

BREEAM Pre-Assessment

New Construction V6.1

Trinity International Properties Ltd

157-159 Hornsey Park Road
Wood Green
London
N8 0JX
London Borough of Haringey



Version	Revision	Date	Author	Reviewer	Project Manager
1	A	01.12.2023	Adam Tucker	Miles Blagden	Adam Tucker
	B	18.01.2024	Adam Tucker	-	Adam Tucker
	C	05.02.2024	Adam Tucker	-	Adam Tucker
	D	14.02.2024	Adam Tucker	-	Adam Tucker

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Executive Summary

SRE exists to ensure that the built environment enhances life without costing the earth. This BREEAM¹ Pre-Assessment has been written by SRE on behalf of Trinity International Properties Ltd (The Client) to demonstrate the likely BREEAM score of 157-159 Hornsey Park Road, Haringey (the Proposed Development). This pre-assessment has been based on details supplied by the client and wider design team to-date, in addition to further desk-based study, best practise and historical data. SRE has been a licensed BREEAM organisation for over 10 years and has extensive knowledge of the methodology, which is used to produce an accurate assessment score.

Project Name	157-159 Hornsey Park Road
Lead Assessor	Adam Tucker
Target Rating	‘Very Good’ (>55%)
BREEAM Version	UK New Construction V6.1
Assessment Type	Shell Only
BREEAM Type	Offices (General office building)

Scenario	Min Standards met	Score	BREEAM Rating
SRE Targeted	Yes	57.66%	Very Good



Figure 1 - BREEAM Score Chart

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1.0 Assessment Overview

1.1 Development Overview

The Proposed Development includes the demolition of the existing structures upon the brownfield site at 157-159 Hornsey Park Road, Wood Green. The redevelopment consists of the construction of residential (C3) dwellings and a singular 96.7sqm ground floor commercial space.

There are minor external areas proposed with some accessible/disabled car parking spaces and areas of soft landscaping. The site is proposed to be a car free development.

The BREEAM Pre-Assessment has been produced for the ground floor commercial space only. It is currently assumed the Proposed Development can achieve a 'Very Good' rating under BREEAM New Construction V6.1 (SRE Targeted) based on the assumptions and information agreed to-date.

The BREEAM Pre-Assessment has been undertaken as a 'Shell Only' assessment to reflect the scope of the works to be undertaken by the Client in the proposed employment/commercial space. The credits contained within the assessment are therefore those relevant to the scope of a 'Shell Only' assessment.

This pre-assessment highlights those credits which are likely to be achievable (SRE Proposed) and those that will require additional input (SRE Potential). The scheme is required to achieve a BREEAM score of at least

55% to ensure a 'Very Good' rating is awarded. All relevant Minimum Standards to achieve the desired rating have been accounted for. As a BREEAM assessor was appointed early on in the scheme design there are numerous opportunities to maximise the BREEAM score.

1.2 BREEAM Score

A BREEAM Pre-assessment workshop was held on 28th November 2023 to develop a credit strategy to achieve the desired target rating.

The overall target score for the project is currently 57.66%, which will deliver a 'Very Good' rating. This is compliant with Haringey's Local Plan (2017)¹ Policy SP4 and London Plan (2021)² Policy SI 2. The credits targeted, are considered by SRE and the design team to be realistic and deliverable on-site. Some potential credits are highlighted within the following section, some of which could be adopted to improve the current score and provide a greater 'buffer' to protect against the loss of any credits throughout the construction phase.

BREEAM standards can be challenging to achieve, and the pre-assessment report should be carefully reviewed by the design and construction teams to ensure all targeted credits are delivered as the project is progressed. Sections 2.0 and 3.0 list the specific credits proposed as part of the BREEAM 'Very Good' rating.

¹ Haringey's Local Plan (2017). Available at: [final_haringey_local_plan_2017_online.pdf](#)

² The London Plan 2021 (Adopted 2022). Available at: [the_london_plan_2021.pdf](#)



Figure 2 – Proposed elevation and ground level access for the development at 157-159 Hornsey Park Road (Stephen Davy Peter Smith Architects Ltd)

1.3 Potential and Unachievable Credits

The following are credits which have been identified as those that are *potentially achievable* if high benchmarks and/or third-party reports are undertaken:

BREEAM Credit		Potential credits	% score	Summary of credit requirements
Man 03	BREEAM AP (Site)	1	0.80%	Principal Contractor to appoint AP during RIBA Stages 5-6, positioning on site or in a position to attend site regularly to check progress on BREEAM assessment. <i>SRE 01.12.2023: Requires appointment of an LCC Consultant to complete report prior to end of RIBA Stage 2.</i>
Man 04	Testing and Inspecting building fabric (Air tightness testing & thermographic survey)	1	0.80%	Appointment of personnel (or instruction of PC) to carry out a thermographic survey and air permeability testing. Any defects will require remediation. <i>SRE 01.12.2023: Requires completion of thermographic surveying and air permeability test prior to handover.</i>
Hea 06	Security	1	0.88%	Appoint a Suitably Qualified Security Consultant (SQSS) (i.e. ALO, CPDA and CTSA), to complete a Security Needs Assessment (SNA) prior to the end of RIBA Stage 2. <i>SRE 01.12.2023: SBD principles included in design, SNA required from SQSS.</i>
Ene 01	Energy Performance	1+	0.73%+	Higher performance achieved from SBEM results, greater emissions reduction from baseline building regulation. <i>SRE 01.12.2023: Early design BRUKL report to be checked for credit achievability.</i>
Ene 04	Passive design	1	0.73%	Passive strategies implemented to reduce energy demand and CO2 emissions. <i>SRE 01.12.2023: Energy Specialist to review alongside LZC Feasibility study, potential to be incorporated in design.</i>

Tra 02	Sustainable transport measures	1	1.21%	A live public transport information service provision is put in place (i.e. Interactive screen in an accessible area or publicly available website). <i>SRE 01.12.2023: Potential to be investigated post planning.</i>
Mat 03	Responsible sourcing of materials	1	1.57%	Achieving >20% RSM points for superstructure, substructure and hard landscaping materials in the development. <i>SRE 01.12.2023: Potential to be investigated post planning.</i>
Wst 02	Use of recycled and sustainably sourced aggregates	1+	0.80%+	Identify all aggregate uses and types on the project, determine the quantity in tonnes for each identified use and aggregate type, Identify the region in which the aggregate source is located and calculate the distance in kilometres travelled by all aggregates by transport type – requires >3.5 points from Wst 02 calculator tool. <i>SRE 01.12.2023: Architect/QS to provide detail of aggregates, Assessor to calculate achieved points.</i>
LE 04	Ecological Change and Enhancement	1	1.00%	Net gain of Ecological Value (105-109% of existing value) targeted, significant net gain (110%+). Credits determined by appointed Ecologists BNG calculations. <i>SRE 01.12.2023: Ecologist to produce BNG calculations once green roof, terraces and any other soft landscaping areas are confirmed.</i>
Pol 03	Minimising watercourse pollution	1		Maintaining surface water on the site without affecting public drainage networks. <i>SRE 01.12.2023: Drainage strategy to confirm achievability of this credit.</i>

Table 1 - Potential credits

The following credits have been identified as *unachievable*. An explanation has been given for each:

BREEAM Credit		Unachievable credits	% score	Summary
Ene 01	Energy performance	Up to 3	2.19%	Higher benchmarks are considered unachievable, based upon the proposed energy strategy, and building fabric (Primarily as a result of no on-site LZC generation proposed).
Ene 04	Passive Design (Free cooling)	1	0.73%	Building not intended to implement free cooling strategies, not are studies considered desirable.
Tra 02	Sustainable Transport measures	3	2.88%	No liaison with local authority to improve or supply a public transport service or adjacent cycle routes/public footpaths. <i>SRE 01.12.2023: London based, no transport is already quite substantial – improvements are limited.</i>
Mat 01	Building materials LCA	3+	4.71%+	Building LCA not deemed necessary given small area of commercial development.
Mat 03	Responsible sourcing of materials	1	1.57%	Higher benchmarks are considered unachievable.
Mat 06	Material efficiency	1	1.57%	RIBA Stage 1 and 2 studies not carried out for material efficiency.
Wst 01	Resource efficiency	1	0.70%	Higher benchmarks are considered unachievable.

Table 2 - Unachievable credit

2.0 Summary score sheet

		Available	Targeted	Potential
Management				
Man 01	Project brief and design	4	2	4
Man 02	Life cycle cost and service planning	4	1	1
Man 03	Responsible construction practices	6	5	6
Man 03 – Exemplary (1)	Responsible construction practices	1	1	1
Man 04	Commissioning and handover	1	0	1
Standard Management Credit Total:		15	8	12
Exemplary Management Credit Total:		1	1	1
% Management Total (Standard + Exemplary):		13	7.40	10.60
Health & Wellbeing				
Hea 01	Visual comfort	4	2	2
Hea 01 – Exemplary (1)	Visual comfort	1	0	0
Hea 05	Acoustic performance	1	0	0
Hea 06	Security	1	0	1
Hea 06 – Exemplary (1)	Security	1	0	0
Hea 07	Safe and healthy surroundings	2	2	2

Standard Health & Wellbeing Credit Total:		8	4	5
Exemplary Health & Wellbeing Credit Total:		2	0	0
% Health & Wellbeing Total (Standard + Exemplary):		9.04	3.52	4.40
Energy				
Ene 01	Reduction of energy use and carbon emissions	9	5	6
Ene 03	External Lighting	1	1	1
Ene 04	Low carbon design	3	1	2
Standard Energy Credit Total:		13	7	9
Exemplary Energy Credit Total:		0	0	0
% Energy Total (Standard + Exemplary):		9.49	5.11	6.57
Transport				
Tra 01	Transport assessment and travel plan	2	2	2
Tra 02	Sustainable transport measures	10	5	6
Standard Transport Credit Total:		12	7	8
Exemplary Transport Credit Total:		0	0	0
% Transport Total (Standard + Exemplary):		14.52	8.47	9.68
Water				
Wat 02	Water monitoring	1	1	1

Wat 03	Water leak detection	1	1	1
Standard Water Credit Total:		2	2	2
Exemplary Water Credit Total:		0	0	0
% Water Total (Standard + Exemplary):		2	2	2
Materials				
Mat 01	Environmental impacts from construction products - Building life cycle assessment (LCA)	7	0	0
Mat 01 – Exemplary (1)	Environmental impacts from construction products - Building life cycle assessment (LCA)	1	0	0
Mat 01 – Exemplary (2)	Environmental impacts from construction products - Building life cycle assessment (LCA)	1	0	0
Mat 02	Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)	1	0	0
Mat 03	Responsible sourcing of construction products	4	2	3
Mat 03 – Exemplary (1)	Responsible sourcing of construction products	1	0	0
Mat 05	Designing for durability and resilience	1	1	1
Mat 06	Material efficiency	1	0	0
Standard Materials Credit Total:		14	3	4
Exemplary Materials Credit Total:		3	0	0
% Materials Total (Standard + Exemplary):		24.98	4.71	6.28
Waste				
Wst 01	Construction waste management	5	4	4

Wst 01 – Exemplary (1)	Construction waste management	1	0	0
Wst 02	Use of recycled and sustainably sourced aggregates	1	0	1
Wst 02 – Exemplary (1)	Use of recycled and sustainably sourced aggregates	1	0	0
Wst 03	Operational waste	1	1	1
Wst 05	Adaptation to climate change	1	1	1
Wst 06	Design for disassembly and adaptability	2	2	2
Standard Waste Credit Total:		10	8	9
Exemplary Waste Credit Total:		2	0	0
% Waste Total (Standard + Exemplary):		10	6.40	7.20
Land Use & Ecology				
LE 01	Site selection	2	1	1
LE 02	Ecological risks and opportunities	2	2	2
LE 02 – Exemplary (1)	Ecological risks and opportunities	1	0	0
LE 03	Managing impacts on ecology	3	3	3
LE 04	Ecological change and enhancement	4	4	4
LE 04 – Exemplary (1)	Ecological change and enhancement	1	0	1
LE 05	Long term ecological management and maintenance	2	1	2
Standard Land Use & Ecology Credit Total:		13	11	12

Exemplary Land Use & Ecology Credit Total:		2	0	1
% Land Use & Ecology Total (Standard + Exemplary):		20.98	16.06	18.52
Pollution				
Pol 03	Flood and surface water management	5	3	4
Pol 04	Reduction of night time light pollution	1	1	1
Standard Pollution Credit Total:		6	4	5
Exemplary Pollution Credit Total:		0	0	0
% Pollution Total (Standard + Exemplary):		6	4	5
Innovation				
AI	Approved Innovation	1	0	0
AI - Innovation Credit Total:		0	0	0
% Innovation Total (Standard + Exemplary):		1	0	0
OVERALL TOTALS			55	68
% OVERALL SCORE TOTALS			57.66	70.24

3.0 Detailed Assessment

Management					
Man 01 - Project brief and design					
	Credit	Available	Targeted	Potential	Comments
1	Project delivery planning	1	1	1	Project Delivery Planning Completed BEFORE end of RIBA Stage 2 (1 credit) Targeted - Yes Notes from stakeholders meeting which identify and define each key phase of the project delivery (including, roles, responsibilities and contributions). The following should be considered when defining the above: • End-user requirements • Aims of the design and design strategy • Installation and construction requirements or limitations • Budget and technical expertise • Maintainability and adaptability of the proposal • Operational energy • Requirements for the production of the project and end-user documentation, and for commissioning, training and aftercare support. The project team should also demonstrate how stakeholders' contributions have influenced Initial Project Brief, Project Execution Plan, Communication Strategy and Concept Design. Actions: • Design Team to provide a completed copy of the SRE Man 01 meeting plan and/or supporting docs (Project brief, Sustainability brief, DAS, Project programme, roles and responsibilities schedule).
2	Stakeholder consultation (interested parties)	1	1	1	Stakeholder Consultation (interested parties) (1 credit) Targeted - Yes Complete by end of RIBA Stage 2

					Prior to completion of the Concept Design, the design team should consult with all interested parties on matters that cover the minimum consultation content. They should demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design. Prior to completion of the detailed design (RIBA Stage 4, Technical Design or equivalent), all interested parties should give and receive consultation feedback. Actions: Design Team to provide evidence of meetings between third-party stakeholders and how the outcomes of the meetings have influenced the Project Brief and early design options. SRE (30.11.2023): Public consultation held, led by Maddox Planning Associates. Credit targeted.
3	BREEAM AP (concept design)	1	0	1	BREEAM AP (concept design) (one credit) Targeted - No The project team, including the client, will formally agree strategic performance targets early in the design process. For credit to be achieved: Involve a BREEAM AP in the project at an appropriate time and level to: - Work with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the overall performance of the project against BREEAM, from their appointment and throughout Concept Design. - Monitor progress against the performance targets agreed between the client and project team throughout all stages after their appointment where decisions critically impact BREEAM performance. - Proactively identify risks and opportunities related to the achievement of the targets agreed under the criterion between the client and project team. - Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. - Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team. Actions: Requires appointment of BREEAM AP RIBA Stages 1-2 and have them provide the AP report to show engagement.

					SRE (30.11.2023): AP not appointed at the appropriate time.
4	BREEAM AP (developed design)	1	0	1	BREEAM AP (developed design) (1 credit) Targeted - No For this credit to be achieved, the BREEAM AP (concept design) credit is required. In addition, the BREEAM AP will be involved in the project at an appropriate time and level to: • Work with the project team, including the client, to consider the links between BREEAM issues and to assist them in maximising the overall performance of the project against BREEAM throughout Developed Design. • Monitor progress against the performance targets agreed between the client and project team throughout all stages where decisions critically impact the specification and tendering process and the BREEAM performance. • Proactively identify risks and opportunities related to the achievement of the targets agreed between the client and project team. • Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. • Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team. Actions: Requires appointment of BREEAM AP RIBA Stages 1-3 and have them provide the AP report to show engagement. SRE (30.11.2023): AP not appointed at the appropriate time.
Man 02 - Life cycle cost and service planning					
	Credit	Available	Targeted	Potential	Comments
1	Elemental LCC	2	0	0	Elemental LCC To be completed by end of RIBA Stage 2 (2 credits) Targeted - No A competent person is to be appointed to carry out an outline, entire asset LCC plan before the end of Concept Design (RIBA Stage 2) together with any design options appraisals in line with Standardised method of life cycle costing for construction procurement PD 156865:2008.

					The competent person must be an individual who has acquired substantial expertise or a recognised qualification for undertaking life cycle costing studies and is not professionally connected to a single manufacturer. The ELCC plan is to provide an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years). This will include service life, maintenance and operation cost estimates. The period of analysis should ideally be agreed by the client, in line with the design life expectancy of the building. However, where the life expectancy of the building is not yet formally agreed (due to being at very early design stages), the default design life of 60 years should be used for modelling purposes (in line with the UK default). The design team will provide examples to demonstrate how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. Actions:
2	Component level LCC options appraisal	1	0	0	Component level LCC options appraisal To be completed by the end of RIBA Stage 4 (1 credit) Targeted - No A competent person (see definition provided within ELCC above) is to develop a component level LCC options appraisal by the end of Technical Design (RIBA Stage 4). The component level LCC, in line with PD156865: 2008, should include (where present): • Envelope, e.g. cladding, windows, or roofing • Services, e.g. heat source, cooling source, or controls • Finishes, e.g. walls, floors or ceilings • External spaces, e.g. alternative hard landscaping, boundary protection. The Component level LCC option appraisal should review all of the above component types (where present). However, it is not necessary to consider every single example cited under each component; only a selection of those most likely to draw valued comparisons. This is to ensure that a wide range of options are considered and help focus the analysis on components which would benefit the most from appraisal. The design team will provide examples to demonstrate how the component level LCC options appraisal has

					been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. Actions:
3	Capital cost reporting	1	1	1	Capital cost reporting (1 credit) Targeted - Yes The capital cost of the project will be formally stated in the BREEAM assessment, measured in £k/m². Written confirmation is to be provided during the Design Stage. The capital cost for the building includes the expenses related to the initial construction of the building: • Construction, including preparatory works, materials, equipment and labour • Site management • Construction financing • Insurance and taxes during construction • Inspection and testing Costs related to land procurement, clearance, design, statutory approvals and post occupancy aftercare are not included. Actions: QS or PM to confirm that written confirmation of the final capital cost of the project in £k/m² will be provided.
Man 03 - Responsible construction practices					
	Credit	Available	Targeted	Potential	Comments
Pre-req 1	Prerequisite - Legally harvested and traded timber		✓	✓	Prerequisite - All timber and timber-based products used on the project to be 'Legally harvested and traded timber'. The requirements outlined by the UK Government Timber Procurement Policy (TPP) need to be followed, in that they must be covered by third-party independent forest certification schemes Category A (e.g. FSC or PEFC). Actions: Main Contractor to confirm all Timber products used on site will be 'Legally harvested and traded timber', chosen based on the above certification.

1	Environmental management	1	1	1	Environmental Management (1 credit) Targeted - Yes The principal contractor and demolition contractor must have a certified Environmental Management System (ISO 14001/EMAS). The EMAS must be third party certified or, in compliance with BS 8555, have appropriate structure, have reached implementation stage phase four implementation and operation of the environmental management system and have completed defined phase audits one to four. In addition, they are required to implement best practice pollution prevention policies and procedures on site in accordance with PPG6. Actions: Client to ensure that the Main Contractor and Demolition Contractors appointed have ISO 14001/EMAS certification.
2	BREEAM AP (site)	1	0	1	BREEAM AP (site) (1 credit) Targeted - No Client and contractor to formally agree performance targets. A BREEAM AP should be involved in the project at an appropriate time and level to: • Work with the project team, including the client, to consider the links between BREEAM issues and assist them in achieving and if possible going beyond the design intent, to maximise the projects performance against the agreed performance targets throughout the Construction, Handover and Close Out stages. • Monitor construction progress against the performance targets agreed under criterion 5 above throughout all stages where decisions critically impact BREEAM performance. • Proactively identify risks and opportunities related to the procurement and construction process and the achievement of the targets agreed under criterion 5 above. • Provide feedback to the constructors and the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. • Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team and the provision to the assessor. Actions: Main Contractor to appoint a BREEAM AP for Construction, Handover and Close Out stages and have them provide an AP summary report/notes of engagements.
3	Responsible construction management	2	2	2	Responsible construction management Targeted - Yes

					Team members are to be assigned responsibility for reporting and monitoring the items listed within Table 4.1 of the BREEAM NC V6.1 manual. Credits are achieved as follows: • One credit: As a minimum, achieve 9 of the items listed in table 4.1 of the manual, namely: a, d, f, g, h, j, n, o & r. • Two credits: Achieve six additional credits from table 4.1 as well as the criterion above required for one credit. As per BREs GN33, The Considerate Constructors Scheme (CCS), or equivalent, can be used in support of the delivery of the above measures, however, this is in addition to the site-specific evidence detailed above. Following the BRE guidance note KBCN1500, the CCS credit requirements are as follows: • One credit requires a minimum of 9 points per section and 27 overall. • Two credits required a minimum of 11 points per section and 35 overall. • Two credits + exemplary requires a minimum of 13 points per section and 39 points overall. Actions: Project Team to ensure the appointed Main Contractor commits to achieving the above. If CCS is used, this needs to be registered to support these 2+1 credits.
4	Monitoring of construction site impacts	2	2	2	Monitoring of construction site impacts (2 credits) Targeted - Yes (2 credits) Responsibility is to be assigned to an individual for monitoring, recording and reporting energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing) throughout the build programme. To ensure the robust collection of information, this individual must have the appropriate authority and responsibility to request and access the data required. Where appointed, the BREEAM AP could perform this role. First monitoring credit utility consumption (energy and water) The assigned individual is to: • Set targets for the site energy consumption in kWh as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation. • Set targets for the potable water consumption (m3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation.

					- Monitor and record data as described above. Second monitoring credit transportation of materials and waste The assigned individual is to: - Set targets for transportation movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum this will cover transport from the point of supply to the building site, including any transport, intermediate storage and point of supply. Materials used in major building elements will be monitored as a minimum. Transport from the construction gate to the waste disposal processing should also be monitored, covering construction waste groups outlined in the project's resource management plan. - Monitor and record data as described above. Actions: Project Team to ensure the appointed Main Contractor commits to monitoring energy and water (one credit) and transport of materials on site and transport of waste (one credit).
e1	Responsible construction management	1	1	1	Responsible construction management Targeted - Yes The Main Contractor must achieve all items listed in Table 4.1. If the Considerate Constructors Scheme (CCS) is used, this will require the achievement of a minimum of 13 points per section and 39 overall. Actions: Project Team to ensure the appointed Main Contractor commits to achieving the above. If CCS is to be used, confirmation of registration is required.
Man 04 - Commissioning and handover					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite (Very Good to Outstanding)		✓	✓	Prerequisite - Mandatory to achieve a Very Good to Outstanding level The commissioning test schedule and responsibilities credit must be achieved. A Building user guide to be provided as a minimum requirement to achieve a 'Very Good' rating.

3	Testing and inspecting building fabric	1	0	1	Testing and inspecting building fabric (one credit) Targeted - No (Potential) For this credit to be achieved, the criteria within Commissioning - testing schedule and responsibilities above must be met. In addition: - Complete post-construction testing and inspection to quality-assure the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through airtightness testing and a thermographic survey). A suitably qualified professional (see definition below) undertakes the survey and testing in accordance with the appropriate standard. - Rectify any defects identified during post-construction testing and inspection prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building or element as defined at the design stage. Suitably Qualified Professional: <u>Airtightness testing</u>: Membership of Air Tightness Testing and Measurement Association (ATTMA) or Independent Air Tightness Testing Scheme (IATS) attained at organisational level. <u>Thermographic survey</u>: Professionals holding a valid Category 2 or RQF (Regulated Qualifications Framework) Level 4. Alternatively, the survey can be undertaken by a Category 1 thermographer and then the images interpreted by a Category 2 or Level 4 thermographer. Actions: Project Team to ensure the appointed Main Contractor confirms the above and ensures that airtightness testing and a thermographic survey are included in the project's budget.
		15	8	12	Standard Management Credit Total
		1	1	1	Exemplary Management Credit Total
		13	7.40	10.60	% Management Total (Standard + Exemplary)
Health & Wellbeing					
Hea 01 - Visual comfort					
	Credit	Available	Targeted	Potential	Comments

2	Daylighting (building type dependent)	2	0	0	Credits not sought.
3	View out	1	1	1	View Out (1 credit) Targeted - Yes 95% of the floor area in 95% of spaces for each relevant building area achieves adequate view out. Building areas within 8m of an external wall which has a window/opening of 20% of the surrounding wall area and at a seated eye level, the view out should be of a landscape or buildings (rather than just the sky). KBCN0876 (View out - no relevant areas): If the scope of the assessment does not include any relevant building areas, as defined within the manual, the criteria for view out can be considered as met by default. Actions: Architect to confirm whether the above criteria are achievable for the Proposed Development.
4	Internal and external lighting levels, zoning and control	1	1	1	Internal/External lighting and zoning controls (1 credit) Targeted - Yes All internal lighting is to be designed to provide illuminance levels in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard. Internal lighting is to be zoned to allow for occupant control. Zoning must be in accordance with the criteria below for the relevant areas present in the building (relevant areas present have been assumed at this stage - Project team to provide further clarification of spaces to be zoned): • In office areas, zones of no more than four workplaces • Workstations adjacent to windows or atria and other building areas separately zoned and controlled Small spaces (less than 40m²) Buildings consisting entirely of small rooms or spaces (less than 40m²) which do not require any subdivision of lighting zones or control will meet the zoning criteria by default. External lighting is to be provided in accordance with BS 5489-1:2013 and BS EN 12464-2:2014. Actions: M&E Consultant to confirm the internal and external lighting will be specified in line with the above.

e1	Daylighting (building type dependent)	1	0	0	Credit not sought.
Hea 05 - Acoustic performance					
	Credit	Available	Targeted	Potential	Comments
1	Acoustic performance	1	0	0	Acoustic Performance (1 credit) Targeted - No The building meets the appropriate acoustic performance standards and testing requirements for Indoor ambient noise levels: Achieve indoor ambient noise levels that comply with the design ranges given in Section 7 of BS 8233:2014. A programme of pre-completion acoustic testing is carried out by a compliant test body (i.e. UKAS, IAF, ANC accreditation). The basic built form has a large impact on the acoustic performance of the building and would be outside the control of the tenant. A suitably qualified acoustician (SQA) must carry out a quantifiable assessment of the specification of the build form, construction and any external factors likely to affect the indoor ambient noise levels. The SQA must then confirm the developer's works will enable a future tenant utilising a typical fit-out and specification to meet the levels required to demonstrate compliance. Actions:
Hea 06 - Security					
	Credit	Available	Targeted	Potential	Comments
1	Security of site and building	1	0	1	Security: Input by RIBA Stage 2 (1 credit) Targeted - No (Potential) A Suitably Qualified Security Specialist (SQSS/ALO) must conduct an evidence-based Security Needs Assessment (SNA) prior to RIBA Stage 2, which is to include: • A visual audit of the site and surroundings, identifying environmental cues and features pertinent to the security of the proposed development. • Formal consultation with relevant stakeholders, including the local ALO, CPDA and CTSA (as applicable), in order to obtain a summary of crime and disorder issues in the immediate vicinity of the proposed development.

					• Identification of risks specific to the proposed, likely or potential use of the buildings. • Identification of risks specific to the proposed, likely or potential user groups of the buildings. • Identification any detrimental effects the development may have on the existing community. The SQSS is to develop a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA. The controls and recommendations should be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations must be justified and agreed with the SQSS. The scope of the recommended security controls may consider the following: • Design and layout (e.g. crime prevention through environmental design). • Physical security (e.g. tested and certified security products). • Technological security (e.g. Tested and certified alarms, automatic access control systems, CCTV). It may be necessary to also consider building and security systems? ability to resist cyber-related attack. This will be dependent on the types of systems to be incorporated into the project. Actions: • Project team to confirm whether an SQSS will be appointed prior to RIBA Stage 2 to perform an SNA. • Measures will need to be incorporated into the design of the Proposed Development to comply with the recommendations within the SNA.
e1	Security of site and building	1	0	0	Credit not sought.
Hea 07 - Safe and healthy surroundings					
	Credit	Available	Targeted	Potential	Comments
1	Safe access	1	1	1	Safe and healthy surroundings (1 credit) Targeted - Yes Where external site areas form part of the assessed development the following apply:

					• Dedicated and safe cycle paths are provided from the site entrance to any cycle storage and connect to off-site cycle paths where applicable. • Dedicated and safe footpaths are provided on and around the site providing suitable links for the following: ○ The site entrance to the building entrance ○ Car parks (where present) to the building entrance ○ The building to outdoor space ○ Connecting to off-site paths where applicable. ○ Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths. Where vehicle delivery access and drop-off areas form part of the assessed development, the following apply: • Delivery areas are not accessed through general parking areas and do not cross or share the following: ○ pedestrian and cyclist paths ○ outside amenity areas accessible to building users and general public. • There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. • Parking and turning areas are designed for simple manoeuvring according to the type of delivery vehicle likely to access the site, thus avoiding the need for repeated shunting. <u>Dedicated and safe cycle lanes</u> Marked-out and clearly signed routes to accommodate building users arriving on and travelling through the assessed site on a bicycle. They must also have the following features: 1. Adequate external lighting in accordance with BS 5489-1:20131 Lighting of roads and public amenity areas. 2. Appropriately sized, designed and constructed. The following publications offer guidance on how to demonstrate this: • Local transport Note 2/08 Cycle infrastructure design, Department of Transport, 2008.
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					- Sustrans design guidance (www.sustrans.org.uk), specifically the Sustrans design manual handbook for cycle-friendly design. <u>Dedicated and safe footpaths</u> Marked-out and clearly signed routes to accommodate building users arriving on and travelling through the assessed site on foot. They must also have the following features: - Dedicated pedestrian crossing points are provided where needed to allow pedestrians to cross vehicle access routes - Appropriate traffic calming measures are in place to slow traffic at any crossing points - Developments with high numbers of visitors provide signposting to other local amenities and public transport nodes off site (where existing) - Adequate external lighting in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas. Actions: - Architect to confirm that access routes within the site will comply with the above. - This credit benefits from early attention as industrial developments frequently have difficulty achieving the above safe access requirements.
2	Outside space	1	1	1	Outside Space (1 credit) Targeted - Yes There is an outside space providing building users with an external amenity area. To be deemed applicable, this must meet the following: - Of an appropriate size for the number of building users. - Be an outdoor landscaped area. - Have appropriate seating areas and be non-smoking. - Be located to ensure it is accessible to all building users and avoids areas that will have disturbances from sources of noise (e.g. building services, car parks, busy roads, delivery areas etc.). Actions: Architect to confirm that an outside space in compliance with the above criteria will be provided within the Proposed Development.

	8	4	5	Standard Health & Wellbeing Credit Total	
	2	0	0	Exemplary Health & Wellbeing Credit Total	
	9.04	3.52	4.40	% Health & Wellbeing Total (Standard + Exemplary)	
Energy					
Ene 01 - Reduction of energy use and carbon emissions					
	Credit	Available	Targeted	Potential	Comments
1	Energy performance	9	5	6	Energy Performance (9 credits) At least <u>Four</u> credits are required to achieve an 'Excellent' rating an EPC_{nc} of at least 0.4 would be required. Targeted - Yes - 5 credits (confirmed through SBEM modelling & BRUKL report produced by SRE) Energy modelling must be undertaken to calculate an Energy Performance Ratio for New Construction (EPR NC). The EPR NC achieved is compared with the benchmarks in Table 6.1 of the BREEAM NC V6.1 manual and awarded the corresponding number of BREEAM credits. Actions: Energy modelling is to be undertaken and an SBEM or BRUKL provided to confirm credits.
Ene 03 - External Lighting					
	Credit	Available	Targeted	Potential	Comments
1	External lighting	1	1	1	External Lighting (1 credit) Targeted - Yes To achieve 1 credit, the Proposed Development must meet either of the following: There is no external lighting on site (including lighting on the building, at entrances and signs) OR External light fittings within the construction zone have:

					• an average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt • automatic control to prevent operation during daylight hours. • presence detection in areas of intermittent pedestrian traffic. Actions: MEP to confirm that external lighting will be specified in line with the above requirements.
Ene 04 - Low carbon design					
	Credit	Available	Targeted	Potential	Comments
1	Passive design	2	0	1	Passive Design (2 credits) Targeted - No (potential) Complete by end of RIBA stage 2 One credit - Passive design analysis (Targeted) The first credit within Hea 04 (thermal modelling) must be achieved. The project team must undertake an analysis of the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures. These will reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings. Reductions in total energy demand and CO2e emissions resulting from the passive design measures must also be quantified. One credit - Free cooling (Not Targeted) A free cooling analysis must be included within the passive design analysis. This must identify opportunities for the implementation of free cooling measures. The building must be naturally ventilated or use any combination of the free cooling strategies listed below: • Night time cooling (which could include the use of a high exposed thermal mass) • Ground coupled air cooling • Displacement ventilation (not linked to any active cooling system) • Ground water cooling • Surface water cooling

					• Evaporative cooling, direct or indirect • Desiccant dehumidification and evaporative cooling, using waste heat • Absorption cooling, using waste heat. Actions: • Passive design analysis needs to be provided by the end of RIBA Stage 2 if this credit is to be targeted. • As Hea 04 in Non-applicable for a Shell Only development, criteria 1 is ignored. • Free cooling is to be included within the passive design analysis to confirm the 2nd credit. Project team to confirm whether there are any opportunities to implement natural ventilation or free cooling measures, and whether this is worth including within the passive design analysis.
2	Low and zero carbon technologies	1	1	1	LZC Feasibility Study (1 credit) Targeted - Yes Complete by the end of RIBA Stage 2 An energy specialist is to complete a feasibility study by the end of Concept Design. The most appropriate recognised local (on-site or near-site) low and zero carbon (LZC) energy sources and local LZC technologies for the building or development are to be established and specified based on the feasibility study and its recommendations. The reduced regulated carbon dioxide (CO₂e) emissions resulting from the feasibility study are to be quantified. Actions: SRE has been appointed to conduct the LZC Feasibility Study and will produce the report before the end of RIBA Stage 2. <i>SRE (14.07.2023): The Energy and Sustainability statement has been completed by SRE and issued to the Client.</i>
		13	7	9	Standard Energy Credit Total
		0	0	0	Exemplary Energy Credit Total

	9.49	5.11	6.57	% Energy Total (Standard + Exemplary)	
Transport					
Tra 01 - Transport assessment and travel plan					
	Credit	Available	Targeted	Potential	Comments
1	Travel plan	2	2	2	Pre-requisite - Travel plan must be undertaken to achieve any credits within this section (2 credits) By the end of RIBA stage 2 Targeted - Yes At no later than Concept Design stage, undertake a site-specific transport assessment (or develop a travel statement) and draft travel plan, which can demonstrably be used to influence the site layout and built form. The Transport Assessment/Statement must assess the following as a minimum: • If relevant, travel patterns and attitudes of existing building or site users towards cycling, walking and public transport, to identify relevant constraints and opportunities. • Predicted travel patterns and transport impact of future building or site users. • Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors. • Reporting of the number and type of existing accessible amenities within 500m of the site. • Disabled access accounting for varying levels and types of disability, including visual impairment. • Calculation of the existing public transport Accessibility Index (AI) • Current facilities for cyclists. Following a transport assessment, develop a site-specific travel plan that provides a long term management strategy which encourages more sustainable travel. The travel plan includes measures to increase or improve more sustainable modes of transport and movement of people and goods during the building's operation. If the occupier is known, involve them in the development of the travel plan. Demonstrate that the travel plan will be implemented and supported by the building's management in operation.

					Actions: Travel plan draft and transport assessment required. To be provided by the Project Team by the end of RIBA Stage 2. <i>SRE (30.11.2023): Client confirmed that the Transport Consultant has been appointed and Transport Assessment completed. They have been made aware of the Travel Plan requirement.</i>
Tra 02 - Sustainable transport measures					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Pre-requisite		✓	✓	Pre-requisite - Tra 01 is targeted.
1	Transport options implementation	10	5	6	Transport options implementation (10 credits) Targeted - Yes - 5 Targeted Credits are awarded based upon the site's Accessibility Index (AI) and the implementation of any of the following: - Existing AI >8 - Demonstrate an increase over the existing AI (calculated in Tra01) through either negotiating with transit companies for an increase in frequency OR provision of a diverted bus route/enhanced bus stop OR provide a dedicated bus service. - Provide a public transport information system in a publicly accessible area to allow building users access to up-to-date information on the available public transport and transport infrastructure. This may include signposting to public transport, cycling, walking infrastructure or local amenities. - Provide electric recharging stations for a minimum of 3kW for at least 10% of the total car parking capacity for the development. - Set up a car-sharing group or facility to facilitate and encourage building users to car share, raise awareness of the sharing scheme with marketing and communication materials, provide priority spaces for car sharers for at least 5% of the total car parking capacity for the development and locate priority parking spaces nearest the development entrance used by the sharing scheme participants. - During preparation of the brief, the design team consults with the local authority (LA) on the state of the local cycling network and public accessible pedestrian routes, to focus on whichever the LA deems most relevant to the project, and how to improve it and agree and implement one

					7. proposition chosen with the local authority. The proposition supported by the development is additional to existing local plans and has a significant impact on the local cycling network or on pedestrian routes open to the public. 8. Install compliant cycle storage spaces to meet the minimum levels set out in the BREEAM NC V6.1 technical manual (Table 7.5). For Industrial developments, the requirements are: 1 cycle space per 10 staff. Minimum provision: If the calculated number is less than 4, a minimum of 4 cycle spaces must be provided or 1 space per user (this can include staff and other user groups). 9. Provide at least two compliant cyclists' facilities for the building users for the scope of each compliant facility: 1. Showers - One shower for every 10 cycle storage spaces, subject to a minimum provision of one shower. Both male and female users must be catered for. 2. Changing facilities - Does not include toilet or shower cubicles. To be appropriately sized and account for privacy to allow cyclists of either gender to change in private. Must include adequate space and facilities to hang or store clothing and equipment while changing or showering, e.g. bench seat or hooks. 3. Lockers - At least equal to the number of cycle spaces provided, in or adjacent to the changing rooms (where provided). 4. Drying spaces. - Should be provided with suitable finishes, adequate heating and ventilation and the facility to hang wet clothes with sufficient air movement around them to dry effectively. 10. At least three existing accessible amenities are present within 500m of the site. 11. Ensure a minimum of one new accessible amenity is provided OR ensure more than one new accessible amenity is provided. It has been proposed that the following measures are installed to target 6 credits (+1 potential) in this section: • Existing AI >8 - Calculated to be 18.35 (1) - targeted • EV charging – targeted • Care share - awarded by default • Planned BREEAM-compliant cycle storage provision of 1 space per 10 staff. (8) - targeted • Provide at least two compliant cyclists' facilities for the building users out of showers, changing facilities, lockers or drying space. (9) - potential • At least three existing accessible amenities are present within 500m of the site. (10) - targeted
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					Actions: Project Team to confirm the measures that are to be implemented: - Architect to confirm the installation of EV charging points, BREEAM-compliant cycle storage and BREEAM-compliant cycle facilities that will be installed for both staff and occupants/visitors. - Project Manager to confirm no parking provision (car free development) - with support of architect - Client to confirm the provision of a public transport information system (potential) <i>SRE (30.11.2023): Grid Cell AI calculated as 18.35 - 10 points required for 10 credits.</i>
		12	7	8	Standard Transport Credit Total
		0	0	0	Exemplary Transport Credit Total
		14.52	8.47	9.68	% Transport Total (Standard + Exemplary)
Water					
Wat 02 - Water monitoring					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite (Good to Outstanding)		✓	✓	Prerequisite (Good to Outstanding) Minimum requirement for 'Very Good' rating Specify a water meter on the mains water supply to each building. This includes instances where water is supplied via a borehole or other private source.
1	Water monitoring	1	1	1	Water Monitoring (1 credit) Targeted - Yes Mandatory - A water meter is fitted to the mains supply on each building. For water-consuming plant or building areas consuming 10% or more of the buildings total water demand it is required that easily accessible sub-metres are fitted or water monitoring equipment is installed. For each meter (main and sub), a pulsed or other open protocol communication output needs to be installed and connected to an appropriate utility monitoring and management system, e.g. a building

					management system (BMS), for the monitoring of water consumption. If there is no BMS system in operation at Post-Construction stage, credits will be awarded provided that the system used enables connection when the BMS becomes operational. Actions: MEP to confirm that water meters will be specified in line with the above requirements.
Wat 03 - Water leak detection					
	Credit	Available	Targeted	Potential	Comments
1	Leak detection system	1	1	1	Leak detection system (1 credit) Targeted - Yes A BREEAM Compliant leak detection system is to be installed on the mains water supply to each building to detect major leaks on the water supply within the buildings and between the buildings and water supply. The system must be: • A permanent automated water leak detection system that alerts the building occupants to the leak OR an inbuilt automated diagnostic procedure for detecting leaks; • Activated when the flow of water passing through the water meter or data logger is at a flow rate above a pre-set maximum for a pre-set period of time. This usually involves installing a system which detects higher than normal flow rates at meters or sub-meters. It does not necessarily require a system that directly detects water leakage along part or the whole length of the water supply system; • Able to identify different flow and therefore leakage rates, e.g., continuous, high or low level, over set time periods. Although high and low-level leakage rates are not specified, the leak detection equipment installed must have the flexibility to distinguish between different flow rates to enable it to be programmed to suit the building type and owner's or occupier's usage patterns; • Programmable to suit the owner's or occupier's water consumption criteria; and • Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers. Actions: MEP to confirm that a leak detection system will be installed in line with the above requirements.

	2	2	2	Standard Water Credit Total	
	0	0	0	Exemplary Water Credit Total	
	2	2	2	% Water Total (Standard + Exemplary)	
Materials					
Mat 01 - Environmental impacts from construction products - Building life cycle assessment (LCA)					
	Credit	Available	Targeted	Potential	Comments
1	Superstructure	6	0	0	Superstructure Life Cycle Assessment (LCA) Targeted - No To be completed by the end of RIBA stage 2 and again during RIBA stage 4 Carry out an LCA of 2-4 significantly different superstructure options, of which the options selected must not hinder the functional requirements previously specified by the client. This must be undertaken within an IMPACT Compliant LCA tool. The following must also be recorded in an 'Option Appraisal Summary Document': • Differences between the design options; • Reasons for selecting the chosen options; and • Reasons for not selecting the discarded options. Reasons must be given for selecting the chosen design option, with the results submitted to BRE prior to the end of the RIBA Stage 2 AND prior to planning submission. This MUST be achieved in order to gain any credits within Mat 01. During RIBA Stage 4, carry out an LCA of 2-3 significantly different superstructure options, based on that selected during Stage 2. Results must explore the same issues as those presented at RIBA Stage 2 with the 'Option Appraisal Summary Document' updated and submitted to BRE prior to the end of Stage 4. Actions:

2	Substructure and hard landscaping options appraisal during Concept Design (all building types)	1	0	0	Substructure and hard landscaping Life Cycle Assessment (LCA) (1 credit) Complete by the end of RIBA Stage 2 Targeted - No During Concept Design identify opportunities for reducing environmental impacts as follows: Carry out an LCA of 6 significantly different substructure and hard landscaping options (min 2 substructure & 2 hard landscaping). Results must explore the same issues as those presented for the Superstructure, with the 'Option Appraisal Summary Document' updated and submitted to BRE at the end of RIBA Stage 2. Actions:
e2	LCA and LCC alignment (all building types)	1	0	0	LCC and LCA alignment (1 exemplary credit) Complete by RIBA Stage 2 Targeted - No Achieve requirements for Mat 01 credit 1. Where the Man 02 LCC (elemental and component level) credits are achieved, the LCA options appraisals align and integrate findings within the overall project.
e3	Third party verification (all building types) - Exemplary level criteria	1	0	0	Third-Party verification (1 exemplary credit) Complete by RIBA Stage 2 and Stage 4 Targeted - No A suitably qualified third-party either carries out the LCA work or verifies the LCA work.
Mat 02 - Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)					
	Credit	Available	Targeted	Potential	Comments
1	Specification of products with a recognised environmental product declaration (EPD)	1	0	0	Environmental impacts from construction products (1 credit) Targeted - No To achieve this credit, the materials listed in Mat 01 are assessed depending upon their EPDs (Environmental Product Declarations). Based upon the type of EPD, a score is given with a single credit awarded if 20 points are scored. Actions:
Mat 03 - Responsible sourcing of construction products					

	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite		✓	✓	Mandatory - This is a minimum requirement for any BREEAM rating 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy (TPP). Actions: Project Team to ensure that the appointed Main Contractor commits to sourcing all Timber products on site in accordance with the BREEAM definition of 'Legally harvested and traded timber'.
1	Enabling sustainable procurement	1	1	1	Sustainable Procurement Plan (1 credit) Targeted - Yes (Mandatory for 'Outstanding' rating). To be completed by the end of RIBA Stage 2 A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products. The plan must: • Be in place before Concept Design. • Include sustainability aims, objectives and strategic targets to guide procurement activities. Note: targets do not need to be achieved for the credit to be awarded but justification must be provided for targets that are not achieved. • Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. Actions: Client/Design Team to confirm whether Sustainable Procurement Plan was provided before the end of RIBA stage 2. SRE can provide this service for a fee, if required.
2	Measuring responsible sourcing	3	1	2	Measuring Responsible sourcing (3 credits) Targeted - Yes (1 targeted, 1 potential) Credits for this issue are awarded based on the proportion of responsible sourcing of materials (RSM) points achieved: 1 credit: A target score of 10% of the available RSM points is achieved for the superstructure. 2 credits (Targeted):

					The above is achieved for the superstructure, AND 20% of available RSM points are achieved for internal finishes and substructure and hard landscaping. 3 credits (Potential): The above is achieved for the superstructure, AND 30% of available RSM points are achieved for internal finishes and substructure and hard landscaping. Calculation of the above requires completion of the Mat 03 Calculator tool by the BREEAM assessor, based on materials information (including materials schedule, drawings and responsible sourcing certificates) provided by the Project Team (specifically the Main Contractor or Architect). Actions: Project Team to ensure the appointed Main Contractor commits to sourcing all superstructure, internal finishes, substructure and hard landscaping materials to be used on site from suppliers with responsible sourcing certificates, where possible.
e1	Measuring responsible sourcing	1	0	0	Measuring responsible sourcing - exemplary criteria (1 exemplary credit) Targeted - No The criteria for 3 RSM credits are achieved, as well as: Core building services achieve - 50% of available RSM points. Actions: Credit not sought at present. If targeted, the Project Team are to ensure that the appointed Main Contractor/MEP sources materials for core building services from suppliers with responsible sourcing certificates, where possible.
Mat 05 - Designing for durability and resilience					
	Credit	Available	Targeted	Potential	Comments
1	Protecting vulnerable parts of the building from damage/material degradation	1	1	1	Designing for durability and resilience (1 credit) Targeted - Yes <u>Protecting vulnerable parts of the building from damage</u> Protection measures are to be incorporated into the building's design and construction to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring. These measures must provide protection against:

					• Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). • Damage from any vehicle or trolley movements within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. • External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building facade and where delivery areas or routes are within 2 metres of the facade, i.e. specifying bollards or protection rails. • Potential malicious damage to building materials and finishes, in public and common areas where appropriate. Examples of suitable durability measures include: • Bollards, barriers or raised kerbs to delivery and vehicle drop-off areas. • Robust external wall construction, up to 2m high. • Corridor walls specified to Severe Duty (SD) as per BS 5234-2. • Protection rails to walls of corridors. • Kick plates or impact protection (e.g. trolleys) on doors. • Hard-wearing and easily washable floor finishes in heavily used circulation areas (i.e., main entrance, corridors, public areas, etc.) • Door stoppers to prevent door handles damaging walls. • Designing out the risk without the need for additional materials specification to protect vulnerable areas. <u>Protecting exposed parts of the building from material degradation</u> • Key exposed building elements that may be subject to environmental degradation to be identified, with either a detailed assessment of the element's resilience or an appropriate durability standard (in line with BS 7543:2015) being installed. • Convenient roof access should also be included within the plans in addition to a fabric design that prevents water damage, ingress and detrimental ponding. • Table 9.14 within the BREEAM New Construction V6 manual contains a list of relevant industry durability and quality standards that can be used to achieve compliance. This list addresses standards to be followed for the following building elements:
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					○ Timber ○ Curtain walling ○ Brickwork, blockwork ○ Roof elements ○ Metal cladding ○ Glazing ○ Masonry Actions: Architect to confirm that protection measures and durability or quality standards to be specified and followed for vulnerable and exposed parts of the building, in line with the above criteria.
Mat 06 - Material efficiency					
	Credit	Available	Targeted	Potential	Comments
1	Material efficiency	1	0	0	Material efficiency: Input from RIBA Stage 1 (1 credit) Targeted - No At the Preparation and Brief and Concept Design stages, set targets and report on opportunities and methods to optimise the use of materials through the compilation of a Material Efficiency report. This should be carried out at each of the RIBA Stages, 1 (Preparation & Brief), 2 (Concept Design), 3 (Developed Design), 4 (Technical Design) & 5 (Construction). Additionally, at RIBA Stages 3 (Developed Design), 4 (Technical Design) and 5 (Construction), the implementation of measures for maximising material efficiency should be developed and implemented, and noted within the Material Efficiency report. The targets and actual material efficiencies achieved should be reported. Table 9.15 within the BREEAM New Construction V6.1 manual contains the material efficiency strategy that should be followed to produce the Material Efficiency report. Actions:
		14	3	4	Standard Materials Credit Total

	3	0	0	Exemplary Materials Credit Total	
	24.98	4.71	6.28	% Materials Total (Standard + Exemplary)	
Waste					
Wst 01 - Construction waste management					
	Credit	Available	Targeted	Potential	Comments
1	Pre-demolition audit	1	1	1	Pre-demolition audit (one credit) Targeted - Yes A pre-demolition/strip-out audit of any existing buildings, structures or hard surfaces should be completed by RIBA Stage 2 in order to identify opportunities to reuse and recycle existing materials. The audit must cover: • Identification and quantification of the key materials where present on the project • Potential applications and any related issues for the reuse and recycling of the key materials in accordance with the waste hierarchy. • Opportunities for reuse and recycling within the same development • Identification of local reprocessors or recyclers for recycling of materials • Identification of overall recycling targets where appropriate • Identification of reuse targets where appropriate • Identification of overall landfill diversion rate for all key materials. This audit must be referenced in the resource management plan (RMP) for the site. Actions: • Project team to confirm whether demolition is taking place on site. If demolition is occurring, the Main Contractor is to provide a pre-demolition audit prior to the end of RIBA Stage 2 / before any demolition occurs on site.

2	Construction resource efficiency	3	2	2	Construction resource efficiency Targeted - Yes (2 credits targeted) A compliant Resource Management Plan (RMP) must be produced for the project, covering: • Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication, including demolition and excavation waste). • Accurate data records on waste arisings and waste management routes. A nominated person should be identified to take responsibility for the plan and collection of data, confirming that the following benchmarks have been met for non-hazardous construction waste, excluding demolition and excavation waste: • One credit awarded where the amount of waste generated per 100m² is < or equal to 13.3 (m³) or 11.1 (tonnes) • Two credits awarded where the amount of waste generated per 100m² is < or equal to 7.5 (m³) or 6.5 (tonnes) - Targeted • Three credits awarded where the amount of waste generated per 100m² is < or equal to 3.4 (m³) or 3.2 (tonnes) - <u>Potential</u> • Exemplary level awarded where the amount of waste generated per 100m² is < or equal to 1.6 (m³) or 1.9 (tonnes) Potential tool for compiling an RMP and monitoring waste: SMARTWaste® is a web-based membership tool allowing users to measure and monitor construction site impacts. The tool can be used for: • Preparing, implementing and reviewing RMPs • Online measuring and reporting on ○ Waste (aligned to defined waste groups) ○ Site energy, fuel and water use ○ CO₂ production from energy usage ○ Procurement of certified or sustainable timber ○ transportation impacts from materials deliveries, waste removal and staff travel to and from the site ○ Pre-demolition versus post-demolition waste data ○ Industry waste benchmarks.
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					Actions: Project Team to ensure the appointed Main Contractor is aware of their responsibility to appoint an individual responsible for monitoring and recording demolition and excavation waste, and for the production of an RMP in line with the requirements above.
3	Diversion of resources from landfill	1	1	1	Diversion of resources from landfill (1 credit) Targeted - Yes - Where applicable, the following diversion from landfill benchmarks should be met for non-hazardous construction waste and demolition and excavation waste generated. - Waste materials should be separated into key waste groups either on-site or through a licensed contractor for recovery. Type of Waste Non-demolition - 70% (volume) or 80% (tonnage) Demolition - 80%(volume) or 90% (tonnage) Excavation - N/A Actions: Project Team to ensure that the appointed Main Contractor commits to monitoring and meeting the benchmarks for non-hazardous construction waste and demolition and excavation waste noted above.
e1	Construction resource efficiency/Diversion of resources from landfill	1	0	0	Construction resource efficiency & Diversion of resources from landfill (1 exemplary credit) Targeted - No To achieve an exemplary performance credit: Non-hazardous construction waste generated, excluding demolition and excavation waste, must be less than or equal to the exemplary level resource efficiency benchmarks: - Exemplary level awarded where the amount of waste generated per 100m2 is < or equal to 1.6 (m3) or 1.9 (tonnes). - The percentage of non-hazardous construction, demolition and excavation waste (if relevant) diverted from landfill meets or exceeds the exemplary level percentage benchmarks: Type of Waste Non-demolition - 85% (volume) or 90% (tonnage) Demolition - 85%(volume) or 90% (tonnage) Excavation - 95% All key waste groups in Table 10.3 of the BREEAM NC V6.1 manual for diversion from landfill must be

					covered in the RMP. Waste data obtained from licensed external waste contractors must be reliable and verifiable, by using data from EA/SEPA/EA Wales/NIEA Waste Return Forms or from a PAS 402:2013 compliant company. Actions:
Wst 02 - Use of recycled and sustainably sourced aggregates					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite		✗	✓	Pre-requisite Targeted - No The reuse of site-won material on site should be encouraged and a pre-demolition audit should be carried out in accordance with Wst 01.
1	Project Sustainable Aggregate points	1	0	1	Project Sustainable Aggregate Points (1 credit) Targeted - No (potential) All aggregate uses, types of quantities and sources should be identified. The distance (km) travelled by all aggregates by transport type should be calculated and all this information should be entered into the Wst 02 calculator. 3.5-6 points will equate to one credit. More than 6 points will achieve an exemplary credit. Actions: Credit has not been targeted due to high benchmarks.
e1	Project Sustainable Aggregate points	1	0	0	Credit not sought.
Wst 03 - Operational waste					
	Credit	Available	Targeted	Potential	Comments
1	Operational waste	1	1	1	Operational Waste (1 credit) Targeted - Yes Provide a dedicated space for the segregation and storage of operational recyclable waste generated. The space should be:

					- Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams. - Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors. - Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates. - As a NIFA of 2 of operational waste storage space for recyclable waste should be provided for the proposed development. This should be in addition to the waste storage space for general operational waste ? i.e., 2m² for recyclable operational waste, 2m² for general operational waste. <u>For consistent and large amounts of operational waste generated, the following should be provided:</u> - Static waste compactors or balers; situated in a service area or dedicated waste management space. - Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility. - A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. Actions: Architect to confirm the NIFA for the proposed development, and that appropriate waste storage area for the building will be provided.
Wst 05 - Adaptation to climate change					
	Credit	Available	Targeted	Potential	Comments
1	Resilience of structure, fabric, building services and renewables installation	1	1	1	Resilience of Structure (1 credit) Targeted - Yes Input required from RIBA stage 2 A <u>climate change adaptation strategy appraisal</u> must be conducted using a systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle.

					- As a guide, the adaptation plan should consider the following impacts of climate change and extreme weather events and describe how the design mitigates against them, where appropriate: - Flooding - Storms (including high winds) - Cold events - Heat waves (including temperature increases) - Drought (including reduced summer rainfall) - Milder winters - Wetter winters (including increased moisture and driving rain) - Warmer summers and increased solar radiation - Temperature variation - Precipitation, e.g. rain and snow - Subsidence or ground movement. - The assessment must cover the installation of building services and renewable systems, as well as structural and fabric resilience aspects and include hazard identification, hazard assessment, risk estimation, risk evaluation, risk management. - The risk presented by these hazards to the building and the likely impact of the hazards should be identified, taking into account the following aspects as a minimum: - Structural stability - Structural robustness - Weather proofing and detailing - Material durability - Health and safety of building occupants and others - Impacts on building contents and business continuity. <u>Recommendations or solutions</u> must be developed based on the climate change adaptation strategy appraisal, before or during Concept Design, that aim to mitigate the identified impact. - An <u>update must be provided during Technical Design</u> demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost-effective. Omissions must be justified in writing by the assessor.
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					Actions: Architect to provide the adaption to climate change strategy report by the end of RIBA Stage 2 and provide an update during RIBA Stage 4.
Wst 06 - Design for disassembly and adaptability					
	Credit	Available	Targeted	Potential	Comments
1	Design for disassembly and functional adaptability - recommendations	1	1	1	Design for disassembly and functional adaptability (recommendations) (1 credit) Targeted - Yes Input required before the end of RIBA stage 2 - The Design Team must undertake a study to explore the ease of disassembly and the functional adaption potential of different design scenarios by the end of Concept Design. - The study must consider the following as a minimum: - Feasibility: The likelihood to contain multiple or alternative building uses, area functions and different tenancies over the expected life cycle, e.g. related to the structural design of the building. - Accessibility: Design aspects that facilitate the replacement of all major plant within the life of the building, e.g. panels in floors and walls that can be removed without affecting the structure, providing lifting beams and hoists. Accessibility also involves access to local services, such as - local power, data infrastructure etc. - Versatility: The degree of adaptability of the internal environment to accommodate changes in working practices. - Adaptability: The potential of the building ventilation strategy to adapt to future building occupant needs and climatic scenarios. - Convertibility: The degree of adaptability of the internal physical space and external shell to accommodate changes of in-use. - Expandability: The potential for the building to be extended, horizontally or vertically. 'Refurbishment potential': The potential for major refurbishment, including replacing the façade.

					- Recommendations or solutions must be developed based on the study, during or prior to Concept Design, that aim to enable and facilitate disassembly and functional adaptation. Actions: - Architect to provide a disassembly and functional adaptability study prior to the end of RIBA Stage 2.
2	Disassembly and functional adaptability & implementation	1	1	1	Design for disassembly and functional adaptability (implementation) (1 credit) Targeted - Yes Input required from RIBA stage 2. Credits need to be provided by the end of RIBA stage 4. The first Wst 06 credit must be achieved. The Design Team must also (during <u>Technical Design</u>) provide an update on: - How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost-effective. Omissions have been justified in writing to the assessor. - Changes to the recommendations and solutions during the development of Technical Design. - A building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants should also be produced. Functional adaptation implementation: The implementation must be specific to the building and scope of the project, but information should be made available to the assessor covering: - Options for multiple building uses and area functions based on design details, e.g. modularity. - Routes and methods for major plant replacement, e.g. networks and connections have flexibility and capacity for expansion. - Accessibility for local plant and service distribution routes, e.g. detailed information on building conduits and connections infrastructure. - The potential for the building to be extended, horizontally or vertically. Ease of disassembly: See the credit above for the contents that should be included within the Functional Adaptability study. Actions:

					Architect to update the disassembly and functional adaptability study prior to the end of RIBA Stage 4.
		10	8	9	Standard Waste Credit Total
		2	0	0	Exemplary Waste Credit Total
		10	6.40	7.20	% Waste Total (Standard + Exemplary)
Land Use & Ecology					
LE 01 - Site selection					
	Credit	Available	Targeted	Potential	Comments
1	Previously occupied land	1	1	1	Previously Occupied Land (1 credit) Targeted - Yes In order to achieve the credit, 75% of the Proposed Development's footprint must be on previously occupied land. It has been assumed that, due to the Proposed Developments construction being on previously occupied land, this credit will be achievable. Actions: Architect to provide an annotated drawing showing the % of the developments footprint that is on previously developed land.
2	Contaminated land	1	0	0	Contaminated Land (1 credit) Targeted - No A contaminated land professional must undertake a site investigation, risk assessment and appraisal, which deems that land within the development footprint to be affected by contamination. This report should identify: - The degree of contamination - The contaminant sources or types - The options for remediating sources of contamination which present an unacceptable risk.

					The client or principal contractor must confirm that a remediation strategy will be implemented, in line with the report. Actions: Project team to confirm whether the site is significantly contaminated, i.e., whether any remediation will be taking place on site. A remediation strategy will need to be provided if the site is significantly contaminated.
LE 02 - Ecological risks and opportunities					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite - Statutory obligations		✓	✓	Prerequisite The client or contractor must confirm compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.
1	Survey and evaluation/Determining ecological outcomes	2	2	2	Survey and Evaluation (1 credit) Targeted - Yes Typically complete during RIBA Stage 1 A Suitably Qualified Ecologist (SQE) must perform a survey and evaluation for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions (typically RIBA Stage 1). The SQE's survey and evaluation must determine the site's ecological baseline including: • Current and potential ecological value and condition of the site and related areas within the Zone of Influence • Direct and indirect risks to current ecological value from the project • Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the Zone of Influence. The survey and evaluation approach used should be appropriate to the scope and scale of the project. The SQE should use robust professional judgement following established best practice including professional body guidelines (e.g. CIEEM) to consider any aspects listed below that they deem to be relevant: <u>Survey:</u> 1. Determining the Zone of Influence for the site including neighbouring land and habitats

					2. Current flora, fauna (including permanent and transient species) and habitat characteristics (including but not limited to ecological features in or on built structures) 3. Current habitat extent, quality, connectivity and fragmentation 4. Recent and historic site conditions 5. Existing management and maintenance levels and arrangements 6. Existing ecological initiatives within the Zone of Influence 7. Identification of, and consultation with, relevant stakeholders impacted or affected by the site. 8. Local knowledge or sources of information. <u>Evaluation:</u> • Current value and condition of the site and the Zone of Influence in terms of: ○ Features including habitats, species, food sources and connectivity ○ Broader biodiversity and ecosystem services benefits or opportunities • Direct and indirect risks to current ecological value: ○ Sensitive areas and features on or near the site ○ Direct risks including those from human activity (e.g. construction work), habitat fragmentation, and potentially harmful species ○ Indirect risks including water, noise and light pollution • Capacity and feasibility to enhance the ecological value • Habitat restoration and creation potential • Impact of the proposed design, construction works and operations on site in so far as these have been determined at this stage. <u>Sharing of recommendations:</u> Recommendations and data collected from the survey and evaluation should be shared with the appropriate project team members to influence decisions made for activities during site preparation, design and construction works. At an early stage, it is easier to meaningfully influence design and site activities, whilst minimising or avoiding impacts on cost. For example, this could include recommendations from the ecologist relating to aspects such as:
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					• Site layout that the design team should consider. • Features that landscape architects can incorporate in their design or timing considerations for activities on-site to avoid disruption and maximise opportunities. Determining the Ecological Outcomes (1 credit) Targeted - Yes Typically complete during RIBA Stage 2 The survey and evaluation criteria above must be met. The project team must liaise and collaborate with representative stakeholders early enough to influence key planning decisions to: • Identify the optimal ecological outcomes for the site. • Identify, appraise, and select measures to meet the optimal ecological outcomes for the site, in line with the mitigation hierarchy of action: 1. Avoidance 2. Protection 3. Reduction or limitation of negative impacts 4. On site compensation 5. Enhancement, considering the capacity and feasibility within the site, or where viable, off-site. To meet this criterion, the project team need to liaise with each other to agree what the optimal ecological outcomes are and how they will be achieved. The project team need to consider the following aspects where they are appropriate for the nature and scale of the project, in line with the SQE's recommendations: • Ecological value and benefit offered (before, during and after project completion) • Biodiversity and ecosystem services benefits offered (before, during and after project completion) • Local microclimatic conditions • Habitat extent, quality, connectivity and fragmentation • Opportunities to enhance the value of existing habitats and biodiversity, or to restore or create new, more valuable ones • Opportunities to align and integrate with existing ecological features and initiatives in the Zone of Influence
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					- The viability of meeting the mitigation hierarchy and capacity and feasibility for enhancement. Project team members include, but are not limited to: - The client, owner, occupier - Design, construction, facilities team - Specialist consultants. For example, drainage engineer, acoustic consultant or landscape architect, as appropriate for the site. The project team should also consult with other stakeholders to determine appropriate options for the site in question. This may include: - Local government and other statutory relevant organisations - Local community groups or organisations or charities such as the Wildlife Trusts - Local, regional and or national fauna focused groups such as Buglife, RSPB, Bat Conservation Trust etc. The nature of this consultation will vary depending on the projects type and scale and the sensitivity of the site. The SQE can advise on what is appropriate and what justifications are needed as part of evidence. Actions: - Project team to appoint an Ecologist by end of RIBA Stage 2. - Project team to confirm early-stage discussions will take place between the project team and with representative stakeholders to discuss ways to identify and meet the optimal ecological outcomes for the site. - Ecologist to provide initial ecology report and confirm the targeted credits. <i>SRE (01.12.2023): Ecologist confirmed as appointed to complete Preliminary Ecology Appraisal.</i>
e1	Wider site sustainability - Exemplary level criteria	1	0	0	Exemplary level criteria - Wider site sustainability Targeted - No Wider sustainability-related activities and potential ecosystem service benefits are considered as part of determining the optimal ecological outcomes for the site including the areas outlined in the Methodology. Achieve the credits of the assessment issues outlined below: Hea 07 Safe and healthy surroundings - Both credits

					2. Pol 03 Flood and surface water management - Achieve credits for 'Surface water run-off' and 'Minimising watercourse pollution' 3. Pol 05 Reduction of noise pollution
LE 03 - Managing impacts on ecology					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite & Ecological risks and opportunities		✓	✓	Prerequisite - LE 02 is achieved
1	Planning and measures on-site	1	1	1	Planning and measures on-site (1 credit, Route 2) Targeted - Yes Complete by RIBA Stage 3 Further planning to avoid and manage negative ecological impacts on-site must be carried out early enough to influence the Concept Design and design brief as well as site preparation planning (typically Concept Design stage). This should build on the measures agreed for delivering optimal ecological outcomes in LE 02 Ecological risks and opportunities, and is likely to include plans for the following: 1. Determine responsibilities, relationships and management required for implementing measures, including clear ownership of each task 2. Allocate roles and responsibilities and identify when these apply 3. Allocate resources to deliver these measures (including financial, time, technical and skills) 4. Implement procedures for monitoring progress against these plans and collect feedback for continual improvement 5. Align with related activities and processes 6. Implement effective handover and collaboration where responsibility is transferred and shared, including transition to long term management and maintenance arrangements. On-site measures for managing negative ecological impacts during site preparation and construction must be implemented in-practice (e.g. mitigation measures to protect existing ecological features). Fulfilment of the above criteria must be based on input from the project team in collaboration with representative stakeholders and data collated as part of the Determining ecological outcomes in LE 02 Ecological risks and opportunities.

					Actions: • Project team to appoint an Ecologist by end of RIBA Stage 2. • Ecologist to provide initial ecology report and confirm the targeted credits. • Project team to confirm early-stage discussions will take place between the project team and with representative stakeholders to discuss measures for managing negative ecological impacts on-site. <i>SRE (01.12.2023): Ecologist confirmed as appointed to complete Preliminary Ecology Appraisal.</i>
2	Managing negative impacts	2	2	2	Managing negative impacts of the project (2 credits, Route 2) Targeted - Yes (2 credits) For Route 2, LE 03 credit 1 must be achieved. Negative impacts from site preparation and construction works must be managed according to the mitigation hierarchy, in line with the SQE's recommendations and either: • No overall loss of ecological value occurs (two credits). OR, where this is not possible: • The loss of ecological value is minimised (one credit). The following hierarchy must be followed when managing negative impacts of the site preparation and construction works: 1. Avoidance of negative impacts of habitats and features of ecological value on the site. 2. If it is not possible to avoid negative impacts; protect habitats and features of ecological value from damage in accordance with best practice guidelines during development works. 3. If it is not possible to achieve 1 or 2 above, fully reduce, limit or control negative impacts as far as possible. 4. Where it is not possible for avoidance, protection, limitation or control of the negative impacts on features of ecological value on site; compensation has taken place to ensure the existing ecological value is maintained during and after the project. The criteria are only met if an SQE confirms the mitigation hierarchy has been followed. Actions: • Project team to appoint an Ecologist by end of RIBA Stage 2.

					Ecologist to provide initial ecology report and confirm the targeted credits. <i>SRE (01.12.2023): Ecologist confirmed as appointed to complete Preliminary Ecology Appraisal.</i>
LE 04 - Ecological change and enhancement					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite - Managing negative impacts on ecology		✓	✓	Prerequisite - LE 03 must be achieved whereby the roles and responsibilities have been clearly defined and site preparation and construction works have been planned for and implemented at an early stage to optimise benefits and outputs. The client or contractor must confirm compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.
1	Change and enhancement of ecology / Ecological enhancement	1	1	1	Ecological enhancement (1 credit) Targeted - Yes Measures must be implemented to enhance ecological value, based on input from both the project team and the SQE in collaboration with stakeholders and data collected in LE 02. Measures should be implemented in the following order: - On site, or where it is not feasible - Off site within the zone of influence The ecologist's report must clearly identify the enhancement measures that have been implemented, and justify how they meaningfully enhance the site's ecological value. <u>Collaboration</u> can include, for example, considering guidance from the landscape architect regarding long term maintenance requirements as part of decisions made for habitat creation and enhancement. Data collated should be analysed and where potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site. Guidance Note 40: Ecology Assessment Reporting Template can be referred to and used to collate information and evidence for the assessment. Actions: - Project team to appoint an Ecologist by end of RIBA Stage 2. - Ecologist to provide initial ecology report and confirm the targeted credits.

					It is also recommended that the Ecologist completes an GN40 to assist in the collation of evidence, but this is not compulsory.
2	Change and enhancement of ecology	3	3	3	Enhancement of Ecology (3 credits) Targeted - Yes (3 targeted) Up to three credits can be awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36. Credits are awarded in line with the Reward Scale table in GN36 where there are no residual impacts on protected sites or irreplaceable habitats. How credits are awarded for change in ecological value, as per Guidance Note KBCN1376: Guidance Note 36 outlines a rewards scale (table 9) for the credits awarded in LE04, Ecological Change and Enhancement. Table 9 breaks down the credits into 4 sections: 1. Minimising loss 2. No net loss 3. Net Gain 4. Significant net gain Sections 1-3 correspond to the 3 credits awarded when a project follows the comprehensive route. Exemplary level credits are given if section 4 is achieved. There are two approaches that can be used for this calculation methodology, depending on the scale and size of the project and distinctiveness of the habitats on the site: 1. Full methodology - This must be used where the pre-development habitats are above the set size threshold of 0.05 hectares in total or include habitats that are of high distinctiveness. 2. Simplified methodology - This can be used where the pre-development habitats are below the set size threshold and no habitats present that are of high distinctiveness. 1 credit is currently assumed for minimising loss and 2 credits listed as potential for no net loss, as an estimate. Ecologist to confirm. Actions: - Project team to appoint an Ecologist by end of RIBA Stage 2. - Ecologist to provide initial ecology report and confirm the targeted credits.

					Ecologist to complete the GN36 checklist to confirm the anticipated change in ecological value of the project.
e1	Change and enhancement of ecology - Exemplary level criteria	1	0	1	Change and Enhancement of Ecology - Exemplary credit (Potential) SRE (13.02.2024): Preliminary Ecological appraisal indicates a BNG of 164.09%, which would achieve all credits here. Landscape plans to be evaluated through design. 3 credits + 1 exemplary credit likely achievable.
LE 05 - Long term ecological management and maintenance					
	Credit	Available	Targeted	Potential	Comments
Pre-req	Prerequisite - Statutory obligations, planning and site implementation		✓	✓	Prerequisite: The client or contractor must confirm that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. For Route 2 (targeted), the Managing Negative Impacts criteria in LE 03 must be achieved, and at least one credit under LE 04 for 'Change and Enhancement of Ecology' must be awarded.
1	Management and maintenance throughout the project / Landscape and ecology management plan	2	1	2	Management and maintenance throughout the project (1 credit) Targeted - Yes - Measures must be implemented to manage and maintain ecology throughout the project. - These measures should be based on input from the project team in collaboration with representative stakeholders and data collated as part of the Determining ecological outcomes in LE 02. - To ensure the optimal ecological outcomes agreed in LE 02 are met in-practice, these measures must monitor and review the effectiveness of the mitigation and enhancement measures in place for LE 03 & LE 04 to ensure they are implemented. - A section on Ecology and Biodiversity should be included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. This should include detailed management and maintenance plans as required by landscape and asset managers as well as relevant parts of the handover information for occupiers written in a format that encourages understanding and supportive behaviours.

					<u>Examples of management and maintenance throughout the project:</u> • Monitoring and reporting of outcomes and successes from the project • Arrangements for the ongoing management of landscape and habitat connected to the project (on and, where relevant, off site) • Maintaining the ecological value of the site and its relationship or connection to its Zone of Influence • Maintaining the site in line with any sustainability linked activities, e.g. wider sustainability benefits (LE 02 Ecological risks and opportunities). <u>Handover information contents:</u> The handover information should include the following content, as appropriate: 1. Details of the ecological value within the property boundary (e.g. public and private gardens, green roofs), common areas (e.g. communal garden), and the surrounding area (e.g. public recreational space). 2. The benefits of the ecological value to the occupants and the broader community. 3. Guidance on how the occupants can make the most of the local ecology and contribute to its management, (e.g. planting ecologically appropriate species in their property), as well as things that should be avoided doing (e.g. disrupting wildlife corridors, planting invasive species or allowing them to colonise and spread) 4. Relevant actions that can be taken to enhance value within the property to help ensure its ongoing management and maintenance. 5. Contact details for those responsible for the management and maintenance of the local ecology and sources of local information on biodiversity and ecological management including management companies and local wildlife trusts. Landscape and ecology management plan (or similar) development (1 credit) Targeted - No (potential) A Landscape and Ecology Management Plan, or equivalent, must be developed in accordance with BS 42020:2013 Section 11.1 covering at least the first five years after project completion as a minimum and including: • Actions and responsibilities of relevant individuals prior to handover • The ecological value and condition of the site at handover and how this is expected to develop and change over time
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					• Identification of opportunities for ongoing alignment with activities beyond the development project, which support the aims of BREEAM's Strategic Ecology Framework • Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts • Clearly defined and allocated roles and responsibilities for delivering the plan The landscape and management plan or similar must be updated to support maintenance of the ecological value of the site (see sections relating to Maintenance and Monitoring in CIEEM, CIRIA, IEMA, for helpful guidance). Actions: • Project team to appoint an Ecologist by end of RIBA Stage 2. • Ecologist to provide initial ecology report and, if included, LEMP and confirm the targeted credits.
		13	11	12	Standard Land Use & Ecology Credit Total
		2	0	1	Exemplary Land Use & Ecology Credit Total
		20.98	16.06	18.52	% Land Use & Ecology Total (Standard + Exemplary)
Pollution					
Pol 03 - Flood and surface water management					
	Credit	Available	Targeted	Potential	Comments
1	Flood resilience	2	1	1	Flood resilience (2 credits) Targeted - Yes (1 credit) Medium/High Flood Risk (1 credit) A desk study undertaken by SRE (Preliminary Drainage and Flood Risk analysis based on the Environmental Agency mapping) suggests that the development has a medium risk of flooding. A detailed, site-specific flood risk assessment (FRA) is required to confirm the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA must take all current and future sources of flooding into consideration.

					Actions: Project team to confirm that a flood risk assessment will be undertaken which confirms that the site has a very low flood risk before planning. This is to be sent to SRE for review. SRE (01.12.2023): Indicative EA Flood mapping confirms the site is of a medium/high flood risk.
2	Surface water run-off	2	2	2	Surface water run-off (2 credits) Targeted - Yes (2 credit) Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed in the Methodology must be followed, with justification given by the appropriate consultant where water is allowed to leave the site. One credit - Surface Water Run-Off - Rate (Targeted) For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long-term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance. One credit - Surface Water Run-Off - Volume (Potential) Flooding of the property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND EITHER • Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the development of the assessed site. This must be for the 100-year 6-hour event, including an allowance for climate change. • Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques. OR • Drainage design measures are specified so that the post-development peak rate of run-off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: The pre-development one-year peak flow rate, the mean annual flow rate (Qbar) and 2L/s/ha.

					For the one-year peak flow rate, the one-year return period event criterion applies. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance. Actions: Drainage consultant to be appointed to provide a drainage report confirming the above.
3	Minimising watercourse pollution	1	0	1	Minimising watercourse pollution Targeted - No (Potential) • There is no discharge from the developed site for rainfall up to 5mm (confirmed by the appropriate consultant). • In areas with a low-risk source of watercourse pollution, an appropriate level of pollution prevention treatment is to be provided, using appropriate SuDS techniques. • Areas with a high risk of contamination or spillage of substances, such as petrol and oil, must have separators (or an equivalent system) installed in surface water drainage systems. • Chemical or liquid gas storage areas must have a means of containment fitted to the site drainage system (i.e. shut-off valves). This is to prevent the escape of chemicals to natural watercourses in the event of a spillage or bunding failure. • All water pollution prevention systems are to be designed and installed in accordance with the recommendations of documents such as the SuDS manual and other relevant industry best practice. They must be bespoke solutions taking account of the specific site requirements and natural or man-made environment of and surrounding the site. • A comprehensive and up-to-date drainage plan of the site is to be made available for the building or site occupiers. • Relevant maintenance agreements for the ownership, long-term operation and maintenance of all specified SuDS must be in place. • All external storage and delivery areas are to be designed and detailed in accordance with the current best practice planning guidance. Actions: Drainage consultant to be appointed to provide a drainage report confirming the above. SRE (01.12.2023): Drainage strategy to confirm achievability of this credit. Considered a potential.

Pol 04 - Reduction of night time light pollution					
	Credit	Available	Targeted	Potential	Comments
1	Reduction of night time light pollution	1	1	1	Reduction of night-time light pollution (1 credit) Targeted - Yes EITHER: External lighting pollution is eliminated through effective design that removes the need for external lighting. This must not adversely affect the safety and security of the site and its users. OR: - The external lighting strategy is designed in compliance with Table 2 (and its accompanying notes) of the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011. - All external lighting (except for safety and security lighting) must be able to be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system must comply with the lower levels of lighting recommended during these hours in Table 2 of the ILP guidance notes. - Illuminated advertisements must be designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements. Actions: Project team/ MEP to confirm that external lighting will be specified in line with the above requirements.
		6	4	5	Standard Pollution Credit Total
		0	0	0	Exemplary Pollution Credit Total
		6	4	5	% Pollution Total (Standard + Exemplary)



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