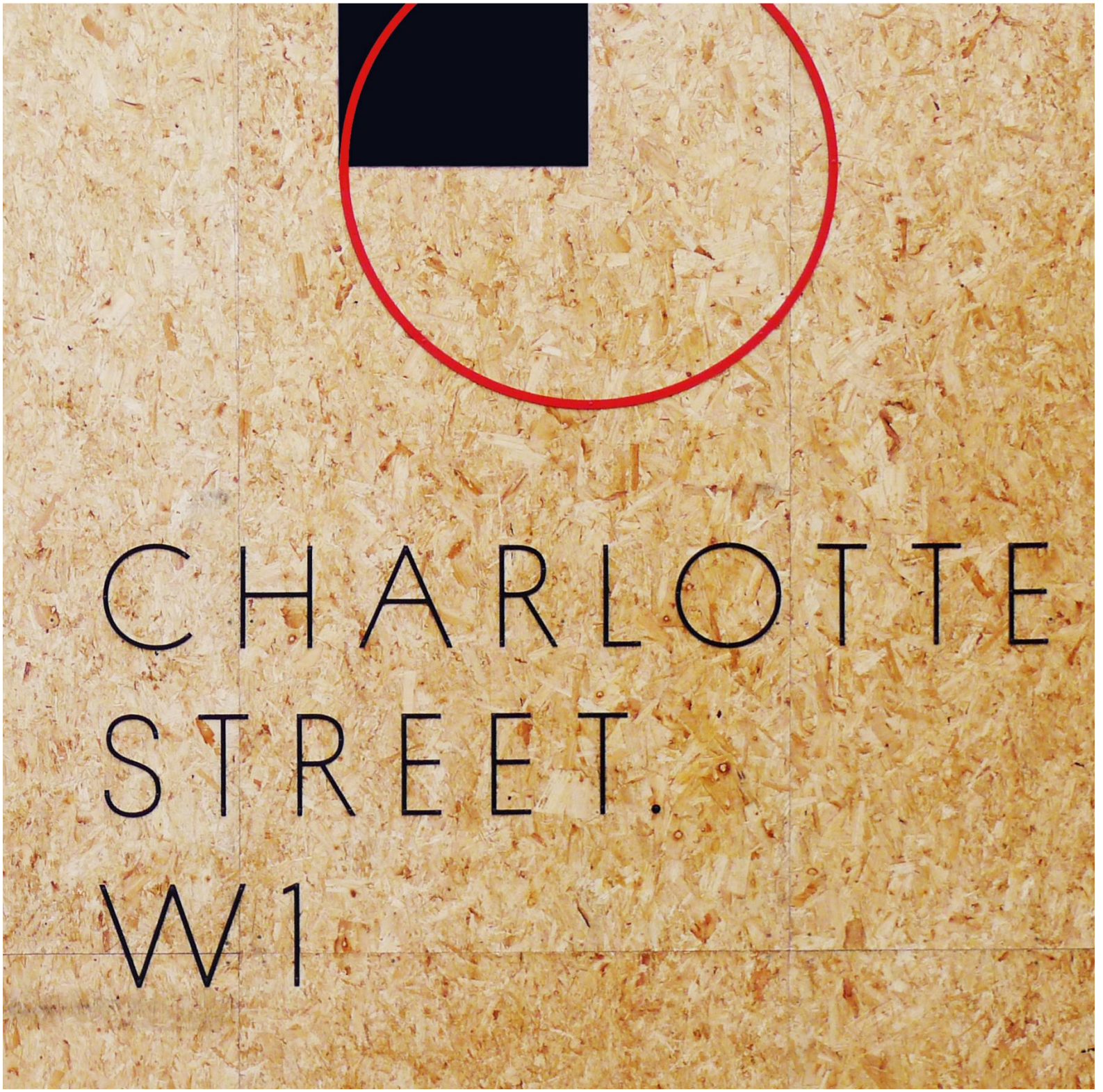
80 Charlotte Street & 65 Whitfield Street:

Minor Material Amendment –

Sustainability Statement Addendum

Date
December 2015



West London & Suburban Property Investments Ltd

80 Charlotte Street

Sustainability Statement Addendum

REP/001

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Job number 207329

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Appendices

1 Introduction

Background

1.1 This Sustainability Statement Addendum is submitted in support of an application for minor material amendments to planning permission reference 2010/6873/P which was granted for the redevelopment of 80 Charlotte Street and 65 Whitfield Street (the site) on 16 March 2012.

1.2 Application 2010/6873/P proposed the partial redevelopment and refurbishment of the site to create a mixed use office and residential scheme with some flexible units at ground and lower ground floor in either office, retail or restaurant use (the Approved Development).

1.3 The amendments to the approved application relate to a requirement for further demolition at the site (the Amended Development), with consequential changes to the replacement buildings.

1.4 The residential elements of the scheme at 65 and 67-69 Whitfield Street remain unchanged from the Approved Development and are not addressed in this document.

1.5 This document follows the structure of the Sustainability Statement for the Approved Development dated December 2010. Only changes to the approach and relevant policies are described. Otherwise the principles of sustainable development adopted are unchanged from the Approved proposals.

1.6 This report is submitted in accordance with the London Borough of Camden (Camden) requirements for major developments to comply with their Core Strategy and Development Policies as well as the London Plan (2015) requirement for a Sustainability Statement to demonstrate that the proposal contributes to the goals of sustainable development.

1.7 The report draws together information from a variety of studies carried out during the design process in order to show how sustainable development principles are addressed. It does not propose any new solutions, but provides a systematic discussion of the sustainability issues associated with the scheme, highlighting the key decisions taken and describing how the scheme proposes to address each issue.

Report Structure

1.8 The remainder of this report is structured as follows:

- Section 2: Site description/Development Proposals - provides information on the design, size and scale of the site;
- Section 3: Response to London Plan and Camden requirements - provides a summary and reference to how the scheme responds to the principles and requirements set out in local and regional planning policy;

- Sections 4 - 14 – describe changes to the sustainability credentials of the scheme under a number of key headings as a road map to achieving the goals of sustainable development; and
- Section 15: Conclusions - draws conclusions with regard to the balance of the social, economic and environmental considerations and impacts of the scheme, demonstrating how the six key goals of sustainable development, as set out in the London Plan Sustainable Design and Construction SPG are achieved through the scheme.

2 Current Site and Development Proposals

The Site

2.1 The site is located in Camden, at approximately National Grid Reference TQ293818. It is bounded by Charlotte Street, Howland Street, Whitfield Street and Chitty Street also incorporating 65 Whitfield Street.

Development Proposals

2.2 For a full set of plans and a detailed description of the site, please refer to the supporting design information prepared by Make Architects.

3 Response to London Plan and Camden requirements

3.1 The report addresses the key principles outlined in the London Plan Supplementary Planning Guidance (SPG) on Sustainable Design and Construction, April 2014, namely:

- Resource management
- Adapting to climate change and greening the city
- Pollution Management

3.2 The London Plan Policies which relate to sustainable design and construction are defined in appendix 1 of the SPG and are reproduced below:

- **Policy 2.18: Green Infrastructure** aims to protect, promote, expand and manage the extent and quality of, and access to, London's network of open and green spaces (**section 11**).
- **Policy 3.2: Addressing health and reducing health inequalities** supports the provision and improvement of health facilities and encourages the design of buildings to promote healthy lifestyles (**sections 7 and 8**).
- **Policy 5.1: Climate change mitigation** sets out the Mayor's strategic target for the reduction of carbon dioxide emissions across London of 60% (below 1990 levels) by 2025. It expects the GLA group, the boroughs and other organisations to make a contribution towards this target and that all new development fully contributes towards the London wide reduction target (**section 5**).
- **Policy 5.2: Minimising carbon dioxide emissions** sets out the Mayor's energy hierarchy which developers are to follow when designing their schemes. It also sets out carbon dioxide reduction targets that developers are to aim for from their developments over the lifetime of the Plan and that where these can't be achieved an off-site or financial contribution in lieu can be sought by the local borough (**section 5**).
- **Policy 5.3: Sustainable Design and Construction** requires that developments demonstrate that sustainable design standards are considered at the beginning of the design process and are integral to proposals. It also requires major development proposals to meet the minimum standards outlined in the Mayor's Supplementary Planning Guidance (**sections 4 to 14**).

- **Policy 5.4: Retrofitting** encourages the retro-fitting of measures to reduce carbon dioxide emissions, improving the efficiency of resource use (such as water) and minimising generation of pollution and waste from existing building stock and states that any opportunities created by new development for retro-fitting should be identified (**not applicable**).

- **Policy 5.5: Decentralised energy networks** sets out the Mayor's strategic target for decentralised energy, which is that 25% of the heat and power used in London is to be from local sources by 2025. The policy sets out how plans can identify and support opportunities for decentralised energy networks (**section 5**).

- **Policy 5.6: Decentralised energy in proposals** sets out a hierarchy for selecting a development's heating system and states that the feasibility of combined heat and power (CHP) should be evaluated for the proposed development as well as the potential for extending the heating network beyond the site boundary (**section 5**).

- **Policy 5.7: Renewable energy** seeks to increase the proportion of energy generated from renewable sources, including through their incorporation into new developments and by identifying specific opportunities within London (**section 5**).

- **Policy 5.8: Innovative energy technologies** encourages the use of innovative energy technologies that will provide an alternative energy source and reduce carbon dioxide emissions (**section 5**).

- **Policy 5.10: Urban greening** encourages the greening of London's buildings and spaces and specifically those in central London by including a target for increasing the area of green space (including green roofs etc) within the Central Activities Zone (**section 11**).

- **Policy 5.11: Green roofs and development site environs** specifically supports the inclusion of planting within developments and encourages boroughs to support the inclusion of green roofs (**section 11**).

- **Policy 5.12: Flood risk management** outlines the requirement for boroughs and developers to carry out flood risk assessments and that developments must comply with national planning policy on flood risk assessments and management to ensure they are designed and built to be resilient to flooding (**section 9**).

- **Policy 5.13: Sustainable drainage** promotes the inclusion of sustainable urban drainage systems in developments and sets out a drainage hierarchy that developers should follow when designing their schemes (**section 9**).

- **Policy 5.14: Water quality and waste water infrastructure** seeks to ensure that adequate provision is made for waste water infrastructure, and that water quality is protected and improved (**section 9**).

- **Policy 5.16: Waste self-sufficiency** sets out how the Mayor will support London authorities to manage as much of their waste as possible within London including through minimising waste generation and encouraging the reuse, recycling/composting and reduction in the use of materials (**section 6**).

- **Policy 5.17: Waste capacity** sets out criteria for assessing waste management facilities and states that developments should include suitable waste and recycling storage facilities (**section 6**).

- **Policy 5.20: Aggregates** sets targets for, and encourages the recycling or re-use of construction, demolition and excavation waste within London (**section 12**).

- **Policy 5.21: Contaminated land** supports the remediation of contaminated sites and seeks to ensure that developments don't activate or spread contamination (**section TBC**).

- **Policy 6.1: Strategic approach** stresses the importance of integrating development with transport and encourages the reduction of car dependence (**section 10**).

- **Policy 6.3: Assessing effects of development on transport capacity** sets out the necessity of assessing development impacts on transport capacity and the transport network at both corridor and local level (**section 10**).

- **Policy 6.14: Freight** focuses on improving freight distribution including servicing and deliveries **(section 10**).

- **Policy 7.6 Architecture** encourages the highest architectural quality, including that the development does not harm privacy, overshadowing, wind and micro-climate and so they incorporate best practice in resource management and climate change mitigation and adaptation (**sections 5, 7 and 12**).

- **Policy 7.14: Improving air quality** aims to reduce exposure to poor air quality in London as well as reduce emissions from development, including during the demolition and construction phases and seeks new development to be 'air quality neutral' (**section 8**).

- **Policy 7.15: Reducing noise and enhancing soundscapes** seeks to reduce overall exposure to noise within London as well as protect new occupiers from noise within their developments (**section 8**).

- **Policy 7.19: Biodiversity and access to nature** seeks a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity (**section 11**).
- **Policy 7.20: Geological conservation** seeks to protect, enhance and enable access to areas of national, regional and locally important geological sites (**not applicable**).
- **Policy 7.21: Trees and woodlands** seeks to protect, maintain and enhance trees and woodlands on a strategic scale as well as protect and promote the provision of additional trees in the public realm as well as on development sites (**section 11**).
- **Policy 7.22: Land for food** seeks to protect allotments and encourages the use of land for food growing close to urban areas (**section 11**).

3.3 The London Borough of Camden Core Strategy (2010) and Development Policies (2010) include many policies which have a bearing on the amended scheme, though only those which have a direct link to sustainability have been included in this document.

3.4 **Policy CS13 - Tackling climate change through promoting higher environmental standards.** This policy covers the following sustainability issues:

- reducing the effects of and adapting to climate change (**section 5**);
- local energy generation (**section 5**);
- water and surface water flooding (**Section 9**); and
- carbon reduction measures (**Section 5**).

3.5 **Policy CS15 - Protecting and improving our parks and open spaces and encouraging biodiversity**, seeks to protect and enhance the borough's green and open spaces and biodiversity. Developers are expected to provide opportunities for biodiversity within the fabric and curtilage of buildings (**section 11**).

3.6 **Policy CS18 - Dealing with our waste and encouraging recycling** contains a requirement for developments to provide adequate facilities for recycling and the storage and disposal of waste. The policy also seeks to secure the re-use of construction waste on development sites to reduce resource use and the need to transport materials (**section 6**).

3.7 **Policy DP22 - Promoting sustainable design and construction** requires the inclusion of sustainable development principles, BREEAM assessment, green/brown roofs and resilience to climate change (**section 4**).

3.8 **Policy DP23 – Water**, requires the inclusion of water efficient fixtures, limits to run-off, assessment of flood risk, reducing pressure of the water and sewer network and encouraging water features (**section 9**).

3.9 **Policy DP28 – Noise and Vibration**, seeks to minimise the impact of noise and vibration from developments (**section 8**).

4 Environmental Assessment

4.1 The Approved Development aimed to achieve a BREEAM rating of Very Good using the BREEAM 2008 (Offices) scheme.

4.2 The BREEAM pre-assessment for the commercial space has been updated and is now based on the BREEAM New Construction 2014 Scheme. The pre-assessment has been revised by a BREEAM Accredited Professional and the full pre-assessment report is included in Appendix A.

4.3 The pre-assessment indicates that a BREEAM Excellent rating can be achieved and this will be the target rating for the amended scheme.

5 Energy

5.1 The Energy Strategy for the scheme prepared by Ove Arup & Partners Ltd has been revised in accordance with the energy related requirements set out in the latest version of the London Plan. This document is submitted alongside the Sustainability Statement in support of the application for minor material amendments.

5.2 The Energy Strategy follows the logic and detailed energy requirements set out in the March 2015 update of the London Plan, and focuses on reducing carbon emissions through the consecutive application of Lean, Clean and Green measures.

5.3 The analysis starts with Part L (2013) compliant base building, firstly seeking to reduce their overall energy demand through a series of 'Lean' measures, before moving on to supply the remaining energy demand in the most carbon efficient ways possible through a selection of 'Clean' and 'Green' measures.

5.4 The overall carbon dioxide emissions savings that are predicted to be achieved can be seen below:

Design Measures	**Commercial**	**Retail**
'Lean' and 'Clean' Measures	9.7%	7.0%
'Green' Measures	5.2%	N/A
Total CO_2 Reduction	14.9%	7.0%

5.5 In order to reduce the energy demand of the building, a number of 'lean' measures are currently incorporated into the proposal. These include good building air tightness, the use of exposed thermal mass, the use of natural daylight where practical and high performance building fabric elements.

5.6 Key energy efficient or "clean" measures that have also been incorporated include:

- Reduced lighting loads
- Daylight linked and dimmable lighting control for perimeter zone together with presence detection control.
- Presence detection to control lighting within the central zone.
- Low specific fan power for ventilation plant.
- High efficiency air source heat pumps

- Water cooled chillers with a proposed Seasonal Energy Efficiency Ratio (SEER) of 5.0
- Efficient waste heat recovery in central ventilation plant with an efficiency of 65%

5.7 The use of CHP and district heating and cooling networks for the site was investigated and was found not to be feasible.

5.8 The use of various renewable technologies was investigated for the site and many were found to be unsuitable, such as wind power and biomass heating.

5.9 At present, the proposal includes solar thermal hot water collectors on the roof to provide hot water for the commercial space. Solar thermal was chosen over PV because the latter provides a larger overall reduction in CO_2 emissions for the same roof area.

5.10 Simultaneous heating and cooling air source heat pumps are also included in the design. These allow heat to be transferred between different areas of the building which improves overall efficiency.

5.11 The consented assessment was conducted against Part L 2006, where an improvement of 46% was cited for the commercial element. The baseline for buildings since that time as tightened significantly (circa 33%, excluding changes to carbon factors). Despite this, the proposed development is still reporting a 15% improvement above current Building Regulations (Part L 2013). Against 2006, it is anticipated that the improvement would be better than that reported in the consented scheme, in excess of 46%. In overall terms, the energy strategy and associated reductions are in line with those previously approved.

6 Waste

6.1 An updated Service Management Plan is not required as part of the current application. A Service Management Plan is required by clause 4.9 of the Section 106 agreement for the Approved scheme and full details of the servicing strategy will be provided in that document. Construction related waste issues are covered in the construction effects section of this report.

7 Microclimate: Daylight and Sunlight

7.1 There is no change to this section as a result of the amendments proposed to the Approved Development.

8 Pollution

8.1 This section summarises revisions to the pollution prevention features of the scheme. Pollution issues have been recognised as important considerations in achieving a sustainable scheme at the site.

Noise and Vibration Pollution

8.2 An updated noise impact assessment has been carried out and the full report, prepared by Clarke Saunders Associates, is submitted in support of the amendment application.

8.3 Vibration levels were measured during the noise surveys and confirmed to have not altered since the previous survey. This assessment does not update the vibration or external building fabric elements of the approved December 2010 Acoustic Statement, as these elements are still current.

8.4 Noise levels were monitored at sixth floor roof level on the proposed site. Measurements of consecutive 5-minute LAeq, LAmax, LA10 and LA90 sound pressure levels were taken between 09:55 hours on Thursday 19th and 10:40 hours on Monday 23rd November 2015.

8.5 The minimum measured background noise levels are shown in the table below:

Position	**Daytime (0700-2300) Minimum $L_{A90,\ 5\ mins}$**	**Night-time (2300-0700) Minimum $L_{A90,\ 5\ mins}$**
Chitty Street	50	49
Charlotte Street	52	47
Howland Street	50	50
Whitfield Street	50	48

8.6 The design noise level for external plant has been set at 5dB below the background noise level in line with Camden Development Policy DP28 – Noise and Vibration.

8.7 The design noise level for emergency plant has been set at 10dB above the background noise level.

8.8 Noise emissions that may be generated from plant equipment have been considered and proposed plant noise emissions criteria have been set to ensure that the overall required levels are not exceeded.

8.9 The cumulative noise level at the nearest noise sensitive receiver has been assessed according to the guidelines set out in BS4142:1997 Method for rating industrial noise affecting mixed residential and industrial areas.

8.10 The predicted external noise levels result in internal noise levels that are in line with the guidance provided in BS8233:2014 for the relevant space usage types.

Air Pollution

8.11 There is no change to this section as a result of the revised development proposals.

Light Pollution

8.12 There is no change to this section as a result of the revised development proposals.

9 Water

Water resources

9.1 The approach to water management for the commercial element of the scheme is unchanged although the exact specification of bathroom fixtures and fittings will be revised to meet the more stringent requirements of the updated BREEAM scheme.

Flood risk

9.2 The Flood Risk status of the Approved Development is unchanged. A full flood risk assessment is not required due to the size and location of the site.

9.3 The impermeable surface area will not change from the approved scheme, and the Proposed Development will not increase the rate of surface water runoff leaving the existing site.

Sustainable Drainage

9.4 The approach to drainage of the site is unchanged from the Approved Development.

10 Transport and Access

10.1 The Transport Assessment is unaltered by the revised proposals and is not resubmitted as part of the amendment application.

11 Biodiversity

11.1 An ecological assessment survey of the site was undertaken in 2010 which concluded that the site lacked any established vegetation and was dominated by built structures.

11.2 The ecological assessment will be revised in light of the proposed amendments so that any additional opportunities to protect or enhance biodiversity can be addressed.

11.3 The following protection and enhancement measures were proposed for the Approved Development and will be retained in the amended scheme:

- Protection of existing street trees
- Introduction of green and brown roof area
- Introduction of bird boxes

11.4 All protection and enhancement measures will be implanted in line with the guidance of a qualified Ecologist.

11.5 The building occupies the extent of the site and no land is available for growing food.

12 Materials

12.1 The London Plan and supporting policy documents highlight materials and their life cycle impacts as a key priority for achieving sustainable development in the built environment.

12.2 The general approach to material use on the site is unchanged from the Approved Development.

12.3 It is recognised that some re-use of materials from the existing building, which was proposed in the Approved Development, will not be possible as a result of the revised design.

12.4 To mitigate the impact of this change, the approach to material selection for the revised scheme will include the following additional measures:

- Calculation of the embodied carbon of the development to assist in decision-making related to materials section;
- Review of materials efficiency at each stage of the project to reduce demand for primary materials and minimise construction waste;
- Consideration of the adaptability of the design to accommodate future changes of use, refurbishment, and extension;
- Design to minimise frequency of material replacement and repair; and
- Design for potential extended design life, accounting for potential changes in weather patterns and extreme events.

13 Archaeology and Cultural Heritage

13.1 The historic environment assessment carried out for the Approved Development by MOLA has been updated to reflect the proposed amendments and concludes that there is no additional impact.

14 Construction Effects

14.1 The Construction Method Statement has been updated by Buro Four and Brookfield Multiplex (BM) and is submitted as part of the application for minor material amendments.

14.2 The Statement concludes that the proposal in its current form is feasible in terms of the general construction process and the proposed methodology.

14.3 Having considered the existing site, works required to construct the development, programme and phasing, the practicality of managing the existing site and agreements necessary to effectively undertake the scheme, it is considered that the following points need to be investigated / developed / discussed for successful implementation:

- Establish key contacts within the neighbouring properties and make contact to introduce the scheme via BM, and regular updates throughout the construction phase;
- Establish the physical characteristics of all of the retained and refurbished building elements;
- Agree any Licences, oversailing agreements and other such requirements with neighbouring properties;
- Agree access arrangements with local authorities and protect pavement at crossover locations;
- Adhere to requirements set out in the Guide for Contractors Working in Camden; and
- Development of clear logistics plan and sequence of works with an established Contractor.

14.4 The detailed elements of each stage of demolition and construction works will be considered by the updated Construction Management Plan, to be approved by the London Borough of Camden before demolition commences.

15 Conclusion

15.1 This addendum to the Sustainability Statement dated December 2010 has been prepared to demonstrate that the revised proposals contribute to the goals of sustainable development as set out in the London Borough of Camden's updated Core Strategy and Development Policies as well as the London Plan (2015).

15.2 The report draws together information from a variety of studies carried out during the design process in order to show how sustainable development is addressed. It does not propose any new solutions, but provides a systematic discussion of the sustainability issues associated with the scheme, highlighting the key changes to the Approved Development and describing how the revised proposals address each issue.

15.3 A preliminary BREEAM assessment has been carried out and indicates that the proposed commercial element of the amended scheme will achieve a rating of Excellent using the BREEAM New Construction 2014 methodology. The original proposal aimed to achieve a Very Good rating under BREEAM Offices 2008.

15.4 The original Sustainability Statement concluded that the site would achieve a high standard of sustainability.

15.5 Discussion of the revised proposals has shown that they respond to current sustainability policies at regional and local level and take advantage of a number of opportunities to improve the environmental performance of the site.

15.6 It should be noted that there is a requirement under clauses 2.13 and 2.60 of the Section 106 agreement which accompanies the Approved Development to submit to Camden for approval "Commercial and Residential Sustainability Plans". This requirement was satisfied for the Approved Development on 7th January 2013, following the submission of the relevant plans in December 2012. Should the amendments to the approved scheme be approved, the details in the approved plans will change. They will therefor need to be resubmitted to Camden for approval.

Appendix A

BREEAM 2014 Pre-Assessment

24/11/2015

80 Charlotte Street

BREEAM 2014 NC Shell and Core

Issue		Available	Targeted	Responsibility
Management				
Man 01	Project brief and design	4	4	Architect, Project Manager, Sustainability Consultant
Man 02	Life cycle cost and service life planning	4	4	Cost Consultant, Client
Man 03	Responsible construction practices	6	6	Contractor
Man 04	Commissioning and handover	4	4	Contractor, Mechanical Engineer
	Management Total	**18**	**18**	
Health & Wellbeing				
Hea 01	Visual Comfort	3	2	Architect, Electrical Engineer/Lighting Designer
Hea 02	Indoor Air Quality	2	0	Mechanical Engineer
Hea 04	Thermal comfort	2	2	Mechanical Engineer
Hea 05	Acoustic Performance	1	1	Acoustician
Hea 06	Safety and Security	2	1	Architect
	Health & Wellbeing Total	**10**	**6**	
Energy				
Ene 01	Reduction of energy use and carbon emissior	12	5	Mechanical Engineer
Ene 02	Energy Monitoring	2	2	Mechanical Engineer
Ene 03	External Lighting	1	1	Lighting Designer, Electrical Engineer
Ene 04	Low carbon design	3	3	Mechanical Engineer
Ene 06	Energy Efficient Transportation Systems	3	3	Electrical Engineer / Lift Engineer
	Energy Total	**21**	**14**	
Transport				
Tra 01	Public Transport Accessibility	3	3	Sustainability Consultant
Tra 02	Proximity to amenities	1	1	Sustainability Consultant
Tra 03	Cyclist facilities	2	2	Architect
Tra 04	Maximum Car Parking Capacity	2	2	Sustainability Consultant
Tra 05	Travel Plan	1	1	Transport consultant
	Transport Total	**9**	**9**	
Water				
Wat 01	Water Consumption	5	3	Architect, Public Health Engineer
Wat 02	Water Monitoring	1	1	Public Health Engineer
Wat 03	Leak Detection	2	2	Public Health Engineer
Wat 04	Water Efficient Equipment	1	1	Architect, Public Health Engineer
	Water Total	**9**	**7**	
Materials				
Mat 01	Life Cycle Impacts	5	3	Architect, Structural Engineer, Sustainability Consultant
Mat 02	Hard Landscaping and Boundary Protection	1	0	Architect
Mat 03	Responsible Sourcing of Materials	4	2	Architect, Structural Engineer
Mat 04	Insulation	1	1	Architect, Mechanical Engineer
Mat 05	Designing for durability and resilience	1	1	Architect, FACADES
Mat 06	Material efficiency	1	1	Architect, Structural Engineer
	Materials Total	**13**	**8**	
Waste				
Wst 01	Construction Waste Management	4	2	Contractor
Wst 02	Recycled Aggregates	1	0	Structural Engineer, Contractor
Wst 03	Operational Waste	1	1	Architect
Wst 04	Speculative Floor and Ceiling Finishes	1	1	Architect, Client
Wst 05	Adaptation to climate change	1	1	Architect, Structural Engineer
Wst 06	Functional adaptability	1	1	Architect, Structural Engineer
	Waste Total	**9**	**6**	
Land Use & Ecology				
LE 01	Site Selection	2	1	Sustainability Consultant
LE 02	Ecological Value of Site and Protection of Ec	2	2	Ecologist
LE 03	Minimising impact on existing site ecology	2	2	Ecologist
LE 04	Enhancing site ecology	2	1	Ecologist

LE 05	Long Term Impact on Biodiversity	2	2	Ecologist
	Land Use & Ecology Total	**10**	**8**	
Pollution				
Pol 01	Impact of Refrigerants	3	0	Mechanical Engineer
Pol 02	NOx emissions	3	0	Mechanical Engineer
Pol 03	Surface Water Run Off	5	4	Civil Engineer, Public Health Engineer
Pol 04	Reduction of Night Time Light Pollution	1	1	Lighting Designer, Electrical Engineer
Pol 05	Noise Attenuation	1	1	Acoustician
	Pollution Total	**13**	**6**	
Innovation				
Man 03	Responsible construction practices	1	1	
Hea 01	Visual Comfort	1	0	
Ene 01	Reduction of energy use and carbon emissior	5	0	
Wat 01	Water Consumption	1	0	
Mat 01	Life Cycle Impacts	3		
Mat 03	Responsible Sourcing of Materials	1	0	
Wst 01	Construction Waste Management	1	0	
Wst 02	Recycled Aggregates	1	0	
Wst 05	Adaptation to climate change	1	0	
AI	Approved Innovation	1	0	
	Innovation Total	**16**	**1**	