FABER MAUNSELL | AECOM

Global reach, local knowledge.
Local focus. Worldwide strength. Multi-sector experience. Multi-disciplinary expertise. Faber Maunsell offers this all – delivering outstanding solutions that help to create a better world in which to work and live.

CHICHESTER HOUSE
Sustainability Statement
31st July 2007

Disclaimer
This document has been prepared by Faber Maunsell Limited ("Faber Maunsell") for sole use of the client company detailed above (the "Company") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between Faber Maunsell and the Company.

Any information provided by third parties and referred to herein has not been checked or verified by Faber Maunsell, unless otherwise expressly stated in the Report.

No third party may rely upon this document without the prior and express written agreement of Faber Maunsell.

Faber Maunsell
77 Hatton Garden
London
EC1N 8JS

Telephone: 020 7645 2000
Fax: 020 7645 2099
Website: http://www.fabermaunsell.com

Job No: 53465ENLE Date Created: 31/07/07

Table of Contents

1 Executive Summary

1 Executive Summary

This Sustainability Statement has been prepared by Faber Maunsell to accompany the planning application for Chichester House, in the London Borough of Camden. This report has been prepared as part of a series of documents to support the full planning application by HEDF II UK for the demolition of the existing building and the erection new office, retail and residential units.

This Sustainability Statement provides a summary of the contribution that the redevelopment of Chichester House will make to sustainable development, outlining the measures that have been taken in terms of the site plan and the design of the new office, retail and residential units. This statement is based on information gathered from GMW Architects and the Faber Maunsell building services team on the proposed design, specification and construction practices to be adopted for the new development.

This Sustainability Statement sets out the following:

- A summary of the national and local drivers for sustainable development (Section 3).
- A description of the standards and targets relevant to the development (Section 4).
- An examination of the proposed development in view of current local, regional and national planning policies and guidelines, along with a description of measures incorporated in the scheme addressing these policies (Section 5).
- A summary of the provisional BREEAM for Offices and EcoHomes ratings, based on an initial 'pre-assessment' of the scheme (Section 4 and BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application).
- A summary of how the development addresses the criteria contained within the Mayor's SPG on Sustainable Design and Construction Checklist and the Draft Alterations of the London Plan) (Appendix A).

The proposed redevelopment at Chichester House contributes towards current national, regional and local planning policies with respect to sustainable development, as follows:

- Sustainable location for development, being a brownfield site with very strong public transport links;
- Use of sustainable transport is encouraged by the provision of cycle facilities, including showers. One car parking space is provided on site for disabled use (visitors);
- Energy consumption will be reduced though energy saving measures including improved levels of insulation and air tightness, energy efficient light fittings and control operations through a BMS. The building will also include renewable technologies in the form of ground source heating/cooling, solar water heating and PV panels;
- The design proposes to incorporate measures to make efficient use of water. Water efficient fittings are to be specified to both the office and residential units;
- The specification of materials will have regard to the whole life environmental impact of construction materials and a Sustainable Materials Specification will be developed, which the contractor will be required to sign up to;
- Provisions have been made within the design to enable the segregation and storage of recyclable waste;
- Pollution will be minimised through specification of low NO_X boilers, specification of refrigerants with low GWP, provision of fully bunded fuel storage areas, and minimal volume and vibration of plant and services;
- The building will meet the principles of inclusive design and will be secure; and

- It is envisaged that environmental impacts during construction are to be minimised through following best practice measures with regards to waste management, waste minimisation, air and noise pollution.

2 Introduction

2 Introduction

2.1 Background

Faber Maunsell's Sustainable Development Group has been commissioned by HEDF II UK to prepare a Sustainability Statement for the redevelopment of Chichester House on High Holborn, in line with current and emerging planning policy guidance.

This Sustainability Statement provides a summary of the contribution that Chichester House will make to sustainable development, outlining the measures that have been taken in terms of the site plan, the design of the new buildings and contributions to improve the local area. This statement draws on information relating to sustainability contained in more detailed submissions and it should be read in conjunction with a number of specialist reports, which have been prepared to support the application. These reports are as follows:

- Environmental noise survey prepared by Sandy Brown Associates;
- Plant noise assessment prepared by Sandy Brown Associates;
- Servicing/Refuse/Parking Statement prepared by Mayer Brown;
- Daylight & Sunlight Report prepared by GIA;
- BREEAM and EcoHomes Reports prepared by Faber Maunsell;
- Energy Strategy prepared by Faber Maunsell;

Additional information was collected during design team meetings and through email correspondence.

This statement also summarises key policy drivers for sustainable development as they apply to Chichester House, including policies and objectives being promoted by central, regional and local government.

In detail, the report sets out the following:

- A summary of the national and local drivers for sustainable development (Section 2).
- A description of the standards and targets relevant to the development (Section 3).
- An examination of the proposed development in view of current planning policies and guidelines, along with measures considered for inclusion at later stages of the design process (Section 4).
- A summary of the predicted BREEAM for Offices, EcoHomes and BREEAM Retail ratings, based on an initial 'pre-assessment' of the scheme and review of the retail element's performance against BREEAM (Section 4 and BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application).
- A summary of how the development addresses the criteria contained within the Mayor's SPG on Sustainable Design and Construction Checklist and the Draft Alterations of the London Plan) (Appendix A).

2.2 The Proposed Development

The site is situated on the south side of High Holborn in London. This road is a busy two lane two way road in the centre of London. Whetstone Park and Lincolns Inn Square are other roads just south of the site but are comparatively quieter than High Holborn.

The proposed development of Chichester House intends to demolish the existing building and erect a new building for office, retail and residential use. The existing building is an eight-story, 70,000 sq ft office and retail building. The site is surrounded by both commercial and residential buildings. Residences lie to directly east of the site on the opposite side of the public footpath behind Penderel's Oak pub.

The new development is to have:

- gross external area of 10,263m^2;
- flexible office accommodation providing a range of unit sizes;
- 298m^2 gross external area of retail units; and
- 6 residential units in a separate structure building to the rear of the site.

Moseley and Webb have confirmed that the proposed development is considered a major development for the GLA and will be referable to the Mayor (under the Town and Country Planning [Mayor of London] Order 2000).

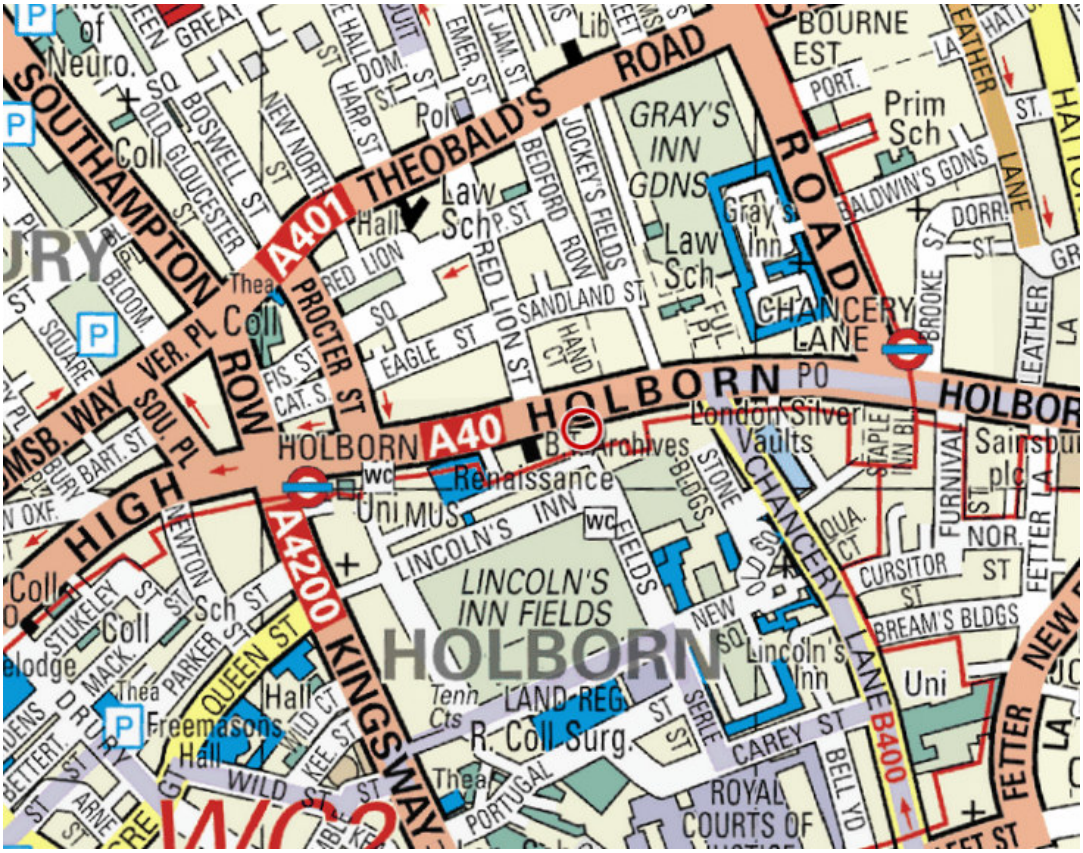

Figure 1: Site plan of the proposed development

3 Sustainability Agenda

3 Sustainability Agenda

The development proposals have been considered in relation to national, regional and local policy and available guidance on sustainable development. The following key policy documents are of relevance to many aspects of the design proposals:

3.1 National Policy on Planning and Sustainable Development

Key documents include:

- Planning for a Sustainable Future – White Paper (May 2007)[1]
- A Better Quality of Life – a Strategy for Sustainable Development for the UK[2];
- Securing the future – Delivering UK Sustainable Development Strategy[3];
- The Sustainable Communities Plan[4];
- Planning Policy Statement 1: Delivering Sustainable Development[5];
- Consultation Planning Policy Statement: Planning and Climate Change Supplement to Planning Policy Statement 1[6];
- Planning Policy Statement 3: Housing[7];
- Planning Policy Statement 6: Planning for Town Centres[8];
- Planning Policy Statement 9: Biodiversity and Geological Conservation[9];
- Planning Policy Statement 10: Planning for Sustainable Waste Management[10];
- Planning Policy Guidance 13: Transport[11];
- Planning Policy Guidance 15: Planning and the Historic Environment[12];
- Planning Policy Guidance 16: Archaeology and Planning[13];
- Planning Policy Statement 22: Renewable Energy[14];
- Planning Policy Statement 23: Planning and Pollution Control[15];
- Planning Policy Guidance 25: Development and Flood Risk[16]; and
- Building a Better Quality of Life – a Strategy for more Sustainable Construction[17].

3.2 Greater London Authority Policies

Key Greater London Authority (GLA) policy document which have been reviewed and addressed in the development of the Sustainability Statement include:

[1] Planning for a Sustainable Future http://www.communities.gov.uk/pub/669/PlanningforaSustainableFutureWhitePaper_id1510669.pdf
[2] A better quality of life http://www.sustainable-development.gov.uk/publications/uk-strategy99/index.htm
[3] Securing the future http://www.sustainable-development.gov.uk/publications/uk-strategy/index.htm
[4] Sustainable Communities Plan http://www.communities.gov.uk/index.asp?id=1139868
[5] PPS1 http://www.communities.gov.uk/index.asp?id=1143805
[6] PPS1 consultation document http://www.communities.gov.uk/index.asp?id=1505140
[7] PPG3 http://www.communities.gov.uk/index.asp?id=1162075
[8] PPS6 http://www.communities.gov.uk/index.asp?id=1143820
[9] PPS9 http://www.communities.gov.uk/index.asp?id=1143832
[10] PPS10 http://www.communities.gov.uk/index.asp?id=1143834
[11] PPG13 http://www.communities.gov.uk/index.asp?id=1144015
[12] PPG15 http://www.communities.gov.uk/index.asp?id=1144041
[13] PPG16 http://www.communities.gov.uk/index.asp?id=1144056
[14] PPS22 http://www.communities.gov.uk/index.asp?id=1143909
[15] PPS23 http://www.communities.gov.uk/index.asp?id=1143916
[16] PPS25 http://www.communities.gov.uk/index.asp?id=1504639
[17] Building a better quality of life http://www.dti.gov.uk/files/file13547.pdf

- London Plan Supplementary Planning Guidance on Sustainable Design and Construction[18] (LP SPG), May 2006;
- The London Plan: Spatial Development Strategy for Greater London[19], Mayor of London, February 2004;
- Draft Further Alterations to the London Plan (Spatial Development Strategy for Greater London) , September 2006[20];
- The Mayor's Energy Strategy: Green Light to Clean Power[21], Mayor of London, February 2004; and
- The Mayor's Municipal Waste Management Strategy, September 2003.

Additional consideration has been given to the following documents in the development of this report and the wider development proposals:

- The Mayor's Air Quality Strategy, September 2002;
- The Mayor's Biodiversity Strategy, July 2003; and
- The Mayor's Ambient Noise Strategy March 2004.

The LP SPG was published in May 2006 to provide additional information to support the implementation of the London Plan policies. It explains the principles of sustainable design and construction and how they should be implemented in London. The SPG is applicable to all development types and associated spaces which are referable to the Mayor and has been a key document of reference in the preparation of the sustainability statement.

3.3 Local Planning Policies – London Borough of Camden

Key London Borough of Camden (LBC) documents reviewed and addressed in the development of the sustainability statement are as follows:

- Replacement Unitary Development Plan, adopted June 2006; and
- Camden Planning Guidance 2006, adopted December 2006.

The LBC Replacement Unitary Development Plan (UDP) was adopted in June 2006, replacing the UDP adopted in 2000 and Alterations No. 1 and 2 to the 2000 UDP. The UDP sets out Camden's aims and priorities for the use of land in the Borough and the policies to achieve these through planning decisions.

Camden Planning Guidance 2006 gives additional advice and information on how the Council will apply the planning policies in the LBC Replacement UDP. It has been prepared in accordance with the relevant legislation and regulations as a supplementary planning document.

3.4 Sustainability Statement for Chichester House

Particular regard has been given to the London Plan Supplementary Planning Guidance on Sustainable Design and Construction (LP SPG), the Draft Further Alterations to the London Plan (LP Further Alterations), the London Borough of Camden's Replacement Unitary Development Plan (LBC Replacement UDP) and the London Borough of Camden's Planning Guidance (LBC Planning Guidance) in the preparation of this report.

The sustainability statement reviews the developments contribution to the objectives and policies within these documents.

[18] http://www.london.gov.uk/mayor/strategies/sds/docs/spg-sustainable-design.pdf
[19] http://www.london.gov.uk/mayor/strategies/sds/london_plan/lon_plan_all.pdf
[20] http://www.london.gov.uk/mayor/strategies/sds/further-alts/docs/alts-maintext.pdf
[21] http://www.london.gov.uk/mayor/strategies/energy/docs/energy_strategy04.pdf

4 Standards and Targets

4 Standards and Targets

4.1 Environmental Assessments

The Camden Planning Guidance 2006 states:

> **Paragraph 44.19:** *"The Council has chosen BREEAM and EcoHomes Assessments as its assessment methods for sustainability as they cover a broad range of sustainability issues, are well tested, and are widely accepted across the UK."*
>
> **Paragraph 44.21:** *"All housing proposals, new build, conversions, changes of use and refurbishments that will provide 5 or more dwellings are expected to achieve a Very Good or Excellent rating using the EcoHomes Assessment."*
>
> **Paragraph 44.22:** "Proposals for new, converted or refurbished development that are equal to or greater than 1000m² in floorspace are expected to achieve a Very Good or Excellent rating using the BREEAM assessment."
>
> **Paragraph 44.28:** *"Relevant proposals must be assessed using the relevant BREEAM or EcoHomes assessment at various stages in the design and construction process, in accordance with the following:*
> - *a BREEAM or EcoHomes Pre-Assessment Estimator, or equivalent, must be provided with the application, to demonstrate that the proposal can meet the criteria.*
> - *a BREEAM or EcoHomes Design Stage Assessment, or equivalent, must be submitted to, and approved by, the Council prior to commencement of work on site, to demonstrate that the detail design meets the criteria. This will be a condition of approval.*
> - *a BREEAM or EcoHomes Post Construction Review, or equivalent, must be carried out and submitted to the Council prior to occupation, to ensure that the development has met the criteria that were approved earlier. This will be included in a S106 agreement."*

In addition LBC Planning Guidance 2006 (Paragraphs 17.11, 51.12 and 27.7) state that the Council will expect developments of 1000m^2 or more floorspace or 5 or more dwellings to be designed, constructed and fitted so that the following targets are achieved:

- at least 60% of the credits available under Energy in the relevant BREEAM or EcoHomes Assessment;
- at least 60% of the credits available under the Water element of the relevant BREEAM or EcoHomes Assessment;
- at least 40% of the credits available under the Materials element of the relevant BREEAM or EcoHomes Assessment.

4.1.1 Overview of BREEAM and EcoHomes

BREEAM (Building Research Establishment Environmental Assessment Method) and EcoHomes seek to minimise the adverse effects of new buildings on the environment at global and local scales, whilst promoting healthy indoor conditions for the occupants. The environmental implications of buildings are assessed and compared with good practice by independent assessors.

BREEAM is the BRE's environmental rating scheme for new, refurbished and operational commercial and public buildings including offices, retail and educational buildings. EcoHomes is the BRE's environmental rating scheme for new and refurbished homes.

BREEAM Retail provides a tailored assessment approach as a development is only assessed against the criteria that are under the influence of the assessment stakeholder. For example, where a development has no car parks, all assessment credits relevant to car parks will be filtered out of the scheme before conducting the assessment.

An overall rating of the building's performance is given using the terms Pass, Good, Very Good or Excellent. This is determined from the total number of BREEAM criteria met and their respective environmental weighting.

4.1.2 Summary of BREEAM and EcoHomes 2006 Pre Assessment, Chichester House

Faber Maunsell's Sustainable Development Group has been commissioned by Hines to undertake the BREEAM Design and Procurement pre assessment of the retail, offices and residential units within Chichester House.

An initial BREEAM pre-assessment meeting was held on 11 June 2007 at the offices of Faber Maunsell to identify those credits anticipated to be achieved based on current design intent and those which have potential to be achieved, if changes to the current design were implemented. The credit requirements of each credit were also discussed. Based on verbal expressions of intent stated during the meeting pre-assessment reports were produced for the retail, office and residential elements at Chichester House and circulated to the client and design team. Following issue of the report a further meeting was held on 13th July 2007, at GMW's offices in London.

The BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application provides a summary of the pre-assessment exercise and details those credits which the design team and client has targeted to pursue at detailed design stage and achieving in the formal Design and Procurement BREEAM and EcoHomes assessments to be undertaken at detailed design stage.

A discussion of the Chichester House BREEAM Retail pre-assessment exercise is provided in the following section.

4.1.3 Chichester House BREEAM Retail Assessment

As discussed with the London Borough of Camden (telephone call between Georgia Arnott and Celeste Giusti 04/06/07), due to the small size of the retail unit proposed within Chichester House of 279m^2 (net internal area), the shell level of fit-out and the absence of any associated uses it is not intended to progress the pre-assessment to a full Design and Procurement assessment that is submitted to the BRE.

The size of the development and level of fitout are taken into account in the BREEAM Retail filtering exercise which has determined that a relatively small number of credits are applicable to the assessment. In addition under some assessment area the number of assessment credits becomes greatly reduced. For example the credit summary table for retail illustrates that only two credits E01 and E03 have been allocated to assess the energy impacts of the development. Each credit is therefore highly weighted, therefore if one credit is not achieved Chichester House is penalised more than a larger retail development would tend to be as a larger number of credits would tend to have been allocated. This is discussed in further detail within the BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application.

Many of the issues (e.g. management, ecology, materials, and many health and wellbeing issues) are the same for offices as the retail building. Therefore, by addressing them in the office assessment these issues will be addressed in the retail unit at Chichester House.

However, to determine how the development would perform against BREEAM criteria and to enable the client to identify sustainability issues relevant to the retail unit BREEAM a retail pre-assessment has been undertaken.

The credit requirements for each credit applicable to the Chichester House retail unit were discussed with the design team and client at meetings on 11 June 2007 and 13 July 2007 and a full pre-assessment report, detailing credit requirements has been issued to the client and design team. The credit summary table detailing the result of this exercise is provided overleaf. For each credit below which is identified as 'target', the client and design team have

confirmed that the compliance requirements of each 'target' credit will be met by the development's design and/or through a tenant requirement on the future user of the unit.

A further discussion of the BREEAM Retail exercise is provided in the BREEAM Retail 2006 Pre-Assessment Summary report provided in the BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application. The credit summary table is provided over leaf.

4.1.4 Summary of performance

Based on the pre-assessment exercise outlined above and current design intent, it is anticipated that the following scores are achievable and will be targeted by the development at the full design and procurement assessment stage:

- **BREEAM Offices 2006 70.10% "Excellent" Rating**
- **EcoHomes 2006 67.40% "Very Good" Rating**

Based on the BREEAM Retail pre-assessment exercise undertaken to date and current design intent it is anticipated that a score of **60.94**% - "**Very Good**" rating would be achieved under a BREEAM Retail 2006 assessment.

It should be noted that the final rating achieved in a certified BREEAM assessment will be dependent on the provision of satisfactory evidence for each credit

See overleaf for the credit summary tables for each pre-assessment.

Credit Summary BREEAM Offices 2006		Credit no.	Credits Available	Target Credits
Management	Commissioning Responsibilities	M 1	2	2
Credit Value	Considerate Contractor	M4	2	2
1.67%	Construction Site Impacts	M 5	4	4
	Building User Guide	M12	1	1
Section Credit Total			9	9
Weighted Section Total			15%	15.0%
Health	Daylighting	HW 1	1	0
Credit Value	View Out	HW 1	1	0
1.15%	Glare Control	HW 3	1	1
	High Frequency Lighting	HW 4	1	1
	Internal and External Lighting Levels	HW 5	1	1
	Lighting Zones	HW 6	1	1
	Potential for Natural Ventilation	HW 8	1	0
	Internal Air Pollution	HW 9	1	1
	Ventilation Rates	HW 11	1	1
	Thermal Comfort	HW 14	1	1
	Thermal Zoning	HW 15	1	1
	Microbial Contamination (Legionella)	HW 16	1	1
	Acoutic Performance (Indoor Noise)	HW 17	1	1
Section Credit Total			13	10
Weighted Section Total			15%	11.5%
Energy	Reduction of CO_2 Emissions	E 1	15	9
Credit Value	Sub-metering of Energy Uses	E 2	1	1
0.76%	Sub-metering of Areas / Tenancy	E 3	1	1
	External Lighting	E 4	1	1
Section Credit Total			18	12
Weighted Section Total			14%	9.1%
No of credits required to achieve LBC target				11 credits = 60%
Transport	Provision of Public Transport	T 1	2	2
Credit Value	Transport CO_2	T 2	10	9
0.76%	Cyclist Facilities	T 5	2	2
	Travel Plan	T 8	1	1
Section Credit Total			15	14
Weighted Section Total			11%	10.6%
Water	Water Consumption	W 1	3	2
Credit Value	Water Meter	W 2	1	1
0.83%	Major Leak Detection	W 3	1	1
	Sanitary Supply Shut Off	W 4	1	1
Section Credit Total			6	5
Weighted Section Total			5%	4.2%
No of credits required to achieve LBC target				4 credits = 60%
Materials	Material Specs - Major Elements	MW 1	4	0
Credit Value	Floor Finishes	MW 3	1	1
0.83%	Reuse of Building Façade	MW 5	1	0
	Reuse of Building Structure	MW 6	1	0
	Recycled Aggregates.	MW 7	1	1
	Responsible Sourcing of Materials	MW 8	3	2
	Storage of Recyclable Waste	MW 12	1	1
Section Credit Total			12	5
Weighted Section Total			10%	4.2%
No of credits required to achieve LBC target				6 credits = 40%
Land use &	Re-Use of Land	LE 1	1	1
Ecology	Reclaimed Contaminated land	LE 2	1	0
Credit Value	Ecological Value	LE 3	1	1
1.50%	Mitigating Ecoogical Impact	LE 4	2	2
	Enhancing Site Ecology	LE 5	3	1
	Long Term Impact on Biodiversity	LE 6	2	0
Section Credit Total			10	5
Weighted Section Total			15%	7.5%
Pollution	Refrigerant GWP	P 1	1	0
Credit Value	Preventing Refrigerant Leaks	P 2	2	2
1.00%	Insulant GWP	P 4	1	1
	NOx Emissions of Heating Source	P 6	3	0
	Flood Risk / Water Run-Off	P 7	3	2
	Minimising Water Course Pollution	P 8	1	1
	Renewable & Low Emission Energy	P 11	3	1
	Reduction of Light Pollution	P 12	1	1
Section Credit Total			15	8
Weighted Section Total			15%	8.0%
		TOTALS	100%	70.1%
		RATING:		**Excellent**

EcoHomes 2006 Credit Summary - Chichester House		Credit no.	Credits Available	Target Credit
Energy	Dwelling Emission Rate	Ene 1	15	7
0.92%	Building envelope performance	Ene 2	2	1
per credit	Provision of drying space	Ene 3	1	1
	Eco-labelled white goods	Ene 4	2	2
	Internal Lighting	Ene 5	2	2
	External lighting	Ene 6	2	2
Section Credit Total			**24**	**15**
Weighted Section Total			**22.00%**	**13.75%**
No of credits required to achieve LBC target			14.4 credits = 60%	
Transport	Public transport	Tra 1	2	2
1.00%	Cycle storage	Tra 2	2	2
per credit	Local amenities	Tra 3	3	3
	Home office	Tra 4	1	0
Section Credit Total			**8**	**7**
Weighted Section Total			**8.00%**	**7.00%**
Pollution	Insulation ODP and GWP	Pol 1	1	1
0.91%	Low Nox emissions	Pol 2	3	2
per credit	Reduction of surface runoff	Pol 3	2	0
	Zero Emission Energy Source	Pol 4	3	3
	Flood Risk Mitigation	Pol 5	2	2
Section Credit Total			**11**	**8**
Weighted Section Total			**10.00%**	**7.27%**
Materials	Environmental impacts of materials	Mat 1	16	9
0.45%	Responsible sourcing - basic building elements	Mat 2	6	2
per credit	Responsible sourcing - finishing elements	Mat 3	3	1
	Recyclable materials	Mat 4	6	6
Section Credit Total			**31**	**18**
Weighted Section Total			**14.00%**	**8.13%**
No of credits required to achieve LBC target			12.4 credits = 40%	
Water	Internal water use	Wat 1	5	3
1.67%	External water use	Wat 2	1	1
Section Credit Total			**6**	**4**
Weighted Section Total			**10.00%**	**6.67%**
No of credits required to achieve LBC target			4 credits = 60%	
Landuse/Ecology	Ecological value of site	Eco 1	1	1
1.33%	Ecological enhancement	Eco 2	1	1
per credit	Protection of ecological features	Eco 3	1	1
	Change of ecological value of the site	Eco 4	4	2
	Building footprint	Eco 5	2	2
Section Credit Total			**9**	**7**
Weighted Section Total			**12.00%**	**9.33%**
Health & Wellbeing	Daylighting	Hea 1	3	2
1.75%	Sound insulation	Hea 2	4	1
per credit	Private space	Hea 3	1	0
Section Credit Total			**8**	**3**
Weighted Section Total			**14.00%**	**5.25%**
Management	Home user guide	Man 1	3	3
1.00%	Considerate constructors scheme	Man 2	2	2
per credit	Construction site impacts	Man 3	3	3
	Security	Man 4	2	2
Section Credit Total			**10**	**10**
Weighted Section Total			**10.00%**	**10.00%**
		TOTALS:	**100%**	**67.40%**
		RATING:		**Very Good**

Credit Summary BREEAM Retail 2006		Credit no.	Available Credits	Target Credits
Management	Considerate Constructors	M4	**2**	2
1.15%	Construction Site Impacts	M5	**4**	4
	Environmental Responsibility	M7	**1**	1
	Building User Guide	M12	**1**	1
	Building User Education	M13	**1**	1
	Environmental Policy	M18	**1**	1
	Environmental Purchasing Policy	M19	**1**	1
	Environmental Management System	M22	**2**	0
Section Credit Total			13	11
Weighted Section Total			15%	12.7%
Health and	Daylighting	HW01	**2**	1
Wellbeing	Internal Air Pollution	HW09	**1**	0
2.50%	Ventilation Rates	HW11	**1**	1
	Thermal Comfort	HW14	**1**	1
	Microbial Contamination	HW16	**1**	1
Section Credit Total			6	4
Weighted Section Total			15%	10.0%
Energy	Reduction of CO_2 Emissions	E01	**15**	6
1.14%	Sub-metering - Areas	E03	**1**	1
Section Credit Total			16	7
Weighted Section Total			18%	8.0%
No of credits required to achieve LBC target				10 credits = 60%
Transport	Provision of Public Transport	T1	**4**	4
1.14%	Cyclist Facilities	T5	**2**	1
Section Credit Total			6	5
Weighted Section Total			7%	5.7%
Water	Water Meter	W02	**1**	1
2.50%	Mains Leak Detection	W03	**1**	1
Section Credit Total			2	2
Weighted Section Total			5%	5.0%
No of credits required to achieve LBC target				2 credits = 60%
Materials&Waste	Major Building Elements	MW01	**4**	0
0.77%	Low Impact Paints and Varnishes	MW04	**1**	1
	Reuse of Building Facade	MW05	**1**	0
	Reuse of Building Structure	MW06	**1**	0
	Recycled Aggregates	MW07	**1**	1
	Responsible Materials Sourcing	MW08	**3**	2
	Designing for Robustness	MW10	**1**	1
	Storage of Retailer Recyclables	MW13	**1**	1
Section Credit Total			13	6
Weighted Section Total			10%	4.6%
No of credits required to achieve LBC target				6 credits = 40%
Land use/Ecology	Reuse of Land	LE01	**1**	1
1.50%	Contaminated Land	LE02	**1**	0
	Ecological Value and Protection	LE03	**1**	1
	Mitigating Ecological Impact	LE04	**2**	2
	Enhancing Site Ecology	LE05	**3**	1
	Long Term Impact on Biodiversity	LE06	**2**	0
Section Credit Total			10	5
Weighted Section Total			15%	7.5%
Pollution	Insulant ODP and GWP	P04	**1**	1
1.88%	Minimising Flood Risk	P07	**3**	2
	Renewable/Low carbon Energy	P11	**3**	0
	Noise Attenuation	P13	**1**	1
Section Credit Total			8	4
Weighted Section Total			15%	7.5%
		TOTALS:	100%	60.94%
		RATING:		**Very Good**

4.2 Considerate Construction Management Schemes

4.2.1 Considerate Constructors Scheme

The Considerate Constructors Scheme[22] is a UK certification scheme that encourages the considerate management of construction sites. It has been in operation since 1997 and was developed from local schemes in the City of London and City of Westminster. The scheme is operated by the Construction Confederation and is widely used in major or sensitive schemes.

This initiative, started in 1997 and is a voluntary Code of Considerate Practice, which is adopted by participating construction companies and everyone involved on the construction site. The Scheme is a non-profit making independent organisation founded by the industry to improve its image. The Scheme is neither grant maintained nor funded by the government and is solely financed by its registrations.

The CCS Code covers the following issues:

- Considerate
- Environment
- Cleanliness
- Good neighbour
- Respectful
- Safe
- Responsible
- Accountable

It is envisaged that the project will register under the above schemes and commit to follow best practice under all issues covered.

4.3 The control of dust and emissions from construction and demolition

This “Best Practice Guidance” document[23], November 2006 has been produced in partnership between the London Councils and the Greater London Authority with assistance from the Building Research Establishment and the PRECIS Working Group. This document consolidates existing best practice used in London, UK and other countries to reduce emissions from demolition and construction activities.

All contractors will be required to comply with the Mayor and ALG’s London BPG on the control of dust and emissions during construction and demolition (Mayors Essential Standard).

[22] http://www.considerateconstructorsscheme.org.uk/htm-home/index.html
[23] http://www.london.gov.uk/mayor/environment/air_quality/docs/construction-dust-bpg.pdf

5 Sustainability Statement

5 Sustainability Statement

The following Sustainability Statement is based on documentation submitted and discussions with the design team. The issues covered in the statement relate to national, regional and local policies.

Each issue section includes a brief summary of relevant planning policies, followed by an explanation of how the proposed development contributes towards these objectives.

5.1 Re-Use Land and Buildings

5.1.1 Policies and Drivers

(LP SPG 2.1.2) 100% of development on previously developed land, unless very special circumstances can be demonstrated.

(LP SPG 2.1.2) Development density should be maximised based on local context, design principles, open space provision and public transport capacity.

(LP SPG 2.1.3) Existing building reused where practicable, where the density of development and residential amenity are optimised and where the building conforms to or has the potential to meet standards for energy, materials, water and biodiversity conservation set out in this SPG.

(LP Further Alterations para 4.1iv) Precedence should be given to retrofitting over demolition, where ever practical

(LBC Planning Guidance 44.11) Should the re-use of the existing structure not be possible, sustainable development principles should be integral to the design of the new development.

5.1.2 Proposed Development Performance

The proposed development of Chichester House intends to reuse a brownfield location in London's High Holborn neighbourhood. The site currently contains an unoccupied eight-storey office and retail building which is in poor condition and not suitable for modern office environments. The current site has under used potential which would be realised by the proposals. The proposed development aims to create new office, retail and residential units. The density of the development will be maximised without increasing the footprint from the current building on site.

The design team carried out an initial assessment of a major refurbishment of the existing building and found that current building standards for energy efficiency would not be met. The new construction will ensure that greatly improved levels of energy efficiency and water efficiency will be achieved compared to the old building currently on site.

The new construction will also maximise density on site. The existing building has a gross external area of 8,988m^2; the proposed development will have a gross external area of 10,263m^2 creating an uplift of 1,275m^2.

5.2 Maximise use of natural systems

Location and Urban Design

(LP SPG 2.2.2) All development to follow the principles of good design set out in London Plan Policy 4B.1.

(LP SPG 2.2.2) Minimise need for and use of mechanical ventilation, heating and cooling systems.

Adaptation to Climate Change

(LP SPG 2.2.3) Buildings provide for flexibility of uses during their projected operational lives.

(LP SPG 2.2.3) Buildings adapted to and mitigate for the effects of the urban heat island and the expected increases in hot dry summers and wet mild winters.

(LP Further Alterations Policy 4A.15 Tackling Climate Change) Developments to make the fullest contribution to the mitigation of and adaptation to climate change and, in particular to:

- **minimise emissions of carbon dioxide**
- **adopt sustainable design and construction measures (Policy 4A.2)**
- **prioritise decentralised energy generation, including renewables (Policy 4A.7 and 4A.5)**

(LP Further Alterations New Policy 4A.5iii) The Mayor will and other agencies should promote and support the most effective adaptation to climate change, including:

- **minimising overheating and contribution to heat island effects (policy 4A.5iv)**
- **minimising solar gain in summer (policy 4A.5iv)**
- **contributing to reducing flood risk including applying principles of sustainable urban drainage (policy 4A.5vii)**

(LP Further Alterations New Policy 4A.5iv) The Mayor will, and boroughs should strongly encourage development that avoids internal overheating and excessive heat generation and contributes to the prevention of further over-heating, especially where the urban heat island is most intense. Developers should demonstrate how development could be made heat resilient in design, construction and operation.

(LP Further Alterations Policy 4A.2i) The Mayor will, and boroughs should, ensure future developments meet the highest standards of sustainable design and construction and reflect this principle in DPD policies. These will include measures to:

- **reduce carbon and other emissions that contribute to climate change**
- **design new buildings for flexible uses throughout their lifetime**
- **manage overheating**
- **make most effective and sustainable use of water, aggregates and other resources**
- **minimise energy use, including by passive solar design, natural ventilation, and vegetation on buildings**
- **ensure designs make the most of natural systems both within and around the building**
- **manage flood risk, including though flood resilient design**
- **encourage major developments to incorporate living roofs and walls where feasible**

(LBC Planning Guidance 44.12) To achieve a more sustainable building, the siting of development should consider the following:

- **The natural topography of the site and any natural or historic features that should be retained. Further details can be found in the Landscaping and Trees Camden Planning Guidance.**
- **The microclimate.**
- **Orientation for solar gain in the winter and limiting solar gain in the summer**
- **Maximising available daylight**
- **Potential location of on-site renewable technology, especially ground source heating and cooling, solar panels and wind turbines**
- **Impact of proposal on access to light of adjoining properties and overshadowing**

(LBC Planning Guidance 44.13) To achieve a more sustainable building, mainly with regard to energy, the design stage should consider the following:

- **Where appropriate buildings should be shaped to minimise their surface area. Unnecessary protrusions should be avoided to minimise heat loss, particularly where heated or poorly insulated. Buildings should be located as close together as practical, or joined where practical (both on the site and with adjoining sites), to minimise heat loss through walls and openings.**
- **Thermal buffers should be provided in areas of greater heat loss, such as vestibules, atriums, conservatories, garages, lobbies and sheltered courtyards.**
- **Thermal massing, shading and insulation which can all improve passive solar effects. In some circumstances grants and subsidies may also be available for insulation to reduce energy consumption.**
- **Natural ventilation. For new buildings, the applicant should demonstrate that the original design of the building has considered natural ventilation or that due to the use or location of the development, natural ventilation is not possible, for example medical uses requiring sterile conditions and sites adjacent to polluting uses. Fans should be considered prior to air conditioning. As a last resort, where air conditioning is used, consideration should be given to the incorporation of timed, temperature-sensored and zoned lighting, heating and cooling systems.**

Residential development standards - Windows

(LBC Planning Guidance 40.27) Rooms on south facing walls should always have windows. South facing windows and walls should be shaded in summer to prevent overheating. Appropriate shading might be achieved by:

- **mature deciduous trees located so as to shade the structure**
- **eaves or overhangs that protect from sun that is high in the sky only**
- **external shutters or blinds that can be operated by the occupant.**

(LBC Planning Guidance 40.8) External shading should be provided for western facing windows and outdoor spaces to minimise overheating in summer. Deciduous trees provide the best shade for this purpose

(LBC Planning Guidance 40.30) All habitable rooms, including basements, must have an external window with an area of at least 1/10 of the floor area of the room. An area of 1/20 of the floor area of the room must be able to be opened to provide natural ventilation. Windows to atriums will be acceptable as external windows in exceptional circumstances only.

5.2.1 *Proposed Development Performance*

5.2.1.1 *Location and Urban Design*

The design statement sets out how the development meets the principles of good design and complies with London Plan Policy 4.B.1. The density of the site will be maximised without increasing the current building footprint.

The natural topography of the site is being retained with the proposed development being entirely within the existing building footprint. The building will reuse part of the existing basement slab and all of the existing retaining walls to minimise further excavation required to accommodate plant.

Urban design proposals for Great Turnstile, located to the east of the site, seek to enhance the public realm and revitalise Great Turnstile as a public thoroughfare.

The impact of the proposals on access to light of adjoining properties and the impact of microclimate is covered in Section 5.4.2.5 and 5.4.2.6 below.

Flexibility of Design

Changing economic, social or environmental demands, climate change and the introduction of new technology can result in the potential use of a building being no longer viable. Therefore

the GLA requires that, wherever practical, new buildings provide flexible space capable of multiple uses.

Consideration has been given to ensuring the flexibility of the building's use in the future in the Chichester House development. The architectural design seeks to ensure flexible design by providing:

- Maximum economic column free floor space capable of repeated subdivision;
- Flush ceilings with integrated services to facilitate future subdivision and redivision of office floors; and
- High floor to floor heights (3.8m) for increased ceiling/floor voids should future tenants require increased capacity in these areas.

The building services also seek to ensure flexible design by providing:

- Zoned lighting with daylight sensors in office units to facilitate additional lighting/task lighting only in areas and at times required.
- Chilled beam layout with 1.5m partition flexibility over the majority of the office floor space to maximise partition/office subdivision for incoming tenants and future adaptability.

Minimised use of mechanical ventilation, heating and cooling

Consideration has been given to minimising the need for heating and cooling within the proposed development. High performance glazing is proposed for the office and retail elements to reduce the solar gain of the building. Thermal wheel heat recovery with high operating efficiencies is proposed for all main air handling units, which significantly reduces the heating required to warm up incoming fresh air in winter. All heaters and radiators have TRV control for more precise control and heating will be provided by high efficiency, low NO_X, gas condensing boilers. Chilled beams, which have lower energy consumption than conventional cooling system, are proposed for the office area. All selected plant will out perform the minimum Building Regulation Part L2A efficiency requirement.

The residential building will be naturally ventilated, except for a mechanical extract system specified for the bathrooms. Ground floor residential windows are shaded by oversailing upper storeys. The uppermost duplex residential floor, most exposed to solar gain from high level sun, is shaded by means of a contemporary architectural cornice above the windows. The remaining residential floors rely on the overshadowing provided by adjacent buildings. Subject to the findings of the daylight and sunlight report by GIA additional solar control could be provided within the glazing units of these intermediate residential storeys and/or in conjunction with solar coatings to the glazing panes.

5.2.1.2 *Adaptation to Climate Change*

Consideration has been given to adaptation to climate change. The main location specific design issues related to climate change are:

- Risk of flooding;
- Water resources;
- Higher temperatures; and
- Subsidence.

Risk of Flooding

The site falls in the 1 in 1000 year flood risk area or less, as designated by the Environment Agency. Therefore a Flood Risk Assessment has not been undertaken and flood mitigation measures have not been investigated further.

Water resources

To reduce future pressures on water resources, low water use technologies are proposed to be incorporated into the proposed development, as discussed in more detail within Section 4.3.2.3 below.

Higher temperature

The urban heat island effect is predicted to intensify as a result of climate change. It is therefore likely that reliance on air conditioning will increase in the future, increasing energy consumption and carbon emissions. Measures to reduce requirements for cooling are discussed above. To summarise key measures to reduce cooling requirements are as follows:

- Solar control measures;
- Specification of high mass building materials; and
- Highly efficient air conditioning plant.

These measures are discussed further within Section 5.3.2 below.

Green roofing is also being incorporated into the design for shade and natural cooling.

Subsidence

Subsidence is expected to be exacerbated as a result of climate change and is predicted to be a greater issue for clay soils. The client and design team are not aware of any history of subsidence on site. It is proposed that the development will reuse part of the existing basement slab and all of the existing retaining walls to minimise further excavation required to accommodate plant. It is therefore anticipated that the risk of subsidence is low.

5.3 Conserve energy, water and other resources

5.3.1 Policies and Drivers

(LP SPG 2.3.2) Carry out energy demand assessment and maximise energy efficiency.

(LP SPG 2.3.2) Major commercial and residential developments to demonstrate that consideration has been given to the following ranking method for heating and cooling systems: Passive design; solar water heating; combined heat and power; community heating; heat pumps; gas condensing boilers; gas central heating.

(LP SPG 2.3.2) Wherever outdoor lighting is proposed it should be energy efficient, minimising light lost to the sky.

(LP SPG 2.3.2) Carbon emissions from total energy needs of the development should be reduced by at least 10% by the on site generation of renewable energy.

(LP SPG 2.3.4) 100% [water] metering of all newly built property

(LP SPG 2.3.4) Residential developments to achieve average water use n new dwellings of less than 40m³ per bedspace per year (approx. 110 litres/head/year)

(LP SPG 2.3.3) 50% of timber and timber products to be specified form the Forest Stewardship Council (FSC) source and balance from a known temperate source

(LP SPG 2.3.3) Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global

(LP SPG 2.3.3) Minimise use of new aggregates

(LP Further Alterations Policy 4A.8)

The Mayor will and boroughs should support the Mayor's Energy Strategy and its objectives of improving energy efficiency and increasing the proportion of energy used generated from renewable sources.

(LP Further Alterations Policy 4A.5i)

- **The Mayor will and boroughs should in their DPDs require all developments to demonstrate that their heating, cooling and power systems have been selected to minimise CO_2 emissions.**
- **The need for active cooling systems should be reduced as far as possible through passive design including ventilation, appropriate use of thermal mass, external summer shading and vegetation on and adjacent to developments.**
- **The heating and cooling infrastructure should be designed to allow the use of decentralised energy (including renewable generation) and for it to be maximised in the future.**

(LP Further Alterations Policy 4A.7) The Mayor will and boroughs in their DPDs should require developments to achieve a reduction in carbon dioxide emissions of 20% from onsite renewable energy generation.

(LP Further Alterations 4A.2i) The Mayor will, and boroughs should, ensure future developments meet the highest standards of sustainable design and construction and reflect this principle in DPD policies. These will include measures to:
- **reduce carbon and other emissions that contribute to climate change**
- **make most effective and sustainable use of water, aggregates and other resources**
- **minimise energy use, including by passive solar design, natural ventilation, and vegetation on buildings**
- **supply energy efficiently and incorporate decentralised energy systems (Policy 4A.5i) , and use renewable energy where feasible (policy 4A.7)**
- **procure materials sustainably**
- **minimising light lost to the sky particularly from street lights**

The Mayor will and boroughs should ensure that developments minimise the use of new aggregates and do not use insulating and other materials containing substances which contribute to climate change through ozone depletion

(LP Further Alterations Policy 4A.11) The Mayor will work in partnership with appropriate agencies within London and neighbouring regions to protect and conserve water supplies and water resources in order to secure London's needs in a sustainable manner by supporting the Water Action Framework and by:
- **minimising the use of treated water**
- **reaching cost-effective minimum leakage levels**
- **maximising rainwater harvesting opportunities**
- **introducing targets for water recycling in major developments**
- **using dual potable and grey water recycling systems**
- **keeping under review the need for additional sources of water supply**
- **minimizing the amount of energy consumed in water supply processes**
- **ensuring that adequate sustainable water resources are available for major new development and for conservation and enhancement of the natural environment**
- **maintaining and upgrading the infrastructure**

In determining planning applications, the Mayor will and boroughs should have proper regard to the impact of those proposals on water demand and existing capacity. The Mayor will and boroughs should apply a maximum water use target of 40 m^3 per bedspace per year for residential development.

Energy

(LBC Planning Guidance 44.13) To achieve a more sustainable building, mainly with regard to energy, the design stage should consider the following:
- **The incorporation of combined heat and power, or combined cooling, heat and power systems into the development. Development should not use electric water or space heating systems**
- **The incorporation, where appropriate, of communal heating, cooling and power schemes, either within the development, or in conjunction with other nearby development.**

Potential locations for renewable heat and energy facilities
- **roofs and other building components should be designed to allow green and brown roofs and for the installation of photovoltaic cell panels, wind turbines or other renewable energy generation facilities at a later date.**

- **the specification of energy efficient appliances and fittings throughout the development.**

(LBC Replacement UDP SD9C) The Council will seek developments that conserve energy and resources through:
a) designs for energy efficiency;
b) renewable energy use; and
c) optimising energy supply.
The Council will require major developments to demonstrate the energy demand of their proposals and how they would generate a proportion of the site's electricity and heating needs from renewables wherever feasible.

(LBC Replacement UDP para 1.64) The Council expects major developments of 1000m^2 or 10 housing units or more to incorporate renewable energy production equipment to provide at least 10% of predicted energy requirements.

(LBC Planning Guidance 17.11) The Council will expect developments of 1000m^2 or more floorspace or 5 or more dwellings to be designed, constructed and fitted so that it obtains at least 60% of the credits available under Energy in the relevant BREEAM or EcoHomes Assessment.

Water

(LBC Planning Guidance 51.7) All development that has on-site open space or landscaping should incorporate a water collection facility (a rainwater tank or water butt), for use in watering soft landscaping.

(LBC Planning Guidance 51.11) When preparing development schemes, applicants should consider:
- **the incorporation of on-site attenuation in the form of retention ponds, soakaways and other water management devices, to reduce runoff from the site in heavy rain;**
- **the collection of 'grey' water (i.e. wastewater that can be reused for some purposes) from showers, sinks, and other sources, and its reuse for flushing toilets, irrigation or other purposes;**
- **the use of collected roof water for flushing toilets;**
- **the incorporation of 'green' and 'brown' roofs and green walls (walls with planting such as vines) into the development;**
- **the specification of water efficient appliances and fittings throughout the development. New (including change of use) residential developments should aim to achieve an average water use of less than 40 metres cube per bedspace per year (approx 110 litres/head/day) in line with the Mayor's SPG on Sustainable Design and Construction; and**
- **Development should be fitted with individual water meters for each tenancy / unit.**

(LBC Planning Guidance 51.12) Development of 1000m² or more in floorspace or that will provide 5 or more dwellings is expected to be designed, constructed and fitted such that it obtains at least 60% of the credits available under the Water element of the relevant BREEAM or EcoHomes Assessment.

Materials

(LBC Replacement UDP SD9C) The Council will seek developments that conserve resources through the use of recycled and renewable building materials. The Council may use conditions or planning obligations to secure recycling of materials on site and/or use of recycled aggregates in major schemes.

(LBC Planning Guidance 11.7) Materials should be recovered, re-used and recycled wherever possible.

(LBC Planning Guidance 27.5)
- **Materials and building components should be from sustainable sources.**
- **Recycled and salvaged materials should be used wherever possible.**
- **Materials should be sourced locally as far as possible.**
- **Where reused or local materials cannot be obtained, materials and building components should be prefabricated where possible and appropriate.**

- **Consideration should be given to the Building Research Establishment's (BRE) Green Guide to Specification for the sourcing of new materials, to minimise the impacts of the development on the environment and improve occupant safety and comfort.**
- **Materials not reused on site should be made available for reuse elsewhere.**

(LBC Planning Guidance 27.7) Development of 1000m² or more or 5 or more dwellings expected to be designed, constructed and fitted such that it obtains at least 40% of the credits available under the Materials element of the relevant BREEAM or EcoHomes Assessment.

5.3.2 *Proposed Development Performance*

Reducing carbon emissions is one of the fundamental design aims of any development adopting the principles of sustainable design, in order to mitigate the effects of global climate change and help conserve finite global fossil fuel resources.

An energy strategy for the site has been developed which adheres to the principles set out in the Mayor's Energy Strategy, the current London Plan and proposed Draft Further Alterations to the London Plan. The specific principles of the Energy Strategy are as follows:

- Using less energy
- Supplying energy efficiently
- Using renewable energy

5.3.2.1 *Reducing Energy Demand*

The building has been designed to be energy efficient. It benefits from good daylighting and has high efficiency lighting equipment and controls. The facades will be prone to high solar heat gains; therefore high performance glazing will be used to reduce the demands for cooling in the summer. The energy demand of this building has been significantly reduced through a number of energy efficiency measures. For example, the chilled beam system reduces overall building CO_2 emissions by 11% when compared with a more conventional fan coil unit installation. This is discussed in more detail with the Energy Statement submitted in support of this Planning Application.

At this stage it is proposed that the development will meet of the following objectives and targets:

- In order to reduce ventilation heat losses, the building will be constructed in compliance with Part L2 under Building Regulations 2006. Improved levels of insulation and air tightness will be achieved compared to the current situation on site.
- Energy efficient light fittings will be supplied in the office areas and will meet the requirements of Part L2. In the residential units internal lighting will meet the requirements of Part L1 and at least 75% of all of the fixed light fittings will be specified as dedicated low energy fittings.
- Lighting and heating controls will enable services to operate efficiently under different loadings and allow for localised control.
- High efficiency, low NO_X, gas condensing boilers will minimise emissions from the heating system.

5.3.2.2 *Supplying Energy Efficiency and Renewables*

In addition to the energy efficiency measures to reduce energy demand, the building will include renewable technologies in the form of ground source heating/cooling, solar water heating and PV panels.

A renewable energy feasibility study for Chichester House has been carried out by Faber Maunsell, investigating the contribution on site generation from renewable technologies could make to reduce the developments carbon emissions. This is reported in the Energy Statement submitted in support of the Planning Application. Potential CO_2 savings and capital costs from the following technologies have been reviewed for incorporation into Chichester House:

- Building mounted wind turbines
- Solar PV

- Solar thermal water heating
- Biomass heating
- Ground source heating
- Ground source cooling

The proposed solution is to use a combination of solar thermal water heating, solar PV and ground source heating and cooling. This solution produces CO_2 emissions savings of 6.55% for the Chichester House development.

5.3.2.3 *Water Efficiency*

It is the intention of the development to ensure that water use is minimised and controlled as appropriate. Chichester House proposes a low water use development. To ensure this aspiration is carried through and implemented within the development, minimum water use targets have been set for the new office and residential units.

The Mayor has set a minimum target for residential developments to achieve average water use in new residential development of less than $40m^3$ per bed space per year (approx.110 litres/head/day). The Mayor's water use target should be met as a minimum through incorporation of low water use technology. In line with the Mayor's standards the following targets have been set for the residential development:

- Water usage less than $40m^3$ per bed space per year (approx 110 litres/head/day)
- All toilets specified will be dual flush with maximum volumes of 6/4l flush;
- All taps fitted to toilet and washroom areas will be percussion self regulating taps fitted with flow regulators;
- All showers within the proposed development will have a maximum average flow rate of 9 litres/minute.
- No dishwasher/low water use dishwasher (max 12litres/cycle); and
- Low water use washing machine/washer dryer (max 40litres/cycle).

In addition, to enable water consumption to be monitored and managed by the future site users a water meter with a pulsed output will be provided for the retail and office elements of the development.

The new offices have a target water usage less than $4.4m^3$ per person per year inline with BREEAM Offices 2006. This target will be met through the specification of the following sanitary ware:

- dual flush toilets with maximum volumes of 6/4l flush;
- IR proximity control on urinals; and
- Showers with a maximum average flow rate of 9 litres/minute.

5.3.2.4 *Material use*

In order to ensure that the whole life environmental impact of construction materials has been considered in the selection of building materials within the proposed building, along with durability of the materials a Sustainable Materials Specification (or similar) will be drawn up in advance of construction, which the contractor will be required to sign up to. The specification will include the following:

- Guidance from the Building Research Establishment will be consulted on the acceptability of the schemes where timber will be sourced. It is anticipated that 90% of timber and timber products would be sourced from the following schemes: FSC, CSA (Canadian Standard's Association), SFI (Sustainable Forestry Initiative) or PEFC (Programme for the Endorsement of Forestry Certification, formally the Pan European Forest Certification Scheme);

- All insulation materials specified for use in the development (including insulants used in the building fabric and services) shall be free of CFCs both in their make up and manufacture, will not contribute to stratospheric ozone depletion and will have a global warming potential of less than 5. The use of asbestos is prohibited.

- Consideration to the overall environmental impact of construction materials, which should include their manufacture, installation, maintenance and destruction. Elements of the building will be appraised using the BRE 'Green Guide to Specification'. This guide

attributes a grade to materials based on their whole life environmental performance. The aim would be to obtain elements with the highest environmental rating i.e. A ratings.

- As discussed within Section 5.9.2.1, a building audit will be undertaken inline with the London Remade Demolition Protocol;
- In line with BREEAM credit MW7 and to reduce the amount of virgin material used within the development HEDF II UK are seeking to ensure that at least 25% of the aggregate used in the high grade aggregate uses on site will be from a recycled source.
- Specify materials that do not emit toxic substances, for example: low solvent finishing products; and avoid products which contain / emit formaldehyde;
- The scheme's design shall ensure that as many materials as possible are recoverable and reusable elsewhere. There will be no hybrid materials, and buildings can be easily dismantled;

5.4 Reduce the noise, pollution, flooding and microclimatic effects

5.4.1 Policies and Drivers

(LP SPG 2.4.2) Demonstrate that adverse impacts of noise have been minimised, using measures at source or between source and receptor (including choice and location of plant or method, layout, screening and sound absorption) in preference to sound insulation at the receptor, wherever practicable.

(LP SPG 2.4.3) All new gas boilers should produce low levels of NO_x.

(LP SPG 2.4.3) Take measures to reduce and mitigate exposure to air pollution

(LP SPG 2.4.4) Use of Sustainable Drainage Systems measures, wherever feasible

(LP SPG 2.4.4) Achieve 50% attenuation of the undeveloped site's surface water run off at peak times

(LP SPG 2.4.5) Mitigate any negative impact on the microclimate of existing surrounding public realm and buildings to meet the Lawson criteria for wind comfort

(LP SPG 2.3.2) Wherever outdoor lighting is proposed it should be energy efficient, minimising light lost to the sky.

(LP Further Alterations 4A.5vi) Developers seeking to develop a site at flood risk should undertake an appropriate flood risk assessment. All flood risk management proposals should avoid increasing flood risk to neighbouring areas

(LP Further Alterations 4A.2i) The Mayor will, and boroughs should, ensure future developments meet the highest standards of sustainable design and construction and reflect this principle in DPD policies.

- **reduce air and water pollution,**
- **manage flood risk, including though flood resilient design**
- **ensure developments are comfortable and secure for users**
- **conserve and enhance the natural environment, particularly in relation to biodiversity and enable easy access to open spaces**
- **avoid creation of adverse local climate conditions**
- **reduce adverse noise conditions**

(LP Further Alterations 4A.5vii) The Mayor will, and boroughs should, seek to ensure that surface water run-off is managed as close to its source as possible in line with the following drainage hierarchy:

- **store rainwater for later use**
- **use infiltration techniques, such as porous surfaces in non-clay areas**
- **attenuate rainwater in ponds or open water features for gradual release to a watercourse**

- **attenuate rainwater by storing in tanks or sealed water features for gradual release to a watercourse**
- **discharge rainwater direct to a watercourse**
- **discharge rainwater to a surface water drain**
- **discharge rainwater to the combined sewer.**

The use of sustainable urban drainage systems should be promoted for development unless there are practical reasons for not doing so. Developers should aim to achieve green field run off from their site through incorporating rainwater harvesting and sustainable drainage

(LBC Replacement UDP SD7) The Council will not grant planning permission for floodlighting or other forms of lighting, if it creates light pollution. Unless appropriate attenuation measures are available and are included, the Council will not grant planning permission for:
a) development likely to generate noise/vibration pollution; or
b) development sensitive to noise/vibration in locations with noise/vibration pollution.

(LBC Replacement UDP SD8A) The Council will only grant planning permission for plant or machinery, including ventilation or air handling equipment, if it can be operated without causing a loss to local amenity and does not exceed the thresholds set out in Appendix 1.

(LBC Replacement UDP SD9B) The Council will only grant planning permission for development that it considers is sited and designed in a manner that does not cause harm to the water environment, water quality or drainage systems and prevents or mitigates flooding. The Council will require developers to include measures to conserve water and where appropriate incorporate Sustainable Urban Drainage Systems.

(LBC Planning Guidance 4.6) In order to manage, improve and prevent any further deterioration of air quality in the Borough, the Council will require an air quality assessment with planning applications that could have a significant impact on air quality.

(LBC Planning Guidance 28.15) All development proposals that include the installation of plant, ventilation or air conditioning equipment will need to provide detailed acoustic/noise and vibration information in the form of a report at the planning application stage.

(LBC Planning Guidance 51.6) The Council will only grant planning permission for development that does not cause harm to the water environment, water quality or drainage systems and prevents or mitigates flooding.

5.4.2 Proposed Development Performance

5.4.2.1 Air Pollution

Operational air quality impacts from developments arise predominantly from the affect they have on road traffic, which is the main source of transport-related local air quality pollutants. Given that there is only one car parking space provided on site, that cycle parking with shower facilities will be provided for staff (as discussed further in Section 5.8 below) and the close proximity of transport nodes to the development it is considered that the development will have no impact on traffic related air quality during the operational phase of development.

The following measures will be implemented to minimise emissions to air by plant and machinery operating on the site:

- Low NO_X emission gas boilers will be specified within the scheme. The residential units will be provided with SEDBUK A rated NO_X class 5 gas condensing boilers, which have a dry NO_X emissions level of ≤70mg/kWh;
- All plant will be subject to regular servicing to maximise efficiency and minimise emissions; and
- Refrigerants with low global warming potential (GWP) will be sought.

Measures to mitigate construction stage air quality issues are discussed in the sustainable construction section below.

5.4.2.2 *Water Pollution and Flooding*

Due to the location of the proposed development within a complex urban area there is very limited opportunity to install soakaways or other sustainable drainage systems, particularly as there are limited open areas within the proposed development.

The current development discharges rainwater directly into the sewers. Given that there is to be no increase in the building's footprint or significant increase in the roof area as a result of the proposals it is anticipated that there will be no significant increase in runoff rates from the site.

There are no water courses within 500m of the site therefore there is limited potential for the development to impact on any watercourse or areas of open water. Notwithstanding this, all fuels storage areas will be fully bunded and pose little risk of polluting surface run off.

As discussed within Section 5.2.1.2 above the site is located in the 1 in 1000 year flood risk, as designated by the Environment Agency. Therefore a Flood Risk Assessment has not been undertaken and flood mitigation measures have not been developed.

5.4.2.3 *Noise Pollution*

An environmental noise survey of Chichester House has been carried out by Sandy Brown Associates. The purpose of the survey was to establish the background noise climate in the area surrounding the site and the nearest residential properties in order to assess the potential noise impact from the plant associated with the existing premises.

The nearest noise sensitive premises were identified to be the flats behind the existing Penderel's Oak pub on the south of High Holborn, just to the east of the site. The nearest window is estimated to be around 15m from the logging position. A noise monitoring survey was undertaken at a position considered to be representative of the noise levels at the residential window.

The noise assessment concluded that based upon London Borough of Camden's requirements, the total noise produced from the proposed plant associated with the site should not exceed the maximum allowable limits.

The residential development will meet Building Regulation sound insulation levels and HEDF II UK has committed to carrying out a programme of pre-completion testing to meet the EcoHomes criteria for sound insulation.

In line with BREEAM Retail Credit P13, it is proposed that the future retail tenant will be required to carry out a "plant noise assessment" in compliance with BS 4142:1997 on the plant to be installed in the retail unit, and for the tenant to act on any noise abatement recommendations made as a result of the assessment.

Noise and vibration mitigation measures being proposed as during construction phase are detailed in Section 5.9 below.

5.4.2.4 *Light Pollution*

An environmentally responsible lighting design has been proposed, that will improve the lighting quality of the development. This includes improved lighting on the walkway to the east of the site.

In line with BREEAM Office credit P12, Reduction of Night Time Lighting Pollution all other external lighting will be designed in compliance with the Institute of Lighting Engineers Guidance notes for the reduction of obtrusive light, 2005. Lighting will be automatically switched off between 2300 and 0700.

5.4.2.5 *Microclimate*

The new development is being contained within the same envelope area as the existing building. It is therefore considered that there will be no negative impact on the microclimate of the area and no impact on the wind environment at ground level in the vicinity of the development.

5.5 Ensure developments are comfortable and secure for users

5.5.1 Policies and Drivers

(LP SPG 2.5.2) Inert or low emission finishes, construction materials, carpet and furnishings should be used wherever practical.

(LP SPG 2.5.2) All plant and machinery should be accessible for easy maintenance.

LP SPG 2.5.3) All developments should meet the principles of inclusive design, adopting the principles of SPG "Accessible London: Achieving an Inclusive Environment".

LP SPG 2.5.3 All residential development should meet Lifetime Homes standards and 10% should meet wheelchair accessibility standards (London Plan Policy 3A.4)

(LP SPG 2.5.4) Developments should incorporate principles of "Secured by Design".

(LP Further Alterations 4B.5) Creating an inclusive environment. The Mayor will require all future development to meet the highest standards of accessibility and inclusion. DPD policies should integrate and adopt the principles of inclusive design so that developments:

- **can be used safely, easily and with dignity by all regardless of disability, age, gender, ethnicity or financial circumstances**
- **are convenient and welcoming with no disabling barriers, so everyone can use them independently without undue effort, separation or special treatment**
- **are flexible and responsive taking account of what different people say they need and want, so people can use them in different ways**
- **are realistic, offering more than one solution to help balance everyone's needs, recognising that one solution may not work for all.**

(LP Further Alterations 4A.2i) Ensure developments are comfortable and secure for users.

(LBC Replacement UDP H7) The Council will encourage all new housing developments, including changes of use and conversions, to be accessible to all. All new housing should be built to 'Lifetime Homes' standards and ten per cent of new housing should be designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users.

5.5.2 Proposed Development Performance

5.5.2.1 Public Safety and Crime Prevention

Given the development's location within an area heavily used by pedestrians the development is not considered a high security risk.

However the Principles of Secured by Design will be applied as far as applicable to the development and the following security features will be incorporated as part of the proposed development:

- Provision of a security desk with a security guard in attendance at the entrance to the office areas;
- Provision of CCTV Network;
- The proposed development will increase the security level on site by the redevelopment of a currently vacant building.

All of the residential external doors and windows specified for the development will meet the minimum security standards LPS1175 SR1 (all doors and windows) or PAS24-1 (all external pedestrian doorsets falling within scope of PAS24-1) and BS7950 (all windows falling within the scope of BS7950).

A new lighting design and new paving proposed for Great Turnstile to the east of the site will improve security in the vicinity of the development. A lobby on the eastern side of the building will also help to improve the security of the development.

5.5.2.2 *Access*

The residential units in the new development are designed to meet or exceed current Lifetime Homes Standards. The Mayors' requirement for 10% of housing to meet wheelchair accessibility standards will not be applied at Chichester House since there are only 6 residential units.

5.5.2.3 *Comfortable Internal Environment*

To ensure a comfortable internal environment for future development users the following measures are proposed:

- A Sustainable Materials Specification will be drawn up in advance of construction, which the contractor will be required to sign up to. This specification will seek to specify low emission materials to be used in the development.
- All plant will be subject to regular maintenance and inspection avoiding any risk of carbon monoxide emissions. All mechanical plant, refrigeration and fixed electrical plant will be maintained annually as a minimum. All plant is located to be accessible for easy maintenance.
- Maximised use of natural light into buildings and occupants to benefit from localised glare, temperature and lighting controls.

The impact of a building on the health and wellbeing of the future building users is assessed under BREEAM and EcoHomes. The pre-assessment exercise undertaken in support of the planning application anticipates that 77% of available Health and Wellbeing credits will be achieved under the Offices scheme and 66% of credits would be achieved under BREEAM Retail. The EcoHomes pre-assessment anticipates that credits will be achieved under EcoHomes Daylighting credit, Hea 1 and Sound Insulation credit, Hea 2. For further details see BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application.

5.6 Conserve and enhance the natural environment and biodiversity

5.6.1 *Policies and Drivers*

(LP SPG 2.6.2) No net loss of publicly accessible open space.

(LP SPG 2.6.2) Create appropriate new open, green publicly accessible space where these can address identified areas of deficiency of public open space.

(LP SPG 2.6.3) No net loss of biodiversity and access to nature on the development site.

(LP SPG 2.6.3) Reduction in areas of deficiency of access to nature.

(LP Further Alterations Policy 4A.2i)
- **Conserve and enhance the natural environment, particularly in relation to biodiversity and enable easy access to open spaces.**
- **Encourage major developments to incorporate living roofs and walls where feasible**

(LBC Replacement UDP N4) To ensure that public open space deficiency is not created or made worse, the Council will only grant planning permission for development that is likely to lead to an increased use of public open space where an appropriate contribution to the supply of public open space is made. Other developments will be encouraged to contribute to the supply of open space.

(LBC Replacement UDP N5) In assessing planning applications, the Council will expect development schemes to have considered conserving and enhancing biodiversity, including by creating wildlife habitats.

(LBC Replacement UDP N6B) The Council will seek the creation of new nature conservation sites in areas identified on Map 3: Nature Conservation Deficiency.

5.6.2 Proposed Development Performance

5.6.2.1 Open Space

As a result of the development there will be a net gain of publicly accessible open space in Great Turnstile. The south east corner of the new building will not fully extend to the site boundary, creating more open space in the new development. The space will become a legible and coherent space that will be well lit, with high quality finishes and street furniture and with sensitive modern architecture on either side.

At street level, high quality finishes such as York stone, will replace the existing tarmac. Lighting will improve the ambience and aesthetic, while addressing the safety issues that currently detract from the environment. The widening of Great Turnstile will allow for innovative lighting artwork, which will help to enrich the identity of this new urban space. Bollards at the southern end of Great Turnstile will contain the new space and prevent interference from traffic. There will also be the potential for cycle parking.

5.6.2.2 Natural Environment and Biodiversity

In line with BREEAM for Offices and EcoHomes criteria a professional has been appointed to advise and report on enhancing and protecting the ecological value of the site. The professional's recommendations will be implemented for general enhancement and protection of site ecology.

As a result of the development there will be a net gain of publicly accessible open space. There will be a small increase in the ecological value of the site since the existing site footprint is being redeveloped and the proposed building will incorporate green roofing on the 4th and 5th floor level south terraces.

5.7 Promote sustainable waste behaviour

5.7.1 Policies and Drivers

(LP SPG 2.7.2) Minimise, reuse, and recycle demolition waste.

(LP SPG 2.7.2) Specify use of reused or recycled construction materials

(LP SPG 2.7.2) Provide facilities to recycle or compost at least 25% of household waste by means of separated dedicated storage space. By 2010 this should rise go 35%.

(LP SPG 2.7.2) Recycling facilities should be as easy to access as waste facilities

(LP SPG 3.2) Reduce waste during construction and demolition phases and sort waste stream on site.

(LP Further Alterations 4A.2i)

- **promote sustainable waste behaviour in new and existing developments, including support for local integrated recycling schemes, CHP and CCHP schemes and other treatment options.**

(LP Further Alterations 4A.2*)* The Mayor will and DPD policies should:

- **require the provision of suitable waste and recycling storage facilities in all new developments.**

(LP Further Alteration 4A1) Achieve recycling and re-use levels in construction, excavation and demolition waste of 95 per cent by 2020.

(LBC Replacement UDP SD12) The Council will not grant planning permission for development that does not make adequate provision for the sorting and storage of waste materials. For major developments, the Council will use planning conditions to secure local waste management solutions.

Residential development

(LBC Planning Guidance 50.7) Residential development of 6 dwellings or fewer is serviced by a kerbside waste and recyclables collection. Recycling green boxes and bags are stored inside and taken to the kerbside on collection days. Storage for both waste and recyclables must be provided both inside each dwelling for daily disposal and outside the buildings within the curtilage for weekly storage.

(LBC Planning Guidance 50.9) Internal storage must provide for both non-recyclable waste and mixed recyclables. Capacity for recycling must have equal, if not greater, capacity than storage for nonrecyclable waste. Mixed recyclables are collected in either green bags (30 litre) or from green boxes (55 litre). Adequate space to accommodate either a 30-litre bin (for the green bag inserts) or the 55-litre box must be provided in the same location as the receptacle for the non-recyclable waste.

(LBC Planning Guidance 50.10) External storage areas:
- **should not be located near ground storey windows.**
- **should be within 3 metres of an external door to a house, or within 10 metres of an external door for flats, and within 20 metres of a suitable place that a collection vehicle can stop.**
- **must be safe for users by being well lit and visible from public vantage points and nearby dwellings / tenancies.**
- **should be unroofed, unless they are fully enclosed and secured.**
- **should not impede pedestrian or vehicular access on public thoroughfares or to and from buildings.**
- **should be located as close to the front property boundary as possible, preferably behind the front boundary wall, without detracting from the street scene. No waste can be stored on the public highway/pavements.**

Non-residential development

(LBC Planning Guidance 50.29) External storage must be provided to allow for the amount of recyclable and nonrecyclable waste that is expected to be produced by a development. As a guide, approximately 1m³ storage space is required for every 300-500m² of commercial space. This figure includes both recyclable and non-recyclable waste. Storage space must be designed to accommodate bins to hold this amount of waste, separated, and should be designed in consultation with the waste collection contractor.

(LBC Planning Guidance 50.31) External waste storage areas:
- **should be in an enclosed chamber that can be accessed from outside the building. They should be secured to protect them from disturbance by vermin and scavengers.**
- **should not be located near ground storey windows. They should be located within 10 metres of an external access.**
- **must be safe for users by being well lit and visible from public vantage points and nearby dwellings / tenancies.**
- **should be unroofed unless they are fully enclosed and secured.**

(LBC Planning Guidance 50.32) External storage areas and collection points must be as close as possible to, and preferably within 10 metres of, a place suitable for a collection vehicle to stop. Storage facilities must be at or near street level, and should be accessible via appropriately sized and graded ramps to allow bins to be wheeled to and from the collection point easily.

(LBC Planning Guidance 50.35) Waste and recyclables from residential and commercial components of a development must be stored separately, but they should be stored using the same container type to facilitate ease of collection.

5.7.2 Proposed Development Performance

Waste is a significant environmental concern. It has been identified by Government, Regional and Local Authorities that a significant change in current practices needs to be adopted to

minimise the volumes of waste produced and to divert waste away from being disposed to landfill.

5.7.2.1 *Operational Waste*

A dedicated recycled waste storage area will be provided within the basement of the new building.

Non-residential development

In line with BREEAM for Offices 2m^2 of storage space will be provided in the development per 1000m^2 of net floor area. In addition, the LBC Planning Guidance details that 1m^3 of storage is required for every 300-500m^2 of commercial space and the location of external waste area is to be within 10m of an external access, which will be complied with tithing the proposed development.

Offices produce significant amounts of waste from paper to electronic goods. In order to mitigate this impact and reduce waste generation to landfill, tenants will be encouraged to apply the following principles as far as feasible within the redevelopment:

- Reduce: investigate opportunities to reduce directly the amount of products that is purchased and used within the office;
- Re-use: choose reusable instead of disposable ones;
- Recycle: set up a system for collection and recycling of at least paper, printer cartridges, toner cartridges, plastics and aluminium;
- Responsibly dispose: ensure that waste is disposed of in accordance with current waste legislation;
- Development of appropriate waste recycling targets, in line with legislation requirements;
- Monitoring of progress against targets.

This information will be provided in the building user's guide.

Residential development

In line with EcoHomes 2006, both internal and external recycling storage facilities will be provided in the development. The LBC operates a green box recycling scheme. The following items can be collected as part of the scheme:

- Glass bottles and jars;
- Metal;
- Paper;
- Cardboard; and
- Plastic bottles.

In line with LBC Planning Guidance the following facilities will be provided within the residential element of Chichester house:

- Recycling green boxes and bags are to be stored inside and taken to the kerbside on collection days;
- Capacity for recycling must have equal, if not greater, capacity than storage for nonrecyclable waste. Mixed recyclables are collected in either green bags (30 litre) or from green boxes (55 litre);
- External storage areas should be within 10 metres of an external door for flats, and within 20 metres of a suitable place that a collection vehicle can stop.

5.7.2.2 *Construction Waste*

Construction waste is discussed in Section 5.9 below.

5.8 Sustainable Transport

5.8.1 Policies and Drivers

(LP SPG 2.2.3) Design in facilities for bicycles and electric vehicles.

(LBC Replacement UDP T1)

- **The Council will grant planning permission for development that would encourage travel by walking, cycling and public transport. The Council will not grant planning permission that would be dependent on travel by private motor vehicles.**
- **The Council will require applicants to provide a Transport Assessment in support of any development that significantly increases travel demand or would otherwise have a significant impact on travel or the transport system.**
- **The Council will require applicants to provide a Travel Plan to manage travel arising from any development that significantly increases travel demand or would otherwise have a significant impact on travel or the transport system.**

(LBC Replacement UDP T3)
The Council will only grant planning permission for development that it considers to make satisfactory provision for pedestrians and cyclists.

(LBC Replacement UDP T8) The Council will particularly seek car free housing or car capped housing in the Central London Area. For car free housing and car capped housing, the Council will:
e) not issue on-street residential parking permits;
f) use planning obligations to ensure that future occupants are aware they are not entitled to on-street parking permits; and
g) not grant planning permission for development that incorporates car parking spaces, other than spaces designated for people with disabilities, and a limited number of spaces for car capped housing in accordance with Council's Parking Standards.

5.8.2 Proposed Development Performance

No car parking is to be provided on site and cycle parking with shower facilities will be provided for staff. This will discourage people from driving to the development and will encourage cycling by staff.

In line with EcoHomes 2006, residential cycle spaces will be provided on the following basis:

- Studio and 1 bedroom flat/house to provide storage for 1 cycle
- 2 and 3 bedroom flats/houses to provide storage for 2 cycles

The storage provision will be provided in dedicated cycle storage space in the basement of the building.

In line with BREEAM Office requirements 28 covered and secure cycle spaces are being proposed within the scheme with compliant showers. In addition compliant changing facilities or a compliant drying space proposed to enable full marks to be achieved under this credit. This is discussed further within BREEAM and EcoHomes 2006 Pre-Assessment document submitted in support of the planning application.

Given the sites location within close proximity to a number of public transport nodes, including being within 500m of two underground stations and the absence of car parking within the scheme, it is considered that there will not be a significant increase in road traffic movements as a result of the operational phase of the development. In line with BREEAM Offices, a Green Travel Plan has been commissioned for the new development. The travel plan will meet the needs of the particular site and take into consideration the following (as a minimum):

- Current local environment for walkers and cyclists
- Public transport links serving the site
- Current facilities for cyclists

Construction phase traffic is discussed within Section 5.9 below.

5.9 Sustainable Construction

5.9.1 Policies and Drivers

(LP SPG 3.2) Reduce waste during construction and demolition phases and sort waste stream on site where practical

(LP SPG 3.2) Reduce the risk of statutory nuisance to neighbouring properties as much as possible through site management

(LP SPG 3.2) All developers should consider and comply with the Mayor and ALG's London Best Practice Guide on the control of dust and emissions from demolition and construction

(LP SPG 3.2) Comply with protected species legislation

(LP SPG 3.2) All developers should consider and comply with the Mayor and ALG's London BPG on the control of dust and emissions during construction and demolition

(LP Further Alterations 4.2 Ai) Developers should use best practice and appropriate mitigation measures to reduce the environmental impact of demolition and construction.

(LP Further Alterations 4A.2) The Mayor and ALG London Best Practice Guidance on the control of dust and emissions during demolition and construction addresses environmental impact, including minimising emissions of dust and construction plant and vehicles emissions.

(LBC Replacement UDP SD12) The Council will seek to secure the re-use and recycling of construction waste on sites provided adverse impacts from noise, dust and transport are minimised. On larger sites, the Council may require details of working methods and make conditions and agreements about how the work is carried out.

(LBC Replacement UDP SD8B) The Council will seek to minimise the impact on local amenity from the demolition and construction phases of development. Where these phases are likely to cause harm, due to their duration, scale, location or complexity, planning conditions may be used to minimise the impact.

(LBC Planning Guidance 11.11) Construction and demolition processes are expected to be conducted in accordance with Considerate Constructors Scheme standards. Construction and demolition processes are also expected to conform to the Demolition Protocol.

5.9.2 Proposed Development Performance

The environmental impact of the construction phase will be minimised by the implementation of the "Considerate Contractors' Scheme". Compliance with this scheme indicates that a site is achieving a standard beyond statutory requirements.

5.9.2.1 Waste

The London Remade Demolition Protocol (funded by the Institution of Civil Engineers [ICE]) has been reviewed. Compliant with ICE's Demolition Protocol, a building audit will be undertaken to identify the range and quantity of material to be produced from demolitions and the potential for recovery.

Opportunities will be investigated to maximise the recycling potential of demolition and construction materials. Recyclable materials such as metals, timber, cardboard and office paper, will be put in colour coded bins, ready for collection by the appropriate contractors.

However, due to the restrictions of the site and the design of the building it is unlikely that Chichester House will be able to comply in all respects with the Demolition Protocol since it requires 80% of materials from demolition to be re-used in the development.

All wastes will be subject to controlled collection and storage on-site, to keep the construction site tidy, avoid unsightly accumulations of waste and minimise dust, pest infestation, odour and

litter. Wastes will not be stored in areas of the site adjacent to sensitive receptors. During construction, materials will be carefully stored and protected on site to prevent waste due to accidental damage. Waste streams will be sorted and waste arisings monitored during construction.

All residual waste will be removed from site by licensed carriers to suitable licensed disposal sites. Suitable disposal sites will be identified in consultation with the local authorities and the Environment Agency. Waste transfer notes will be held by the Construction Manager and will fully describe the waste in terms of type, quantity and containment in accordance with the relevant regulations.

5.9.2.2 *Materials*

Material selection during the construction phase is discussed in more details within Section 5.3.2.4 above. Use of prefabricated and modular construction will be used wherever feasible. The use of prefabrication can reduce total energy uses in the construction phases, speed up assembly, reduce waste, noise and dust impacts associated with in situ construction.

5.9.2.3 *Site Pollution*

To minimise any potential pollution issues which could result from the construction phase the following mitigation measures will be implemented during the construction phase.

Specific Air Quality and Dust Control measures will be:

- Dampening down during demolition activities will be undertaken as required to assist with preventing dust pollution;
- Stockpiled materials should be located to take account of the prevailing wind and any sensitive receptors, where practicable. Stockpiles should be dampened;
- Dust sources such as skips, stockpiles and delivery lorries should be covered;
- Roadways (including haul roads), construction sites and dust generating activities such as stone cutting should be dampened and swept when required;
- A wheel washer facility will be used on site, as appropriate;
- Low emission vehicles and plant equipment to be used particularly for on-site generators;
- Activities that may affect air quality or generate dust should be located away from sensitive human receptors and ecological resources whenever possible;
- Construction vehicles delivering and removing materials and plant to the site will be managed in such a way so as to minimise impacts. The vehicles will be obliged to use predetermined routes, agreed with LBC prior to construction;
- If vehicles are left standing at the construction site for significant periods of time, their engines will be turned off;
- Stationary construction plant, such as cranes and generators, would be positioned to minimise impacts from exhaust gases. In addition the contractor will ensure all construction plant is maintained in a satisfactory manner so as to minimise emissions; and
- Contractors will give consideration to the Mayor of London and ALG's London Best Practice Guide on the control of dust and emissions from demolition and construction.

Biodiversity and Pollution Prevention Measures will include:

- Contractors will comply with all protected species legislation, where relevant given the lack of habitat on site;
- Provision of adequate and properly maintained spill kits;
- Service drawings will be made available and used on site to prevent any damage to underground services including water supplies and drains;
- No plant or bowser to be permitted within 10m of road gullies;

- Appropriate arrangements will be made for storage of oils and hazardous waste to minimise pollution risk including compulsory use of bunded fuel browsers, drip trays and spill kits on site;
- To prevent silty runoff from site, particularly during any de-watering, pumps running to silt traps will be incorporated where applicable;
- Discharge to sewers will only be undertaken with approval of the local authority and / Environment Agency; and
- Where wheel wash is implemented it will be cleaned out by a gulley sucker and waste removed to licensed carrier.

Construction Noise and vibration levels will be limited and controlled as far as reasonably practicable, so that sensitive receptors in the area are protected from excessive noise and vibration. The Contractor shall be required to demonstrate that Best Practicable Means (BPM), as defined in Section 72, Part III, of the Control of Pollution Act (COPA) 1974, has been applied to all works.

Publicity would include the name and telephone number of a main contact within the contractor's organisation who is able to give further information and deal with any complaints or emergencies that may arise at any time.

All equipment used on site will be as efficient as possible and well maintained to minimise energy use and emissions. This includes the vehicles that transport materials and personnel to and from site.

5.9.2.4 *Transportation*

Efficient transportation planning is a key component of the construction process, with sub-contractors who deliver to the development site being backloaded with either recyclable construction materials or other related operations organised through the haulier company.

6 Conclusion

6 Conclusion

The proposal for the redevelopment of Chichester House contributes to sustainable development in relation to key sustainability issues as follows:

Sustainable location for development	The proposed development at Chichester House intends to reuse a brownfield location in London's High Holborn neighbourhood. The site currently contains an unoccupied eight-storey office and retail building which is in poor condition and not suitable for modern office environments. The current site has under used potential which would be realised by the proposals. The density of the development will be maximised without increasing the footprint from the current building on site, creating an uplift of 1,275m^2.
Flexibility of Design	Consideration has been given to ensuring flexibility of design so that change of use, different working methods, and changing demand can be accommodated within the building, thus ensuring a maximum lifespan for the building.
Minimised use of mechanical ventilation, heating and cooling	Consideration has been given to minimising the need for heating and cooling within the proposed development. High performance glazing is proposed for the office and retail elements to reduce the solar gain of the building. Chilled beams, which have lower energy consumption than conventional cooling system, are proposed for the office area. The residential building will be naturally ventilated, except for a mechanical extract system specified for the bathrooms.
Adaptation to Climate Change	Consideration has been given to adaptation to climate change. The main location specific design issues related to climate change are: • Risk of flooding; • Water resources; • Higher temperatures; and • Subsidence.
Reduction of Energy Use	Energy consumption will be reduced though energy saving measures including improved levels of insulation and air tightness, energy efficient light fittings and control operations through a BMS. A renewable energy feasibility study has been undertaken and proposes a combination of solar water heating, PV panels and ground source heating/cooling.
Water efficiency	Chichester House proposes a low water use development. To ensure this aspiration is carried through and implemented within the development, minimum water use targets have been set for the new office and residential units. These include: • Residential water usage less than 40m^3 per bed space per year; and • Water usage of less than 4.4m^3 per person per year for commercial offices.

Use of building material	In order to ensure that the whole life environmental impact of construction materials has been considered in the selection of building materials within the proposed building, along with durability of the materials a Sustainable Materials Specification (or similar) will be drawn up in advance of construction, which the contractor will be required to sign up to.
Reduction of noise, pollution, flooding and microclimatic effects	It is considered that the development will have no impact on traffic related air quality during the operational phase of development. Measures will be implemented to minimise emissions to air by plant and machinery operating on the site such as low NO_X emission gas boilers. An environmental noise survey carried out by Sandy Brown Associates concluded that the total noise produced from the proposed plant should not exceed the maximum allowable limits.
Provision of a comfortable and secure development	Consideration has been given to public safety and crime prevention; access for all site users; and the provision of a comfortable internal environment in the development of Chichester House.
Conserve and enhance the natural environment and biodiversity	As a result of the development there will be a net gain of publicly accessible open space. There will be a small increase in the ecological value of the site since the existing site footprint is being redeveloped and the proposed building will incorporate green roofing on the 4^{th} and 5^{th} floor level south terraces.
Promote sustainable waste behaviour	A dedicated recycled waste storage area will be provided within the basement of the new building for office, retail and residential use. This storage area is inline with BREEAM and EcoHomes criteria for external storage of recyclable waste. The residential units of Chichester House will also have an internal storage area in each of the dwellings in line with EcoHomes criteria.
Sustainable transport	The site is located in close proximity to a number of public transport nodes, including being within 500m of two underground stations. It is considered that there will not be a significant increase in road traffic movements as a result of the operational phase of the development and no car parking is proposed on site (only one disabled car parking space for visitors). Residential cycle storage facilities will be provided in the basement of the new building in line with EcoHomes criteria.
Sustainable Construction	The environmental impact of the construction phase will be minimised by the implementation of the “Considerate Contractors’ Scheme”.

7 Appendix A: Mayor of London SPG on Sustainable Design and Construction Checklist

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
Section 2.1 Re-use land and buildings				
Land 2.1.2	100% of development on previously developed land, unless very special circumstances can be demonstrated			The proposed development at Chichester House intends to reuse a brownfield location in London's High Holborn neighbourhood. The current site has under used potential which would be realised by the proposals. (Section 5.1.2)
	Development density should be maximised based on local context (Policy 4B.7) design principles (Policy 4B.1) open space provision (Policy 3D.10) and public transport capacity (Policy 3D.10). Residential development will be assessed on the Matrix of Sustainable Residential Density in the London Plan (Table 4B.1).			In line with Policy 4B.1 and Table 4B.1 of the London Plan, the density of the development will be maximised without increasing the footprint from the current building on site. The proposed development at Chichester House creating an uplift of 1,275m^2 gross external area. (Section 5.1.2)
Buildings 2.1.3	Existing building are reused where practicable, where the density of development and residential amenity are optimised and where the building conforms or has the potential to meet the standards for energy, materials, biodiversity and water conservation set out in this SPG		Para 4.1iv: The Mayor supports an integrated, multi-agency approach, which promotes retrofitting existing buildings. Currently, these contribute about 73% of carbon dioxide emissions. Precedence should be given to retrofitting over demolition wherever practical.	The site currently contains an unoccupied eight-storey office and retail building which is in poor condition and not suitable for modern office environments. The current site has under used potential which would be realised by the proposals. (Section 5.1.2)
		Existing roof space is reused where practicable to create new outdoor spaces and enhance biodiversity alongside the integration of renewable energy.		The 4th and 5th floor level south terraces of Chichester House will be green roofs. It is assumed that there will be a small increase in the ecological value of the site from the green roof. (Section 5.6.2.2)

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
Section 2.2 Maximise use of natural systems				
Location and urban design 2.2.2	All development to follow the principles of good design set out in London Plan policy 4B.1			The design statement details how the development meets the principles of good design and complies with Policy 4.B.1.
	Minimise need for and use of mechanical ventilation, heating and cooling systems			Consideration has been given to minimising the need for heating and cooling within the proposed development. High performance glazing is proposed for the office and retail elements to reduce the solar gain of the building. The residential building will be naturally ventilated, except for a mechanical extract system specified for the bathrooms. (Section 5.2.1.1)
Adapting to Climate Change 2.2.3	Buildings provide for flexibility of uses during their projected operational lives			Consideration has been given to ensuring flexibility of design so that change of use, different working methods, and changing demand can be accommodated within the building, thus ensuring a maximum lifespan for the building. (Section 5.2.1.1)
	Buildings adapt to and mitigate for the effects of the urban heat island and the expected increases in hot dry summers and wet mild winters		Policy 4A.15 Tackling climate change The Mayor will and boroughs should in their DPDs require developments to make the fullest contribution to the mitigation of and adaptation to climate change.	Consideration has been given to adaptation to climate change. The main location specific design issues related to climate change that have been addressed are: • Risk of flooding; • Water resources; • Higher temperatures; and • Subsidence. (Section 5.2.1.2)
	Design in facilities for bicycles and electric vehicles			In line with EcoHomes 2006 and BREEAM Office requirements, covered and secure cycle spaces are being proposed within the scheme. (Section 5.8.2)

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
Section 2.3 Conserve energy, water and other resources				

Energy 2.3.2	• Carry out an energy demand assessment
	• Maximise energy efficiency
	• Major commercial and residential developments to demonstrate that consideration has been given to the following ranking method for heating and cooling systems:
	  • Passive design
	  • Solar water heating; then
	  • Combined heat and power (if possible trigeneration), preferably fuelled by renewables; then
	  • Community heating; then
	  • Heat pumps; then
	  • Gas condensing boilers; and then
	  • Gas central heating.
		All developments to demonstrate that consideration has been given to the following ranking method for heating systems: and should incorporate the highest feasible of the following options:
		• Solar water heating; then
		• Combined heat and
		• Power/trigeneration, preferably fuelled by renewables; then
		• Community heating.
		• New developments should always be connected to existing community heating networks where feasible.
			Policy 4A.8 - Energy Assessment requires that the Mayor's Energy Strategy and its objectives of improving energy efficiency and increasing the proportion of energy used generated from renewable sources is supported
			
			Policy 4A.5i Decentralised Energy: Heating Cooling and Power requires that all developments demonstrate that their heating, cooling and power systems have been selected to minimise CO_2 emissions
				A renewable energy feasibility study has been carried out for Chichester House and is reported in the Energy Statement. The report covers preferred methods of reaching renewable and energy efficiency targets.
				
				Chichester House will include renewable technologies in the form of ground source heating/cooling, solar water heating and PV panels. (Section 5.3.2.2)
				
				Chichester House has been designed to be energy efficient, it benefits from good daylighting and has high efficiency lighting equipment and controls. The energy demand of the building has been significantly reduced through a number of energy efficiency measures. For example, the chilled beam system reduces overall building CO_2 emissions by 11% when compared with a more conventional fan coil unit installation. (Section 5.3.2.1)

	Wherever outdoor lighting is proposed as part of a development it should be energy efficient, minimising light lost to sky.	Wherever outdoor lighting or other electrically powered street furniture is proposed, on site, it should be solar powered and minimise light lost to the sky		In line with BREEAM Offices all other external lighting will be designed in compliance with the Institute of Lighting Engineers Guidance notes for the reduction of obtrusive light, 2005. Lighting will be automatically switched off between 2300 and 0700. (Section 5.4.2.4)
		Lighting ,heating and cooling controls should enable services to operate efficiently under different loadings and allow for localised control.		Lighting and heating controls will enable services to operate efficiently under different loadings and allow for localised control.
	Carbon emissions from the total energy needs (heat, cooling and power) of the	Major developments should be zero carbon emission	Policy 4A.7 Renewable Energy The Mayor will and boroughs	Through the range of proposed renewable technologies the site will achieve a reduction

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
	development should be reduced by at least 10% by the on-site generation of renewable energy.	developments (ZEDs). Major developments should make a contribution to London's hydrogen economy through the adoption of hydrogen and/or fuel cell technologies and infrastructure	in their DPDs should require developments to achieve a reduction in carbon dioxide emissions of 20% from onsite renewable energy generation. Energy Assessment.	in carbon dioxide emissions of 6.55% from onsite renewable energy generation. (Section 5.3.2.2)
Materials 2.3.3	Insulation materials containing substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming must not be used.	No construction nor specification of material with high embodied impact to be used (as defined by the summary ratings in the Green Guide to specification) unless compelling whole life energy or technical case for its use exists. No peat or natural weathered limestone used in buildings or landscaping	Developers should use best practice and appropriate mitigation measures to reduce the environmental impact of demolition and construction.	All insulation materials specified for use in the development shall be free of CFCs both in their make up and manufacture, will not contribute to stratospheric ozone depletion and will have a global warming potential of less than 5. The use of asbestos is prohibited. (Section 5.3.2.4)
	50% timber and timber products from Forest Stewardship Council (FSC) source and balance from a known temperate source.	90% structural timber from FSC source and the balance of timber products from a known temperate source		It is anticipated that 90% of timber and timber products are to be specified from a certified sustainable source. (Section 5.3.2.3)
	Minimise use of new aggregates	10% total value of materials used to be derived from recycled and reused content in products and materials selected.	Policy 4A.2i The Mayor will and boroughs should ensure that developments minimise the use of new aggregates and do not use insulating and other materials containing substances which contribute to climate change through ozone depletion.	It is proposed that at least 25% of the aggregate used in the high grade aggregate uses on site will be from a recycled source. (Section 5.3.2.3)
		Before demolition, appraisal of maximising recycling of materials by use of ICE's Demolition Protocol.		A building audit will be undertaken to identify the range and quantity of material to be produced from demolitions and the potential for recovery. (Section 5.9.2)

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
Water 2.3.4	Residential developments to achieve average water use in new dwellings of less than 40m^3 per bedspace per year (approximately 110 litres/head/day)	Residential developments to achieve average water use in new dwellings of less than 25m^3 per bedspace per year (approximately 70 litres/ head /day)	Policy 4A.11 In determining planning applications, the Mayor will and boroughs should have proper regard to the impact of those proposals on water demand and existing capacity. The Mayor will and boroughs should apply a maximum water use target of 40m^3 per bedspace per year for residential development.	In line with the Mayor's standards and EcoHomes 2006 a target of less than 40m^3 per bed space per year has been set for the residential units of Chichester House. In addition, in line with BREEAM Offices 2006, a target of less than 4.4m^3 per person per year has been set for the offices. (Section 5.3.2.3)
	100% metering of all newly built property.			100% water metering of all developments will be required. (Section 5.3.2.3)
		Use of greywater for all non-potable uses	4.25i Currently only a small percentage of potable water is used for drinking. Many uses of potable water, for example for car washing could be supplied from grey water sources. The Mayor is working with the Government towards a standard for grey water supplies. In the future, this should encourage the installation of dual water systems in new buildings.	A number of water efficiency measures have been proposed for the new building in line with BREEAM and EcoHomes guidelines as detailed in Section 5.3.2.3.

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
Section 2.4 Reduce noise, pollution, flooding and microclimatic effects				
Noise 2.4.2	Demonstrate that any adverse impacts of noise have been minimised, using measures at source or between source and receptor (including choice and location of plant or method, layout, screening and sound absorption) in preference to sound insulation at the receptor, wherever practicable.			An environmental noise survey carried out by Sandy Brown Associates concluded that the total noise produced from the proposed plant should not exceed the maximum allowable limits. (Section 5.4.2.3)
		For residential development achieve BS 8233:1999 (Table 5) 'good' standards for external to internal noise and improve on Building Regulations (2003) Part E for internal sound transmission standards by 5dB.		The residential development will meet Building Regulation sound insulation levels and HEDF II UK has committed to carrying out a programme of pre-completion testing to meet the EcoHomes criteria for sound insulation. (Section 5.4.2.3)
Air Pollution 2.4.3	All new gas boilers should produce low levels of NO_X			High efficiency, low NO_X, gas condensing boilers will be specified for the new development. (Section 5.3.2.1)
		Low emission developments that are designed to minimize the air quality impact of plant, vehicles and other sources over the lifetime of the development		High efficiency, low NO_X, gas condensing boilers will be specified for the new development. It is considered that the development will have no impact on traffic related air quality during the operational phase of development. (Section 5.4.2.1)
	Take measures to reduce and mitigate exposure to air pollution.			A number measures to mitigate air quality impacts have been proposed as part of the scheme. (Section 5.4.2.1)
Water Pollution and Flooding 2.4.4	Use Sustainable Drainage Systems (SDS) measures, wherever practical.			There is very limited opportunity to install SDS measures due to the location of the proposed development within a complex urban area and there being limited open areas. (Section 5.4.2.2)
	Achieve 50% attenuation of the undeveloped site's surface water run off	Achieve 100% attenuation of the undeveloped site's		The current development discharges rainwater directly into the sewers. There is

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
	at peak times.	surface water run off at peak times		no proposed increase in the building's footprint or roof area as a result of the proposals. Therefore it is anticipated that there will be no significant increase in runoff rates from the site
Microclimate 2.4.5	Mitigate any negative impact on the microclimate of existing surrounding public realm and buildings to meet the Lawson criteria for wind comfort and safety.			The new development is contained within the same envelope area as the existing building. It is therefore considered that there will be no negative impact on the microclimate of the area and no impact on the wind environment at ground level in the vicinity of the development. (Section 5.4.2.5)
Section 2.5 Ensure developments are comfortable and secure for users				
Indoor Comfort 2.5.2	Inert and low emission finishes, construction materials, carpets and furnishings should be used wherever practical.			Materials will be specified that do not emit or contain toxic substances. (Section 5.5.2.3)
		Design buildings for indoor comfort of users.		In line with the Mayor's requirements, buildings will be designed for the indoor comfort of users. The impact of a building on the health and wellbeing of the future building users is assessed under BREEAM and EcoHomes. (Section 5.5.2.3)
	All plant and machinery should be accessible for easy maintenance.			All plant will be located to be accessible for easy maintenance. (Section 5.5.2.3).
Designing Inclusive Environment s 2.5.3	All developments should meet the principles of inclusive design, adopting the principles of SPG "Accessible London: Achieving an Inclusive Environment".			The site is designed to comply with the Disability Discrimination Act (DDA) regulations.
	All residential development should meet Lifetime Home standards and 10% should meet wheelchair accessibility standards (London Plan Policy 3A.4)	All residential development should be designed to meet wheelchair accessibility standards or be easily adaptable to meet wheelchair standards.		All residential development will be built to Lifetime Home Standards. The requirement for 10% of housing to meet wheelchair accessibility standards will not be applied to at Chichester House since there are only 6 residential units. (Section 5.5.2.2)
		Developments should be		

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
		fully e-enabled.		
Secure design 2.5.4	Developments should incorporate principles of "Secured by design".			The principles of Secured by Design will be implemented at Chichester House. (Section 5.5.2.1)
Section 2.6 Conserve and enhance the natural environment and biodiversity				
Open space 2.6.2	No net loss of publicly accessible open space	Net gain of publicly accessible open space		As a result of the development there will be a net gain of publicly accessible open space. (Section 5.6.2)
	Create appropriate new open, green, publicly accessible spaces where these can redress identified areas of deficiency of public open space.			
Natural environment and Biodiversity 2.6.3	No net loss of biodiversity and access to nature on the development site.	Net gain of biodiversity and access to nature on the development site.		It is assumed that there will be a small increase in the ecological value of the site from the green roof. (Section 5.6.2)
	Reduction in areas of deficiency in access to nature			
Section 2.7 Promoting sustainable waste behaviour				
Waste 2.7.2	Minimise, reuse and recycle demolition waste on site where practical.			A building audit will be undertaken to identify the range and quantity of material to be produced from demolitions and the potential for recovery. (Section 5.9.2)
	Specify use of reused or recycled construction materials			It is proposed that at least 25% of the aggregate used in the high grade aggregate uses on site will be from a recycled source. (Section 5.3.2.4)
		Use prefabricated and standardised modulation components to minimise waste. If this is not feasible use low waste fabrication techniques.		Prefabricated and modular construction will be used wherever feasible. (Section 5.9.2)
	Provide facilities to recycle or compost at least 25% of household waste by means of separated dedicated storage space. By 2010 this should rise to 35%.	Provide facilities to recycle or compost at least 35% of household waste. By 2015 this should rise to 60%.		The residential units of Chichester House will also have an internal storage area in each of the dwellings in line with EcoHomes criteria. (Section 5.7.2.1)
		Provide facilities to recycle 70% of commercial and		The retail and office units on site are be provided with dedicated recycled waste

SPG Guidance & Section	Essential Standard	Mayor's preferred standard	Further Alterations to the London Plan (Sept 2006)	Proposed Development Performance
		industrial waste by 2020.		storage areas in line with BREEAM requirements. (Section 5.7.2.1)
	Recycling facilities should be as easy to access as waste facilities.			Recycling facilities will be as easy to access as waste facilities. (Section 5.7.2.1)
Part 3 Sustainable construction				
Waste and materials	Reduce waste during construction and demolition phases and sort waste stream on site where practical.			Contractors will be required to monitor waste generated during the construction phases and develop targets for reuse and recycling. (Section 5.9.2)
Noise	Reduce the risk of statutory nuisance to neighbouring properties as much as possible through site management.			Construction noise and vibration levels will be limited and controlled as far as reasonably practicable, so that sensitive receptors in the area are protected from excessive noise and vibration. (Section 5.9.2.)
Air Quality	All developers should consider and comply with the Mayor and ALG's London Best Practice Guide on the control of dust and emissions during demolition and construction.	All contractors should be required by tender requirements to sign up to the Mayor and ALG's London Best Practice Guide on the control of dust and emissions during demolition and construction.		The measures within the "London Best Practice Guide on the control of dust and emissions" will be complied with for Chichester House. (Section 5.9.2)
Building green	Comply with protected species legislation.			There are no protected species.
Considerate contracting 3.11	All developers should sign up to the relevant Considerate Constructors Scheme or in the City of London to the Considerate Contractor Scheme.	All contractors should be required by tender requirements to sign up to the Considerate Constructors scheme or in the City of London to the Considerate. Contractor scheme.		All contractors will be required to sign up to the Considerate Constructors Scheme. (Section 5.9.2)