the design of the development and these are as listed below:

CPG Amenity (updated March 2018)

CPG Biodiversity (updated March 2018)

CPG Sustainability (updated March 2018)

The Emerging planning documents include:

The National Planning Policy Framework (NPPF) draft for consultation 2018 was published in March 2018.

The framework continues to outline a presumption in favour of sustainable development and indicates that plans should positively seek opportunities to meet the development needs of the area and be flexible to adapt to rapid change. Strategic plans should as a minimum, provide for objectively assessed needs for development, as well as any needs that cannot be met in neighbouring areas. Exceptions to the framework are outlined where policies that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area. Or, where any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

The London Plan, The Spatial Development Strategy for Greater London Draft for public consultation (GLA LP draft) (2017)

An overview of how the proposed scheme adheres to the relevant planning policies has been undertaken below. The key sustainability initiatives and commitments for the Development have been broken down by topic. Within each topic planning policies derived from the Mayor's SPG 2014, London Plan 2016, LBC's Local Plan 2017 and associated CPGs have been outlined. Detail of how the proposed development complies with these policies is subsequently outlined.

Review of proposals against planning policies

Land, Site Layout and Building Design

5.5. The Sustainable Design and Construction - Supplementary Planning Guidance (SDC- SPG) states that buildings and their surroundings should be designed and built to improve the local and wider environment and minimise their demand on wider resources through measures that optimise the use of land and encourage local food growing where feasible. New developments should maximise on existing features present on site and be designed according to its immediate micro-climate needs. (SPG, Section 2.2 and 2.3).

5.6. The LBC Local Plan Policy G1 'Growth and Spatial Strategy' aims to encourage high quality developments with high densities to make the most efficient use of Camden's land and buildings, particularly in the most accessible parts of the borough.

5.7. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• As part of the SPG it is the Mayors Best Practice (MBP) that any existing buildings that can be practically refurbished, retrofitted, altered, or extended should be retained and reused. The Development is a small scale fifth floor extension therefore optimising the use of land by increasing the density of the current building. • As per Local Plan Policy E1, Holborn is identified as being a growth area to which new office Development is to be directed. The extension therefore makes efficient use of Camden's limited land as per Policy G1.	SPG Section 2.2 (MP); Section 2.3 (MP & MBP); LBC Local Plan G1, E1

Energy and Carbon Dioxide

5.8. Approximately 50% of the UK's carbon dioxide emissions are attributable to energy used in the heating, lighting and cooling of buildings. A further 10% of emissions are from energy used during the production and transportation of materials and the construction of buildings. As such, it is important that the Development incorporates measures to promote energy efficiency, the use of 'clean' energy and the use of renewable technologies. This should be in line with the energy hierarchy, thereby limiting the level of CO_2 emissions.

5.9. The SPG encourages the use of less energy; the installation of efficient energy supply and renewable energy; addressing carbon dioxide off-setting and utilising energy monitoring. (SPG Section 2.4).

5.10. LBC Local Plan Policy CC1 'climate change mitigation' requires that all developments optimise resource efficiency and support sensitive energy efficiency improvements to existing buildings.

5.11. In respect to listed buildings however Local Plan Policy D2 'Heritage' states that:

"*Proposals that reduce the energy consumption of listed buildings will be welcomed provided that they do not cause harm to the special architectural and historic interest of the building or group. Energy use can be reduced by means that do not harm the fabric or appearance of the building, for instance roof insulation, draught proofing, secondary glazing, more efficient boilers and heating and lighting systems and use of green energy sources. Depending on the form of the building, renewable energy technologies may also be installed, for instance solar water heating and photovoltaics"*

5.12. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• Given that the Site is Grade II listed careful consideration of plant to serve the heating and cooling within the building has been required. The inclusion of a VRF (air source heat pump) system is considered to be the best option to minimise the impact of the pipework distribution on the historic fabric and deliver efficient heating and cooling within the space provided in the future. For example, each floor standing heat pump VRF unit has a condenstate pipe which must be connected into an existing drainage route. In some cases this can feed along the heat pump VRF pipe routes to minimise further impact on the fabric of the existing building. Pipework layout has also been designed to minimise opening up floors and notching floor joists. Therefore, whilst not fully compliant with policy CC1 this is as per Policy D2. • The heat pump VRF systems have high coefficient of performance to maximise energy efficiency. • High efficiency LED lighting will be installed in the new office space. Additionally, the potential for the use of intelligent control of lighting and blinds is being considered. • High performance building fabric and insulation to be specified to reduce energy demand conforming with building regulations.	SPG Section 2.4 (MP) & (MBP); Section 2.5 (MP); LBC Local Plan CC1, CPG Sustainability

• The proposal aims to make more efficient use of the existing listed building by ensuring it can be utilised both profitably and efficiently, thereby ensuring its longevity.

Flood and Water Efficiency

5.13. The SPG emphasises the importance of incorporating sustainable urban drainage in all developments as surface water flooding is likely to increase due to anticipated increased intensity in rainfall events (SPG Section 3.4). Developments should aim to be located outside of areas of flood risk.

5.14. The SPG also states that is essential to use water efficiently to reduce consumption and that developers should maximise the opportunities for water saving measures and appliances (SPG Section 2.6).

5.15. The LBC Local Plan Policy CC3 'water and flooding' seeks to ensure that the development does not increase flood risk and reduces the risk of flooding where possible. This should be via the incorporation of water efficiency measures, consideration of the impact on drainage, incorporation of flood resilient measures in flood prone areas and the utilisation of SuDS.

5.16. LBC's CPG 'Sustainability' guidance states that water efficiency stipulates that all developments are to be water efficient with the water minimisation measures performance assessed against the water category in BREEAM. The inclusion of greywater should be considered. However, the proposed Development does not meet the size requirements (over 1,000sqm) where the inclusion of greywater would be considered a mandatory obligation.

5.17. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• The Development will reduce water consumption by specifying low water use fittings and appliances to achieve a reduction in water use of approximately 40% as per the BREEAM Wat 01 credit requirements. This would include dual flush low capacity WCs and aerating washbasin taps. • As a result of the new Development there would be no change in the volume and rate of surface water run-off.	SPG Section 2.6 and 3.4; LBC Local Plan CC3, CPG Section 7

Materials and Waste

5.18. The SPG encourages the careful choice and use of building materials not only as a mean to save developers money but also reduce the generation of waste and ensure a high quality external environment and a healthy internal environment.

5.19. LBC Local Plan Policy CC5 'Waste' requires that developments include facilities for the storage and collection of waste and recycling.

5.20. LBC's CPG (Sustainability) Section 8, Sustainable Use of Materials requires the implementation of the waste hierarchy and that materials are responsibly sourced and safe to health.

The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• The Development will utilise, where feasible, materials that have a low embodied energy with A/A+ Green Guide Ratings. However, materials sensitive to the character of the main building will be required to be specified in certain instances to ensure that the extension is in keeping with the current Grade II listed building. In these instances, it may not be possible to specify such highly rated materials. • Low VOC materials/ products will be specified e.g paints	SPG Section 2.7; LBC LP CC5, CPG Section 8

• All timber and timber products will be certified under the Forest Stewardship Council (FSC) with full chain of custody. • Where possible materials will be sourced from suppliers who are able to demonstrate responsible sourcing scheme certification. Where not available every effort will be made to procure the product from suppliers who have a certified Environmental Management System. • The extension on the fifth floor and the provision for future installation of new heating and cooling plant will enhance the efficiency and usability of the current historic building. This will prolong the working life of the building resulting in a reduction in waste and material use when compared with demolition and construction of a new building. • A SWMP will be prepared and implemented by the contractor to identify any materials in the Development that are suitable for re-use or recycling. This is as detailed in the Construction Method Statement which has been prepared for the Development.	

Nature Conservation and Biodiversity

5.21. The SPG promotes developments that ensure that there is no net loss in the quality and quantity of biodiversity (SPG Section 2.8).

5.22. The SPG also promotes urban greening and the protection and planting of trees as a measure to help adapt the city to future climates (SPG Section 3.3) due to the numerous associated benefits such as urban cooling through shading; reduced runoff; and reduced energy demand through insulation of the property and improved biodiversity.

5.23. LBC Local Plan Policy A3 Biodiversity aims to ensure that sites of nature conservation and biodiversity are protected and enhanced.

5.24. LBC Local Plan Policy D1 Design also promotes the incorporation of high quality landscape design and maximises opportunities for greening.

5.25. LBC CPG Biodiversity aims to ensure that developments assess their impact on potential species and/or habitats and identify any opportunities for enhancement. LBC guidance relating to protection and enhancement of biodiversity for minor developments is applicable when they are in close proximity to or have the potential to affect biodiversity. In particular this relates to protected sites or protected/priority species.

5.26. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• There is minimal biodiversity resource on the Site, due to its existing built form. A small terrace (8 sqm), including planters is proposed, providing a small area of planting. This will include planting of local species to attract pollinators. Where practical, consideration will be given to species that are drought resistant and require minimum maintenance. Overall this will provide a net gain in biodiversity at the Site.	SPG Section 2.8; LBC A3 and CPG biodiversity

Adapting to Climate Change

5.27. The London Plan states that hotter summers, increased periods without rain and more extreme weather events are likely to occur in the future due to the effect of climate change.

5.28. The SPG states that developments should prevent overheating in the future and promote heat and drought resistant planting (SPG Section 3.2).

5.29. The LBC Local Plan Policy CC2 requires developments to be resilient to climate change, through measures such as reducing surface water runoff, incorporation of green spaces and the application of cooling hierarchy.

5.30. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• The potential for intelligent control of lighting and blinds to minimise solar gain will be considered as the design progresses. • The fabric and envelope of the extension will conform to all Building Regulations standards to reduce the degree of overheating to be experienced within the building during extreme climate scenarios. • The provision of future cooling will be provided by the heat pump VRF, the choice of cooling has been limited by the space available and the impact of the pipework distribution on the historic building fabric as per Policy D2. • The installation of pipework services for the provision of future heating and cooling acts to mitigate against climate change within the building, allowing for continued use of a listed building.	SPG Section 3.2. LBC Local Plan CC2, D2

Pollution Management

5.31. LBC Local Plan Policy A1 Managing the impact of development states that a Construction Management Plan (CMP) may be sought for developments involving listed buildings.

5.32. The initiatives by which the Development would adhere to these policies are summarise below:

Development Commitment	Planning Policy
• A CMS has been prepared for the proposed Development which outlines how the impact of the Development from construction activities such as transport, dust, water and air pollution will be mitigated during the construction process. A detailed site-specific CEMP will be prepared for the Site post-planning.	LBC Local Plan A1.

Land Contamination

5.33. No ground works will be undertaken as part of the Development; therefore, land contamination is not an issue that would impact the proposed Site. As detailed in the CMS a refurbishment / demolition asbestos survey will be undertaken prior to the commencement of works on-site. Where asbestos is identified for removal this will be undertaken by a suitably qualified contractor in line with legal requirements.

Air Pollution

5.34. The Mayor is committed to improving air quality in London and as part of the Mayor's Priorities there is a requirement to design developments so that they are at least 'air quality neutral' (SPG Section 4.3).

5.35. LBC Local Plan Policy CC4 'Air Quality' aims to ensure that the impact of development on air quality is mitigated and ensure that exposure to poor air quality is reduced in the borough. Policy A1 'managing the impact of the development' also addresses the requirement limit the disturbance from dust due to construction and demolition. Further guidance on air emissions relating to construction and demolition, combustion of fuel for energy within the building and transport to and from the building is outlined in LBC's CPG 6 – Amenity, Section 2 – Air Quality.

5.36. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• Detrimental effects on air quality from installed plant will be minimised through the selection of modern efficient heat pump VRF units over the selection of combustion plant.	SPG Section 4.3; LBC Local Plan CC4; CPG 6 Amenity.

• The Public Transport Accessibility Level (PTAL) rating for the Site is 6b (excellent), the highest possible rating. The Site is in close proximity to multiple bus stops and underground stations. Given the smalls scale nature of the proposed extension and the excellent range of public transport facilities and other amenities within the surrounding area the impact of emissions relating to increased transport of occupants to the building is considered to be negligible. • A CMS has been prepared for the Development which includes dust suppression measures to be applied throughout the construction works at the Site. The CMS also seeks as far as possible to ensure that mitigation measures are in place to limit the release of substances that may affect air quality during construction works. Further detail on construction plant emissions (e.g minimisation of vehicle idling times) will be outlined in the CEMP to be prepared for the Site post planning.	

Noise

5.37. To ensure that the Development does not become a source of noise pollution, measures should be taken at the design, construction and operation stage to protect occupiers and the general environment from noise with consideration to engineering measures, careful layout design and administrative measures.

5.38. The SPG encourages noise to be reduced at the source in the first instance to reduce the need for mitigation measures, and then designed out of the scheme, if necessary (SPG Section 4.4).

5.39. LBC Local Plan Policy A1 'managing the impact of the development' aims to protect the quality of life of occupiers and neighbours which includes the impact of noise and vibration. This is further addressed in Policy A4 'noise and vibration' with further guidance provided in CPG 'Amenity'.

5.40. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• An environmental noise survey and acoustic design statement report has been provided which sets out the acoustic limits for the Development. The acoustic design of building plant will be limited to 10db below background noise in accordance with LBC requirements to ensure avoidance of detrimental effects occuring during operation. • The Construction Management Statement prepared as part of the planning submission identifies noise, vibration and dust to be a key issue to consider in carrying out works safely with noise in particular being identified as a requiring to be afforded the highest priority and a range of measures to reduce the impact of noise from construction have been outlined. • A CMS has been prepared as part of the planning submission. A CEMP is to be developed post planning in accordance with LBC's relevant legislation and guidance to further set out a range of mitigation measures and environmental controls which would include the management of construction related noise and vibration.	SPG Section 4.4; LBC Policy A1, A4 CPG 'Amenity'.

Light Pollution

5.41. The SPG states that developments should be designed to minimise light pollution (SPG Section 4.5) in order to minimise the potential harmful effects of light pollution and its consequential visual nuisance. Buildings need to address 'glare', 'light trespass', and 'sky glow'.

5.42. LBC Local Plan 'Design and heritage' addresses light pollution associated with illuminated signage. Policy A1 'managing the impact of developments' seeks to ensure that artificial lighting should only illuminate the intended area and not affect or impact on the amenity of neighbours.

5.43. CPG ‘biodiversity’ highlights that lighting can have particular negative impacts on biodiversity and indicates that unnecessary lighting should be avoided both in the design of the building and during the construction phase.

5.44. The initiatives by which the Development would adhere to these policies are summarised below:

Development Commitment	Planning Policy
• External lighting is proposed for the terrace but will be limited in extent and the lighting design will accord with the principles of the Institution of Lighting Professionals (ILP) Guidance Note for the reduction of Obtrusive Light (2011). • Installation of energy efficient external lighting and appropriate lighting control to prevent continuous operation during daytime or unoccupied hours. • No illuminated signage will be included as part of the Development.	SPG Section 4.5; LBC Local Plan A1 and CPG ‘Biodiversity’.

6. Conclusion

6.1. The principles of sustainable design have been considered throughout the design process of the Development and have been incorporated where viable without causing undue impact to the fabric and appearance of the Grade II listed building. The proposed alterations and extensions have been designed to minimise the disturbance to the historic fabric and appearance of the building whilst sympathetically improving and extending the space. To deliver the most sustainable Development possible within the confines of the heritage restrictions the key initiatives and commitments highlighted in this statement would be implemented throughout the detailed design and construction phases.

Key Sustainability Features

6.2. The Development would include:

- The provision of high coefficient of performance heat pump VRF units to deliver future heating and cooling to the building and extension.
- The use of high performance building fabric and high efficiency LED lighting within the extension.
- Use of water efficient/low flow sanitary fittings in the extension to reduce potable water consumption within the sanitary facilities to achieve a reduction in water use to the equivalent of approximately 40% as per the BREEAM Wat 01 credit requirements. This would include dual flush low capacity WCs and aerating washbasin taps. It should be noted that no BREEAM assessment of the Development will be undertaken.
- The use, where feasible, of materials that have a low embodied energy with A/A+ Green Guide Ratings. It should be noted that materials sensitive to the character of the main building will be required to be specified in certain instances to ensure that the extension is in keeping with the current listed building. In these instances, it may not be possible to specify such highly rated materials.
- Responsibly sourced building materials wherever possible including all timber to be FSC certified;
- A SWMP will be prepared and implemented by the contractor to identify any materials in the Development that are suitable for re-use or recycling. This is as detailed in the Construction Method Statement which has been prepared for the Development.

Construction phase

6.3. Initiatives that would be delivered in order to support the implementation of the Development and promote sustainability throughout the construction phase include:

- Implementation of the CEMP (to be prepared post planning) in line with LBC requirements; and
- Implementation of the Site Waste Management Plan (SWMP), including waste minimisation, recycling targets and adherence to the Institution of Civil Engineers (ICE) Demolition Protocol.

UK and Ireland Office Locations