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BREEAM - Healthcare 2011
Assessment (LE2 to LE5)

UCLH Phase 4 & PBT Cancer Unit, Grafton Way

For

Bouygues - UK

Project No.: OBOU110/001/001/001

October 2018

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Project Number	Report No.
OBOU110/001	001

Revision No.	Report Status	Date of Issue	Author	Reviewer	Approver
001	Final	1st October 2018	Robert Hutchinson	Felicity Andruszko	Paul Franklin

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1. Summary

1.1 Background

1.1.1 University College of London Hospital (UCLH) proposes to redevelop a site on Grafton Way, London. The plans include redevelopment of the former Odeon site and demolition of the Rosenheim Building to provide a UCLH Phase 4 and Proton Beam Therapy Cancer Treatment Facility. The location of the site is shown on Figure 1.

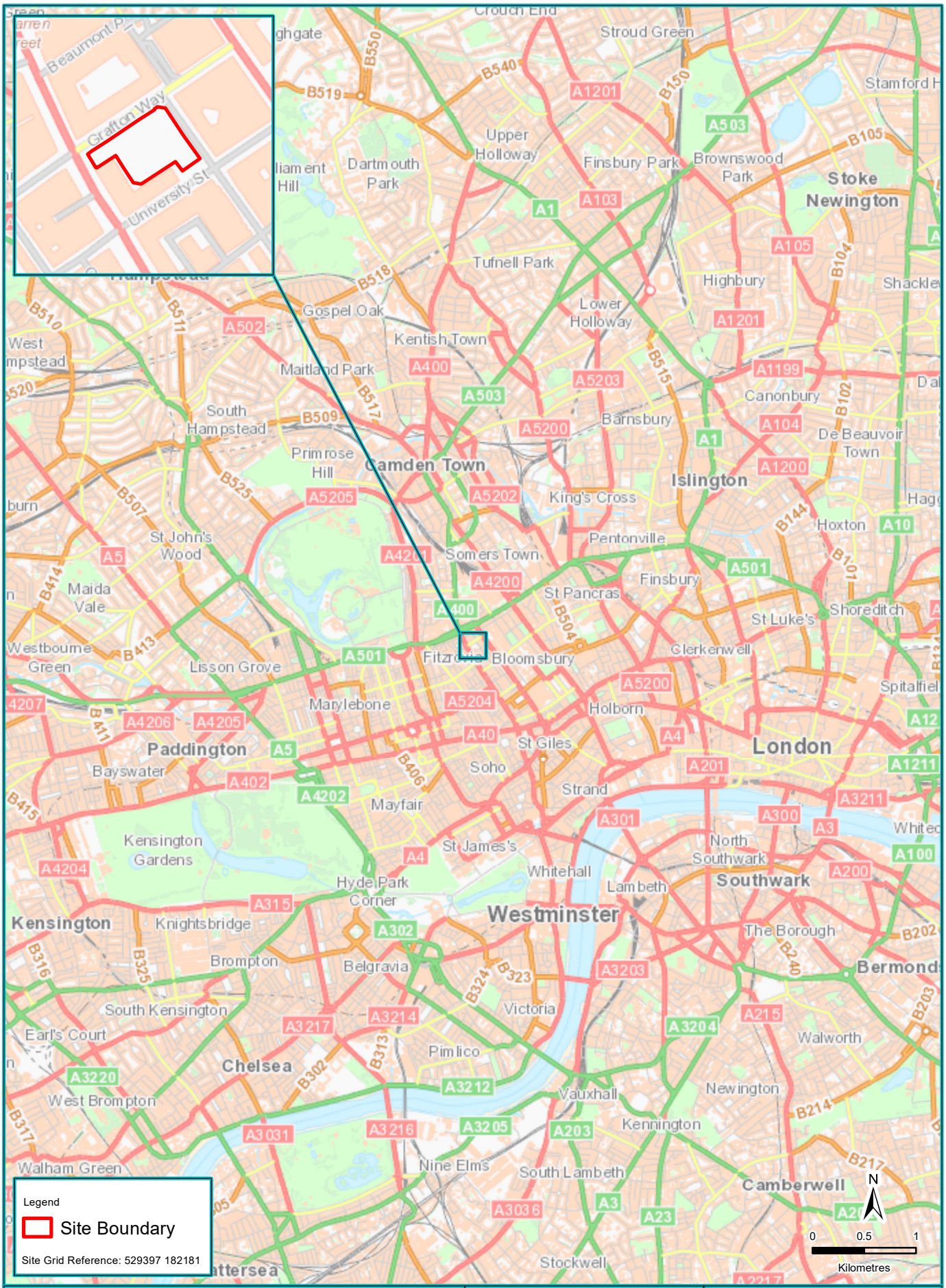
1.1.2 The site is to be assessed using the BRREAM - Healthcare Assessment 2011 (BRE, 2011), which considers whether a proposal will enhance or damage the ecological value of a site.

1.1.3 Buro Four, on behalf of UCLH, commissioned Thomson Ecology on 28th August 2012 to undertake a preliminary ecological assessment of the site to inform a BREEAM - Healthcare Assessment 2011 (BRE, 2011). Following that report, on 14th November 2013, UCLH commissioned Thomson Ecology Ltd to produce an update report on LE2 to LE5 of the BREEAM - Healthcare Assessment 2011 (Thomson Ecology, 2013). Both reports recommended a total of seven credits were available to the project (Thomson Ecology 2012, Thomson Ecology 2013).

1.1.4 Bouygues UK commissioned Thomson Ecology Ltd on 31st August 2018 to produce an updated BREEAM report to reflect the soft landscape design written by Scott Tall Walker Architects - Anna French Associates in 2018 (Document Title; STW Stage 4 - Soft Landscape Design, Revision A, 2018).

1.2 Likely Credit Rating

1.2.1 A total of seven credits are likely to be achieved from a maximum of eight available as illustrated in Table 1, provided the recommendations in this report are followed. The justification for the likely credit rating given above is discussed in the main body of the report.



Client	Bouygues UK	Drawing Ref	OBOU110/26373/1
Figure Number	1	Scale at A4	1:50,000
Figure Title	Site Location	Drawn: EA	Checked: AS
		Date: 17/09/2018	Date: 17/09/2018

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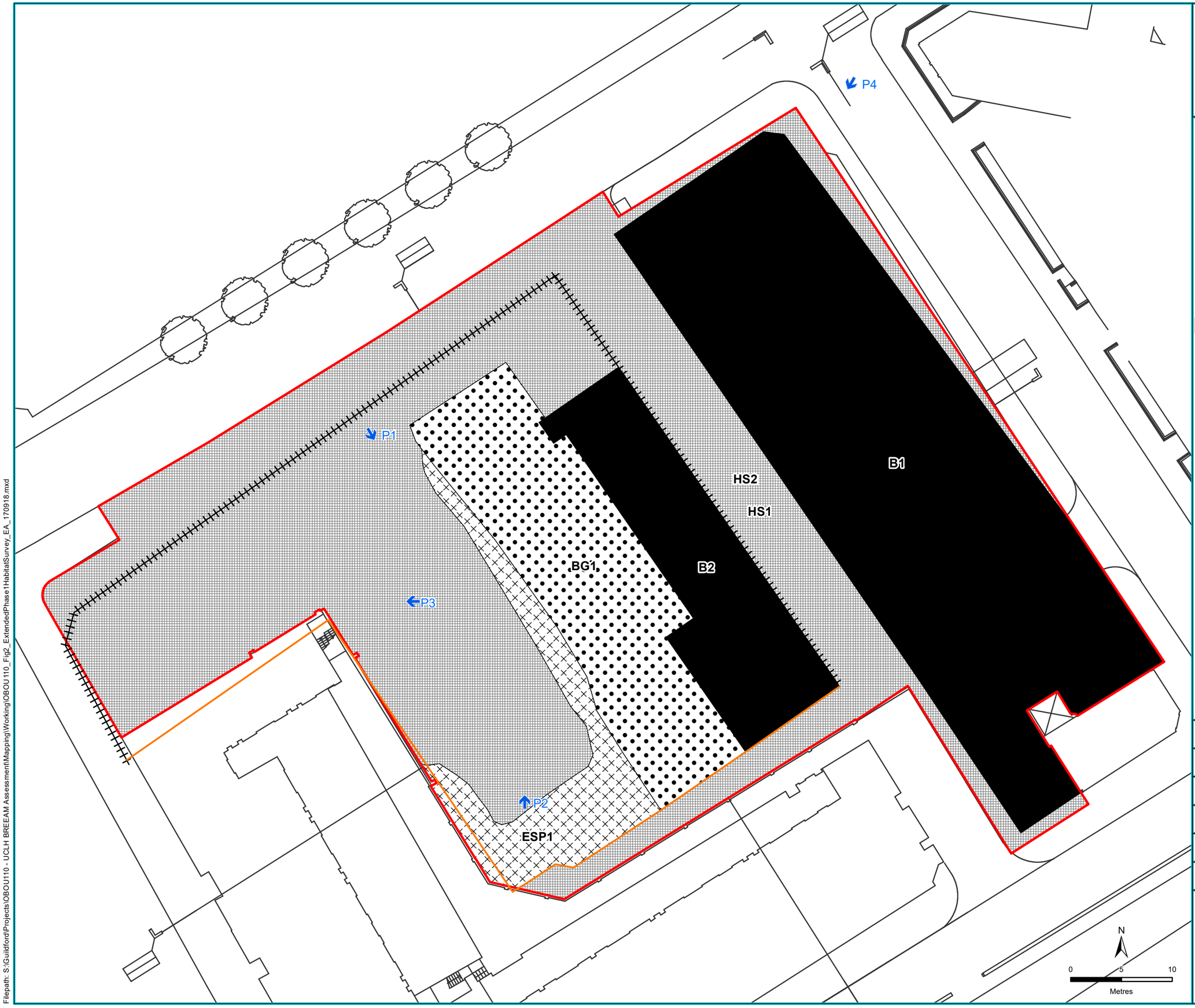

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Legend

- Photograph Location and Direction
- Fence
- Wall
- Ephemeral Short Perennial
- Building
- Bare Ground
- Hard Standing
- Site Boundary

Site Grid Reference: 529396 182183

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26374/1
Scale at A3	1:350
Drawn: EA	Checked: AS
Date: 17/09/2018	Date: 17/09/2018
Client	Bouygues UK
Figure Number	2
Figure Title	Extended Phase 1 Habitat Survey Map

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig2_ExtendedPhase1HabitatSurvey_EA_170918.mxd

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Legend

- Building
- Hard Standing
- Site Boundary

Site Grid Reference: 529,392 182,183

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26396/1
Scale at A3	1:350
Drawn: EA	Checked: AS
Date: 19/09/2018	Date: 19/09/2018
Client	Bouygues UK
Figure Number	3a
Figure Title	Landscape Design - Ground Floor

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig3a_BREEAMLandscapingPlan_GroundFloor_EA_190918.mxd

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Legend

- Granite Setts 200mm x 300mm
- Low Groundcover and Shrub Planting
- Slot Drain
- High Structural Glass
- Granite Setts 100mm x 200mm
- Site Boundary

Site Grid Reference: 529,394 182,170

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of BREEAM. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26375/1
Scale at A3	1:200
Drawn: EA	Checked: AS
Date: 17/09/2018	Date: 17/09/2018
Client	Bouygues UK
Figure Number	3b
Figure Title	Landscape Design - First Floor

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig3b_BREEAMLandscapingPlan_1stFloor_EA_140918.mxd

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Legend

- Hard Standing
- Low Groundcover and Shrub Planting
- Site Boundary

Site Grid Reference: 529,394 182,170

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of BREEAM. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26377/1
Scale at A3	1:200
Drawn: EA	Checked: AS
Date: 17/09/2018	Date: 17/09/2018
Client	Bouygues UK
Figure Number	3c
Figure Title	Landscape Design - Second Floor

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig3c_BREEAMLandscapingPlan_2ndFloor_EA_170918.mxd

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Legend

- Roof Light
- Bark Mulch
- Granite Setts 200mm x 300mm
- Pebbles (Grey Stone)
- Low Groundcover and Shrub Planting
- Timber Seating on Steel Frame
- High Structural Glass
- Granite Setts 100mm x 200mm
- Site Boundary

Site Grid Reference: 529,394 182,170

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of BREEAM. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26378/1
Scale at A3	1:200
Drawn: EA	Checked: AS
Date: 17/09/2018	Date: 17/09/2018
Client	Bouygues UK
Figure Number	3d
Figure Title	Landscape Design - Third Floor

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig3d_BREEAMLandscapingPlan_3rdFloor_EA_170918.mxd

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Legend

- Granite Setts 200mm x 300mm
- Pebbles (Grey Stone)
- Low Groundcover and Shrub Planting
- Slot Drain
- High Structural Glass
- Granite Setts 100mm x 200mm
- Site Boundary

Site Grid Reference: 529,394 182,170

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of BREEAM. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26379/1
Scale at A3	1:200
Drawn: EA	Checked: AS
Date: 17/09/2018	Date: 17/09/2018
Client	Bouygues UK
Figure Number	3e
Figure Title	Landscape Design - Fifth Floor

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig3e_BREEAMLandscapingPlan_5thFloor_EA_170918.mxd

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Legend

- Insulated Extensive Green Roof
- Uninsulated Extensive Green Roof
- Site Boundary

Site Grid Reference: 529,393 182,182

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of BREEAM. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.

Drawing Ref	OBOU110/26408/1
Scale at A3	1:350
Drawn: EA	Checked: AS
Date: 24/09/2018	Date: 24/09/2018
Client	Bouygues UK
Figure Number	3f
Figure Title	Landscape Design - Green Roofs (All Floors)

Filepath: S:\Guildford\Projects\OBOU110 - UCLH BREEAM Assessment\Mapping\Working\OBOU110_Fig3f_BREEAMLandscapingPlan_RoofGardens_EA_240918.mxd

Table 1 Summary of the LE 02 - LE 05 BREEAM assessment for the project

Section	Maximum Credits Available	Likely Credit Rating for Development	Requirements
LE 02 Ecological value of site and protection of ecological features	1	1	The site can be classified as being of low ecological value.
LE 03 Minimising impact on existing site ecology	2	2	The development should result in no negative change to ecological value of the site and consequently the maximum number of credits should be available.
LE 04 Enhancing site ecology	3	2	Two credit points should be available for the reasons stated in the report.
LE 05 Long term impact on biodiversity	2	2	It should be possible to implement all mandatory requirements and the two additional requirements; therefore, two credits should be awarded.
	8	7	

*Likely credit rating based on our assessment – to be confirmed by BRE Assessor

2. Introduction

2.1 Development Background

2.1.1 UCLH proposes to redevelop a site on Grafton Way, London. The plans include the redevelopment of the former Odeon site and demolition of the Rosenheim building to provide a UCLH Phase 4 and Proton Beam Therapy (PBT) Unit cancer treatment facility, as well as inpatient medical facilities and ground floor retail units.

2.1.2 The development is located on land comprised of the Rosenheim Building and former Odeon site (Grid reference: TQ293821) At Grafton Way, London, see Figure 1. The area affected by the development is hereafter referred to as 'the site'.

2.1.3 Bouygues UK (hereafter, Bouygues) confirmed on the 31st August 2018 that construction works started on the site in July 2015, with the site handover planned for July 2020. The soft landscaping for the project has been created by Scott Tallon Walker Architects - Anna French Associates (Document Title; STW Stage 4 - Soft Landscape Design, Revision A, 2018). The soft landscape works are planned for late 2019 and early 2020.

2.2 Ecological Background

2.2.1 Buro Four, on behalf of UCLH, commissioned Thomson Ecology on 28th August 2012 to undertake a preliminary ecological assessment of the site to inform a BREEAM - Healthcare Assessment 2011 (BRE, 2011), which considers whether a proposal will enhance or damage the ecological value of a site (Thomson Ecology, 2012). Following the BREEAM (2011) guidelines, a site visit was carried out by a suitably qualified ecologist to allow an informed assessment of the ecological value of the site to be made.

2.2.2 During the preliminary ecological assessment, the following Phase 1 habitats (JNCC, 2010) were recorded on the site; ephemeral / short perennial, fence, wall, bare ground, buildings and hard standing (Thomson Ecology, 2012). The BREEAM - Healthcare Assessment (2011) assessed that the likely credit rating for the development was seven out of eight possible credits, as detailed below in Table 2.

Table 2 The BREEAM – Healthcare Assessment (2011) likely credit rating (Thomson Ecology, 2012)

Section	Maximum Credits Available	Likely Credit Rating for Development*	Justification/Requirements
LE2	1	1	The site can be classified as being of ecological value.
LE3	2	2	The development should result in no negative change to ecological value and consequently the maximum number of credit points should be available.
LE4	3	2	Two credit points should be available provided an ecologist is appointed, all recommendations followed and a positive increase in the ecological value of the site of up to (but not including) six species is achieved.
LE5	2	2	Two credit points should be available provided all mandatory requirements and at least four additional requirements are implemented.
Total	8	7	-

*Likely credit rating based on our assessment – to be confirmed by a BRE Assessor

2.2.3 On 14th November 2013, UCLH commissioned Thomson Ecology Ltd to produce an update report on LE2 to LE5 of the BREEAM – Healthcare Assessment 2011 (Thomson Ecology, 2013).

2.2.4 The update incorporated the 'style sheet' and report template supplied by Jones Lang LaSalle and appropriate digitised mapping.

2.2.5 The update report assessed that a total of seven credit points could be achieved from a maximum available of eight, provided that the recommendations in the report were followed. The justification for the likely credit rating is as detailed in Table 2 above.

2.3 General Approach and BREEAM Assessment

2.3.1 Bouygues UK contacted Thomson Ecology Ltd on 7th August 2018 with regard to reviewing the BREEAM – Healthcare 2011 assessment (Thomson Ecology, 2013) against the soft landscape design written by Scott Tall Walker Architects – Anna French Associates in 2018 (Document Title; STW Stage 4 – Soft Landscape Design, Revision A, 2018).

2.3.2 Thomson Ecology Ltd recommended that the BRREAM – Healthcare 2011 report is updated to detail the new landscape design. Bouygues commissioned Thomson Ecology Ltd on 31st August 2018 to produce an updated report that would include the following items:

- The recalculation of the change in ecological value for BREEAM 2011 LE03/04 credits based on the latest landscaping proposals;
- Confirming whether the latest landscaping proposals incorporate the planting recommended under sections 5.10 and 5.11 of the 2013 BREEAM report, or confirming that the planting proposed provides equal wildlife and biodiversity benefit to the planting recommended under Sections 5.10 and 5.11; and
- Appropriate digitised mapping.

2.3.3 The site is to be assessed using the BREEAM - Healthcare Assessment 2011 (BRE. 2011), which considers whether a proposal will enhance or damage the ecological value of a site.

2.3.4 The ecological walkover survey which was carried out in 2012 will be used to inform the pre-development condition of the site (Thomson Ecology Ltd, 2012). This is valid because construction works started on the site in July 2015.

2.3.5 The full BREEAM assessment will be carried out by a registered BRE assessor and full details of the final design are required to complete the assessment of the information. The information in this report is intended to assist with the BREEAM assessment by giving the likely credit rating. In addition, advice or recommendations are given as to how a higher credit rating could be achieved for this development.

2.3.6 In addition to this scope, the project will be assessed against The Camden Biodiversity Action Plan (BAP) 2013-2018 as requested by Bouygues UK. The Camden BAP provides the strategic framework to deliver biodiversity across Camden (Camden BAP, 2013 - 2018).

2.4 Suitably Qualified Ecologist

2.4.1 Following the BREEAM guidelines (2011), a suitably qualified ecologist (SQE) is defined as an individual who:

- Holds a degree or equivalent qualification in ecology or a related subject;
- Is a practicing ecologist with a minimum of three years' experience; and
- Is covered by a professional code of conduct and is subject to peer review.

Field Survey

2.4.2 The ecological walkover survey which was carried out in 2012 was undertaken by David Prys-Jones MSc BSc (Hons) MCIEEM. This survey was signed off by David Prys- Jones in 2012 as he met the criteria for a suitably qualified ecologist.

Report

2.4.3 This BREEAM - Healthcare 2011 Assessment report has been undertaken by Robert Hutchinson MSc BSc (Hons) MCIEEM. Robert meets the criteria for an SQE because he:

- Holds an undergraduate degree in Geography and a master's degree in Environmental Sustainability and Green Technology;
- Has been employed as a practising ecological consultant since 2013; and
- Is a full member of the Chartered Institute of Ecology and Environmental Management, which makes them subject to peer review and bound by a professional code of conduct.

2.4.4 The SQE (Robert Hutchinson) has confirmed that this report:

- Represents sounds industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased and exaggerated statements.

3. LE 02 - Ecological Value of Site and Protection of Ecological Features

3.1 Assessment criteria

3.1.1 One credit point is available where evidence is provided that the construction zone is defined a land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works. The aim of LE2 is to encourage development on land that already has limited value to wildlife and to protected existing features from substantial damage during site preparation and construction works.

3.1.2 A site visit was carried out by Thomson Ecology Ltd on 28th September 2012 to determine the ecological value of the site. The methodologies used for field survey and evaluation are given in Appendix 1. The results of the site visit are given below. The information recorded during the site visit in 2012 has been used to inform credits LE 02 - LE 05 of the BREEAM Assessment.

3.2 Field Survey

3.2.1 The following Phase 1 habitats (JNCC, 2010) were recorded on site during the site visit:

- Ephemeral/ short perennial vegetation
- Fence;
- Wall;
- Bare ground;
- Buildings; and
- Hard standing.

3.2.2 These habitats are described in Table 3 below. A map showing the main features and distribution of habitats on the site is given on Figure 2.

Table 3 Descriptions of Habitats Recorded during the Site Visit

Habitat Name	Ephemeral / short perennial	**Code**	ESP1	**Area (m^2)**	222
Description: An area of bare ground through which, some plants have started to colonise, comprising rarely occurring and scattered spear thistle (*Cirsium vulgare*), ribwort plantain (*Plantago lanceolata*) and perennial rye grass (*Lolium perenne*).					
Key Species: Spear thistle, ribwort plantain, perennial rye grass.					
Habitat Name	Fence	**Code**	F	**Length (m)**	N/A
Description: Both steel and wooden fencing (3m in height) is found around the sites northern perimeter.					

Key Species: n/a					
Habitat Name	Wall	**Code**	W	**Length (m)**	N/A
Description: A brick wall (3m in height) is found within the site and around its southern perimeter.					
Key Species: n/a					
Habitat Name	Bare ground	**Code**	BG	**Area (m2)**	501
Description: There is an area of bare ground (BG1) within the centre of the site. This is mainly tuned over soil but also comprises rubble spoil and debris from the partially removed building B2 adjacent.					
Key Species: n/a					
Habitat Name	Building	**Code**	B1 - B6	**Area (m2)**	1725
Description: Two building (B1 and B2) are found within the site. B1 is a seven-storey brick-built building that is still in use by UCLH. B2 is a partially removed two-storey concrete building which has been stripped back to a concrete shell.					
Key Species: n/a					
Habitat Name	Hard Standing	**Code**	HS1-HS2	**Area (m2)**	2028
Description: Hard standing (concrete and tarmac) is present in two areas within the site (HS1 and HS2)					
Key Species: n/a					

3.3 Fauna

3.3.1 No fauna was recorded on the site during the survey.

3.4 Assessment of Ecological Value

3.4.1 The site is considered to have low ecological value as it does not support any natural or semi-natural habitats and is not within 2km of an internationally designated site, or within 500m of a nationally designated site. In addition, no semi-natural habitats are found within a 100m radius of the proposed construction area.

3.5 Conclusion

3.5.1 The site can be classified as being of low ecological value and one credit point can therefore be awarded under LE02.

4. LE 03- Minimising Impact on Existing Site Ecology

4.1 Assessment criteria

4.1.1 The aim of LE 03 is to minimise the impact of a building development on existing site ecology.

4.1.2 Under LE3, credits are awarded if steps are taken to minimise reductions or increase the ecological value of the site. In this case, ecological value is based on the number of plant species per hectare (counting native species or those with a known value to local wildlife only). This is worked out using numbers of native species for the various landscape types on the site, both before and after development. Credit points are available as listed in Table 4 below.

Table 4 Credits available under LE 03 - Mitigating Ecological Impact

Credit Points	Criteria
1	Where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is minimal.
2	Where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of the development.

4.1.3 One credit is available where the change in ecological value of the site is less than zero but equal to or greater than minus nine plant species, resulting in a minimal change. Alternatively, two credits are awarded if the change in ecological value of the site is equal to or greater than zero plant species, resulting in no negative change.

4.1.4 A minimal change is defined as a change in ecological value of between less than zero and equal to, or greater than, minus nine species. No negative change of ecological value is defined as equal to, or greater than zero species.

Species Before Development

4.1.5 A total of four types of habitat with distinct areas were identified on the site on 28th September 2012 by Thomson Ecology Ltd (Thomson Ecology, 2012). The number of species identified in each habitat type is summarised in Table 5 below. As the ecological value of the ephemeral / short perennial habitat is only found within approximately 25% if this habitat parcel's total area, the calculation has been adjusted to reflect this (with the remaining non-valuable portion of this habitat being incorporated into the bare ground value). This can then be used to calculate the average number of species before development.

Table 5 Species on site before development

Habitat Type	Area of Habitat (m^2)	Number of Plant Species	Area of Habitat x Number of Plant Species
Ephemeral / short perennial	56	3	168
Bare ground	667	0	0
Building	1725	0	0
Hard standing	2028	0	0
Total	**4476**		**168**
Species before development[1]			**0.038**

Species After Development - Scenario 1

4.1.6 The soft landscaping design for the project, including drawings and specification have been prepared by Scott Tallon Walker Architects – Anna French Associates in conjunction with Bouygues UK (Document Title: STW Stage 4 - Soft Landscaping Design, Project: P4PBT). This soft landscape design will be used for the assessment of Credit LE03 and is outlined on Figure 3a-3f.

4.1.7 The landscaping design is based on low groundcover and shrub planting (intensive green roof, which includes tree planting, shrubs, perennials, grasses and bamboo and bulbs) on the first floor, second floor, third floor and fifth floor and green roofs (insulated extensive and uninsulated extensive) on the third floor, sixth floor and roof level of the development. A planting list has been included within the soft landscaping design (Document Title: STW Stage 4 – Soft Landscaping Design, Project: P4PBT) and is provided in Appendix 1. No species mix has been allocated to the insulated extensive and uninsulated extensive green roofs, however, Q37 of Scott Tallon Walker Architects Document STW Stage 4 - Roofing & Soft Landscaping states that a "vegetation product system as recommended by a specialist green roof system manufacturer from the UK native Bio-Diverse species selection' will be used. It is estimated that at least eight species will be incorporated into the extensive green roof habitats.

4.1.8 The species mix includes a number of native species such as rounded headed leek (*Allium sphaerocephalon*), snowdrop (*Galanthus nivalis*), yarrow (*Achillea millefolium*), betony (*Stachys officinalis 'Hummelo'*), wormwood (*Artemisia 'Powis Castle'*) and cat-mint (*Nepeta racemosa 'Walker's Low*). Round headed leek is a species categorised as being 'Vulnerable' on the

[1] Calculated as: (total area of habitat x number of plant species)/total area of habitat

Vascular Plant Red List for England (Stroh et al, 2014). In addition, the species mix includes nineteen species, including lavender (*Lavandula angustifolia 'Hidcote'*), rosemary (*Rosmarinus officinalis*) and hyssop (*Hyssopus officinalis*), which will provide value to wildlife. This is primarily due to the habitat it will create for invertebrates, which in turn will create a foraging source for birds.

4.1.9 The scenario below is based on the current landscape proposal (Document Title: STW Stage 4 - Soft Landscaping Design, Project: P4PBT). The average number of species after development has been calculated by multiplying the number of native species or those with a known value to local wildlife, proposed within each planting habitat by the area of each landscaping type. The calculation is shown in Table 6.

Table 6 Ecological value of the site after development under Scenario 1

Habitat Type	Area of Habitat (m^2)	Number of Plant Species	Area of Habitat x Number of Plant Species
Low Groundcover and Shrub Planting (Intensive Green Roof)	289	24	6936
Building	1994	0	0
Hard Standing	1909	0	0
Extensive Insulated and Uninsulated Green Roof	284	8	2272
Total	**4476**		**9208**
Species after development[2]			**2.057**

Change in Ecological Value - Scenario 1

4.1.10 The change in ecological value will be the difference between the value after development and the value before development as shown on Table 7. The change in the ecological value will be 2.019.

[2] Calculated as: (total area of habitat x number of plant species)/total area of habitat

Table 7 The Change in Ecological Value - Scenario 1

Total No. Species After Development		Total No. Species Before Development		Total Change in Species
2.057	-	0.038	=	2.019

4.2 Camden Biodiversity Action Plan

4.2.1 The Camden Biodiversity Action Plan outlines a series of actions to ensure that biodiversity is safeguarded in the borough and that Camden's residents are given opportunities to access the natural environment based upon National Policy Context such as the National Planning Policy Framework (NPPF) 2011, Regional Policy Context such as the London Plan and Camden Borough Policy Context such as the Local Development Framework 2010. The Camden BAP also describes three Actions Plans (1 - Access to Nature, 2 - Built Environment and 3 - Open Spaces and Natural Habitats).

4.2.2 The NPPF 2011 sets out the Government's planning policies for England and how these are expected to be applied. NPPF 2011 Section 11: 109 sets out that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and provide net gains in biodiversity where possible. In addition, Section 11: 118 states that opportunities to incorporate biodiversity in and around development should be encouraged.

4.2.3 With regard to the London Plan 2017 - Policy G1 - Green Infrastructure, Policy G5-Urban Greening and G6 - Biodiversity and access to nature are relevant to this project. In particular, Policy G1 states that green features in the built environment such as green roofs and street trees, should be protected, planned, designed and managed as integrated features of green infrastructure.

4.2.4 It is assessed that this project is compliant with the Camden Biodiversity Action Plan because:

- Green roofs are included in the landscaping strategy for the project. Green roofs are listed as a BAP Habitat within the Borough of Camden. The incorporation of green roofs in the green infrastructure of the project complies with Action Plan 2 of the Camden BAP which requires Camden's built environment to make a positive contribution to the green infrastructure and biodiversity of the borough. In addition, Camden's Development Policy DP22 which forms a component on the BAP strategy states that schemes must incorporate green roofs unless it is demonstrated that this is not possible or appropriate.
- The landscaping plan for the project includes the planting of a good diversity of shrub and low groundcover species. The species list to be planted on the site contains six species listed on the Camden BAP as suggested species for landscaping designs. This complies with NPPF, London Plan and local policy context by incorporating green infrastructure and biodiversity within the development; and
- The project under the current landscaping plans will result in a total change in species of +2.019 which is an increase in overall ecological value. The incorporation of green infrastructure within the building will provide an increase in habitat within Camden which can be utilised by pollinating invertebrates such as bees, hoverflies and moths which in turn will

likely increase the foraging resources for bats and birds within the borough. This particularly complies with the requirement to enhance the natural and local environment and provide net gains in biodiversity.

4.3 Conclusion

4.3.1 Under the current landscape proposal (Scenario 1) it should be possible to achieve two credits as there will be no negative change of ecological value to the site.

4.3.2 It is assessed that the landscaping plan is consistent with the aims of the Camden BAP.

5. LE 04 - Enhancing Site Ecology

5.1 Assessment criteria

5.1.1 The aim of LE04 is to recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development. A maximum of three credit points are available in this section if steps are taken to protect and enhance the ecological value of the site following development.

5.1.2 The first credit is available if the following criteria are met:

- Criteria 1: a SQE is appointed to advise and report on enhancing and protecting the ecological value of the site based on a site survey; and
- Criteria 2: the ecologist's recommendations for general enhancement and protection of site ecology are implemented.

5.1.3 A progressive increase in credit points is available for a positive increase in the ecological value of the site, provided the first credit point has been achieved. This is shown in the table below.

Table 6 Increase in credits available under LE04 - Enhancing Site Ecology

Credit Points	Criteria
1	For a positive increase in the ecological value of the site up to (but not including) six species.
2	For a positive increase in the ecological value of the site of six species or greater

5.2 Appointed Professional Ecologist

5.2.1 Thomson Ecology has been appointed as professional ecologists to advise the client on ecological enhancement and protection of ecological features, as detailed below:

- 2012: David Prys-Jones MSc BSc (Hons) MCIEEM (Thomson Ecology, 2012)
- 2013 - 2015: Barry Wheeler BSc (Hons) MCIEEM (Thomson Ecology, 2013)
- 2015 - 2018: Paul Franklin BSc (Hons) MPhil MCIEEM (Thomson Ecology, 2013); and
- 2018 - Onwards: Robert Hutchinson MSc BSc (Hons) MCIEEM (see Section 2 of this report).

5.2.2 One credit should be awarded.

5.3 Recommendations

5.3.1 As no features of ecological value were recorded on the site (Thomson Ecology, 2012; Thomson Ecology, 2013) recommendations are not required for enhancement and protection of ecological features on the site. Therefore, one credit should be awarded.

5.4 Further Increase in Ecological Value of the Site

5.4.1 Further credits are available under LE04 providing the first credit is achieved, as described above and evidence is provided to demonstrate a positive increase in the ecological value of the site of up to (but not including) six species and an increase of six species or above.

5.4.2 Under the planting scheme described in Section 4 (Scenario 1) there will be an increase of 2.019 species, resulting in two credits being awarded under LE03. In order to achieve an increase of six species, it would require a significant amendment to the current landscaping strategy and an unrealistic amount of extra species planting.

5.5 Conclusion

5.5.1 One credit should be awarded due to an ecologist being appointed. A second credit point can be awarded under LE04 under the current proposed scheme (described in Scenario 1).

5.5.2 The third credit is unlikely to be achieved unless significantly larger areas of the site are made available for planting, or unrealistic numbers of plant species are incorporated into the proposed planted area.

6. LE 05 - Long Term Impact on Biodiversity

6.1 Assessment criteria

6.1.1 One credit point is available if all mandatory requirements and at least two additional requirements under the BREEAM - Healthcare 2011 Assessment are committed to.

6.1.2 A second credit is available if all the mandatory requirements and the recommended additional measures are adopted.

Mandatory Requirements

6.1.3 Mandatory requirements are that:

- A SQE has been appointed prior to commencement of activities on site;
- The SQE has confirmed that all relevant UK and EU legislation relating to protection and enhancement of ecology has, or will be, complied with during the design and construction process; and
- An appropriate landscape and habitat management plan, appropriate to the site, is produced in accordance with BS 42020:2013 Section 11.1, covering at least the first five years after project completion which will include management of any protected features on site, management of any new, existing or enhanced habitats and a reference to the current or future site level or local Biodiversity Action Plan.

6.2 Suitably Qualified Ecologist

6.2.1 Thomson Ecology has been appointed as professional ecologists to advise the client, as detailed in Section 5.2

6.3 Legal and Planning Policy Issues

6.3.1 As no features of ecological value have been recorded, protection and / or enhancement was not required, as detailed in Section 5.3.

6.4 Landscape and Habitat Management Plan

6.4.1 A habitat management plan has been included within Scott Tallon Walker Architects - Anna French Associates - STW Stage 4 - Soft Landscaping Design - Project P4PBT. The instruction for the installation of green roofs, planting of species and management of habitats should be followed at all stages of the project lifecycle. Any deviations from the guidance in the management plan should be approved by a qualified landscape architect, green roof expert or ecologist.

6.5 Additional Requirements

6.5.1 Additional requirements that need to be implemented by the contractor under LE05 (in addition to the mandatory requirements) in order to gain one or two credit points include the following:

- The principal contractor nominates a Biodiversity Champion with the authority to ensure that all green roof and landscaping habitats are carried out in accordance with the soft

landscaping design (Scott Tallon Walker Architects - Anna French Associates - STW Stage 4 - Soft Landscaping Design - Project P4PBT);

- A new ecologically valuably habitat appropriate to the local area is created within the development. Green roofs / roof gardens are covered within the Camden BAP. Therefore, once the landscaping has been installed and signed off as completed to the required specification, the development will be compliant with this additional requirement.

6.6 Conclusion

6.6.1 It should be possible to implement all mandatory requirements and the two additional requirements; therefore, two credits should be awarded.

7. References

7.1.1 Building Research Establishment Ltd (2011) BREEAM New Construction Assessment: Non-Domestic Buildings, Technical Manual SD5073-2.0:2011. BRE, Watford.

7.1.2 Camden Biodiversity Action Plan (2013 - 2018)

7.1.3 JNCC (2010) Handbook for Phase 1 habitat survey: A technique for environmental audit. Joint Nature Conservancy Committee, Peterborough.

7.1.4 Scott Tallon Walker Architects - Anna French Associates (2018) (Document Title; STW Stage 4 - Soft Landscape Design, Revision A,

7.1.5 Stace C (2010) New Flora of the British Isles (third edition). Cambridge University Press, Cambridge.

7.1.6 P.A. Stroh, S.J. Leach, T.A. August, K.J, Walker, D.A Pearman, F.J. Rumsey, C.A Harrower, M.F. Fay, J.P Martin, T. Pankhurst, C.D. Preston & Taylor, I (2014) A Vascular Plant Red List for England. Botanical Society of Britain and Ireland, Bristol.

7.1.7 Thomson Ecology (2012) Ecological Survey to inform BREEAM Healthcare 2011 Assessment (LE2 to LE5), UCLH, Grafton Way, London. Report reference; ABUF107 / 001 / 002

7.1.8 Thomson Ecology (2013) Ecological Survey to inform BREEAM Healthcare 2011 Assessment (LE2 to LE5), UCLH Phase 4 & PBT Cancer Unit, Grafton Way. Report Reference: IUCL103

8. Appendix 1 Soft Landscape Design Species List

Common Name	Latin Name
FIRST FLOOR	
Perennials	
Granny's Bonnet	*Aquilegia chrysantha 'Yellow Queen'*
Wormwood	*Artemisia 'Powis Castle'*
Lavender	*Lavandula angustifolia 'Hidcote'*
Catmint	*Nepeta racemosa 'Walker's Low'*
Oregano	*Origanum laevigatum 'Herrenhausen'*
Primrose	*Primula vulgaris*
Rosemary	*Rosmarinus officinalis*
Purple sage	*Salva officinalis 'Purpurescens'*
Grasses and Bamboos	
Pheasant's Tail Grass	*Anemanthele lessoniana*
Fountain Grass	*Pennisetum alopecurodies 'Hameln'*
Mexican Feather Grass	*Stipa tenuissima*
Bulbs	
Snowdrop	*Galanthus nivalis*
SECOND FLOOR	
Perennials	

Common Name	Latin Name
Rosemary	*Rosmarinus officinalis*
THIRD FLOOR	
Trees	
Loquat	*Eriobotyra japonica*
Shrubs	
Myrtle	*Myrtus communis subsp, tarentina*
Perennials	
Yarrow	*Achillea millefolium*
Lady's Mantle	*Alchemilla mollis*
Wormwood	*Artemisia 'Powis Castle'*
Cranesbill	*Geranium 'Patricia'*
Cranesbill	*Geranium Rozanne*
Hyssop	*Hyssopus officinalis*
Lavender	*Lavandula angustifolia 'Hidcote'*
Rosemary	*Rosmarinus officinalis*
Purple sage	*Salva officinalis 'Purpurescens'*
Betony	*Stachys officinalis 'Hummelo'*
Thyme	*Thymus serphyllum 'Pink chintz'*
Nobel clover	*Trifolium rubens*
Grasses and Bamboos	

Common Name	Latin Name
Pheasant's Tail Grass	*Anemanthele lessoniana*
Siberian melic	*Melica altissima 'Alba'*
Fountain Grass	*Pennisetum alopecurodies 'Hameln'*
Bulbs	
Round-headed leek	*Allium sphaerocephalon*
Grape hyacinth	*Muscari armeniacum*
Daffodil	*Narcissus 'Tete-a- Tete'.*
FIFTH FLOOR	
Trees	
Loquat	*Eriobotyra japonica*
Shrubs	
Myrtle	*Myrtus communis subsp, tarentina*
Perennials	
Yarrow	*Achillea millefolium*
Lady's Mantle	*Alchemilla mollis*
Cranesbill	*Geranium 'Patricia'*
Cranesbill	*Geranium Rozanne*
Hyssop	*Hyssopus officinalis*
Lavender	*Lavandula angustifolia 'Hidcote'*
Catmint	*Nepeta racemosa 'Walker's Low'*

Common Name	Latin Name
Rosemary	*Rosmarinus officinalis*
Rosemary	*Rosmarinus officinalis Prostratus Group*
Thyme	*Thymus 'Silver Posie'*
Nobel clover	*Trifolium rubens*
Grasses and Bamboo	
Pheasant's Tail Grass	*Anemanthele lessoniana*
Siberian Melic	*Melica altissima 'Alba'*
Fountain Grass	*Pennisetum alopecurodies 'Hameln'*
Bulbs	
Round-headed leek	*Allium sphaerocephalon*
Crocus	*Crocus tommasinianus*
Snowdrop	*Galanthus nivalis*
Grape hyacinth	*Muscari armeniacum*
Daffodil	*Narcissus 'Tete-a- Tete'.*