New Warehouse Unit,
Newlands Road, Cardiff
BREEAM Pre-Assessment and Strategy

For

Cubex Land

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Revision record

Description	Rev	Date	By	Checked
BREEAM Pre-Assessment and Certification Strategy	1.0	07/04/2022	Fleur Baguley	Fleur Baguley

Assessor Information

Assessor	BRE Assessor Number	BREEAM License
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CHAPTER: 1 EXECUTIVE SUMMARY

Carbon Consult Limited has been commissioned on behalf of Cubex Land to undertake a BREEAM Pre-Assessment for the proposed development – a new warehouse development at Newlands Road, Cardiff. The site is situated adjacent to the existing Wentloog Corporate Park.

The proposed development comprises the construction of a speculative warehouse (Use Class B2/B8), with ancillary offices (Use Class B1(g)(i)), with associated infrastructure works including site access, parking provision, landscaping and drainage works. The proposed building is 6,225m^2 GFA. This includes 5602 m^2 of warehouse on the ground floor, 622 m^2 of office on mezzanine floor and 557 m^2 of office area on first floor. An end user has not been identified at this stage.

In order to demonstrate the sustainable performance of the development, the project has been assessed using the Building Research Establishment's Environmental Assessment Method (BREEAM) as required by the outline planning conditions and as a project requirement.

It is an expectation that a BREEAM 'Excellent' (≥70%) is achieved at both design and construction stages.

This report considers a route to BREEAM certification for the project and provides an indication of scoring and opportunities for achieving BREEAM 'Excellent'.

Carbon Consult are using the shell only option for this development via the BREEAM UK New Construction 2018 Certification Scheme for Industrial buildings.

Using details already known of the project in conjunction with project experience and knowledge of BREEAM, a set of recommended "Basic" scores have been identified to reach BREEAM 'Excellent'. Furthermore, there are a couple of potential "Additional" scores which will result in a slightly higher BREEAM score being achieved. The "Additional" scores require further investigation, analysis, design development and/or specialist studies to support their achievement. The "Basic" scores incorporate all those which are mandatory or pre-requisites for the overall threshold achievement.

A scoring scenario has been outlined within this report, which if supported by relevant and appropriate documentary evidence, will result in the 'Excellent' achievement.

CHAPTER: 2 PROJECT INTRODUCTION

2.1 PROJECT DETAILS

Figure 1 – Site Location – Newlands Road, Cardiff – Image courtesy of UMC Architects

The proposed scheme is described as 'Erection of an industrial, storage and distribution warehouse,, together with ancillary offices (Use Classes B2, B8 & B1) and associated access, parking, landscaping and ancillary infrastructure' on land to the south of Newlands Road.

The plans include:

- Warehouse unit 5,602m^2
- Two storey ancillary office 1179m^2
- Parking for HGVs
- Dock loading for HGVs
- 58 Car Parking Spaces including 3 accessible and 12 Electric Vehicle Charging
- Landscaping buffer

The site is a greenfield site located at the south of Newlands Road with an area of 1.73 hectares / 4.32 acres. The site is afforded access to the A4232 to the west and further connections to the road network via the A48 and M4 at Junction 29 which is situated approximately 8 miles to the north.

It is an expectation that a BREEAM 'Excellent' (≥70%) is achieved.

The following report summarises the likely BREEAM outcome under the latest BREEAM 2018 New Construction scheme for an industrial unit based on information received to date.

CHAPTER: 3 BACKGROUND TO BREEAM

3.1 WHAT IS BREEAM

BREEAM [Building Research Establishment's Environmental Assessment Method] is the world's leading and most widely used environmental assessment method for buildings. At the time of writing, BREEAM has certified over 260,000 buildings since it was first launched in 1990.

3.1.1 AIMS OF BREEAM

The aims of BREEAM are to:

- To mitigate the life cycle impacts of buildings on the environment
- To enable buildings to be recognised according to their environmental benefits
- To provide a credible, environmental label for buildings
- To stimulate demand for sustainable buildings

3.1.2 OBJECTIVES OF BREEAM

The objectives of BREEAM are:

- To provide market recognition of buildings with a low environmental impact
- To ensure best environmental practice is incorporated in building planning, design, construction and operation.
- To define a robust, cost-effective performance standard surpassing that required by regulations.
- To challenge the market to provide innovative, cost effective solutions that minimise the environmental impact of buildings.
- To raise the awareness amongst owners, occupants, designers and operators of the benefits of buildings with a reduced life cycle impact on the environment.
- To allow organisations to demonstrate progress towards corporate environmental objectives.

BREEAM has been developed to meet the following underlying principles:

- Ensure environmental quality through an accessible, holistic and balanced measure of environmental impacts.
- Use quantified measures for determining environmental quality.
- Adopt a flexible approach, avoiding prescriptive specification and design solutions.

- Use best available science and best practice as the basis for quantifying and calibrating a cost-effective performance standard for defining environmental quality.
- Reflect the social and economic benefits of meeting the environmental objectives covered.
- Provide a common framework of assessment that is tailored to meet the 'local' context including regulation, climate and sector.
- Integrate construction professionals in the development and operational processes to ensure wide understanding and accessibility.
- Adopts third party certification to ensure independence, credibility and consistency of the label.
- Adopts existing industry tools, practices and other standards wherever possible to support developments in policy and technology, build on existing skills and understanding and minimise costs.
- Stakeholder consultation to inform ongoing development in accordance with the underlying principles and the pace of change in performance standards [accounting for policy, regulation and market capability].

3.2 ASSESSMENT VARIATIONS

Assessment Scheme	Building Type	Extent of Works
BREEAM New Construction 2018 	Commercial: • Office • Industrial • Retail Public: • Education • Healthcare • Prison • Court Other: • Residential institution • Non-residential institution • Assembly and Leisure • Other • Bespoke	1. Fully fitted 2. Fully fitted simple building 3. Shell and Core 4. Shell only
BREEAM Refurbishment and Fit Out 2014 	As above	1. Fabric and Structure (part 1) 2. Core Services (part 2) 3. Local Services (part 3) 4. Interior Design (part 4)

Table 1: Current building specific BREEAM Assessment schemes

3.3 BREEAM RATING BENCHMARKS

The BREEAM rating benchmarks for new construction projects assessed using the 2018 version of BREEAM are as follows:

BREEAM Rating	Percentage Score
Outstanding	≥85%
Excellent	≥70%
Very Good	≥55%
Good	≥45%
Pass	≥30%
Unclassified	<30%

Table 2: BREEAM Rating Benchmarks [1]

The above BREEAM ratings assume that all the appropriate minimum standards for each BREEAM rating have been achieved in addition to the percentage score. *[Refer to the table in the minimum standards section below.]*

The BREEAM rating benchmark levels enable a client or other stakeholder to compare an individual building's performance with other BREEAM rated buildings and the typical sustainability performance of new non-domestic buildings in the UK.

In this respect each BREEAM rating level broadly represents performance equivalent to:

- Outstanding: Less than top 1% of UK new non-domestic buildings [innovator]
- Excellent: Top 10% of UK new non-domestic buildings [best practice]
- Very Good: Top 25% of UK new non-domestic buildings [advanced good practice]
- Good: Top 50% of UK new non-domestic buildings [intermediate good practice]
- Pass: Top 75% of UK new non-domestic buildings [standard good practice]

An unclassified BREEAM rating represents performance that is non-compliant with BREEAM, in terms of failing to meet either the BREEAM minimum standards of performance for key environmental issues or the overall threshold score required for formal BREEAM certification.

[1] BREEAM, BREEAM UK New Construction 2018, Non-Domestic Buildings, Technical Manual, SD5078, v3.0

3.4 PERFORMANCE REQUIREMENTS

Each performance requirement within BREEAM is referred to as a "Credit".

These credits are contained with 9 assessment categories, with each category carrying a different overall weighting when contributing to the overall BREEAM score.

Each credit has a number of performance standards with which compliance is required. Compliance is to be demonstrated by the project team by submitting documentary evidence of performance to the project Assessor.

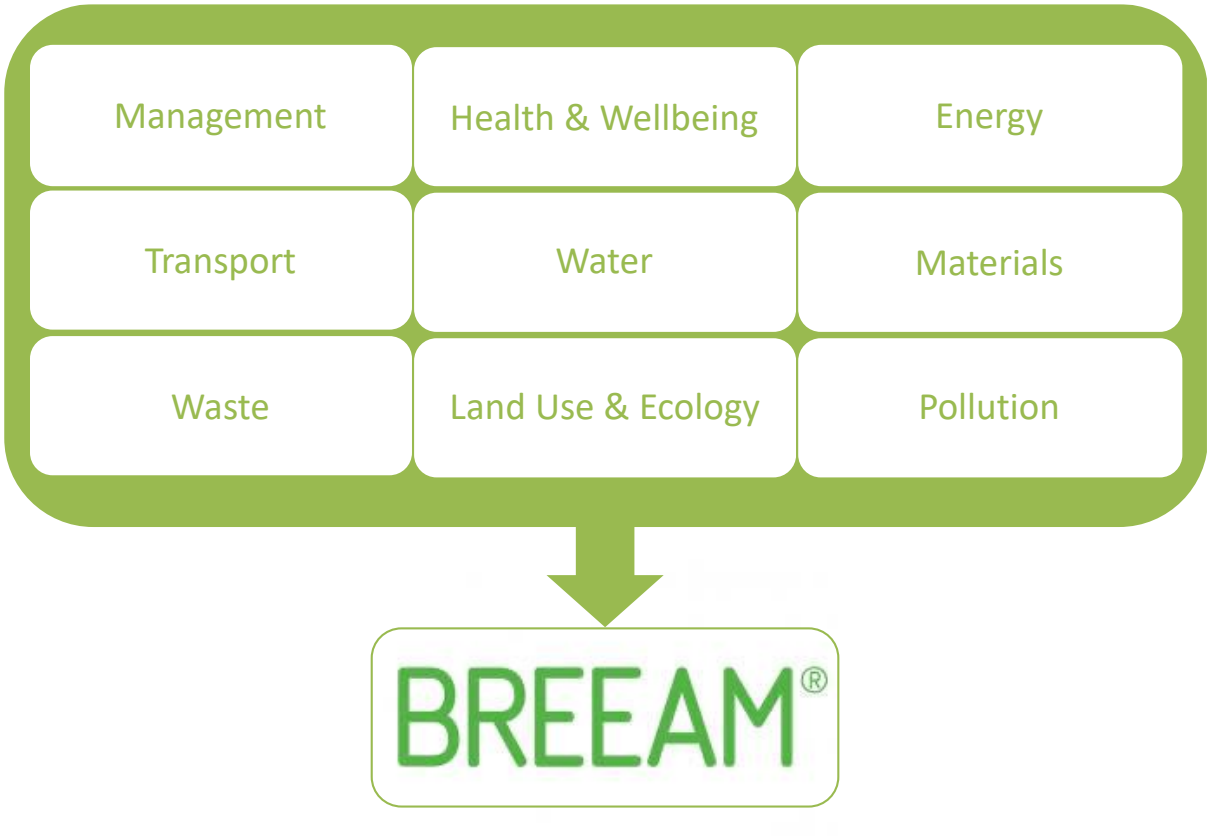


Figure 2 – BREEAM Assessment Categories

3.5 MINIMUM STANDARDS

To maintain a flexible system BREEAM adopts a 'balanced score-card' approach to the assessment and rating of building performance. This means that, to achieve a particular level of performance the majority of BREEAM credits can be traded, i.e. non-compliance in one area can be off-set through compliance in another to achieve the target BREEAM rating.

However, to ensure that performance against fundamental environmental issues is not over-looked in pursuit of a particular rating, BREEAM sets minimum standards of performance in key areas e.g. energy, water, waste etc. It is important to bear in mind that these are minimum acceptable levels of performance and, in that respect, they should not necessarily be viewed as levels that are representative of best practice for a BREEAM rating level.

To achieve a particular BREEAM rating, the minimum overall percentage score must be achieved in combination with the minimum standards detailed in the table below, applicable to the relevant rating.

	Minimum Standards/ Mandatory elements		
BREEAM Issues	**Very Good**	**Excellent**	**Outstanding**
MAN 03 Responsible Construction Practices	-	**One credit (Responsible construction management)**	**One credit (Responsible construction management)**
MAN 04 Commissioning and Handover	**One credit (commissioning-test schedule and responsibilities)**	**One credit (commissioning-test schedule and responsibilities)**	**One credit (commissioning-test schedule and responsibilities)**
MAN 04 Commissioning and Handover	**Criterion 11 (Building User Guide)**	**Criterion 11 (Building User Guide)**	**Criterion 11 (Building User Guide)**
MAN 05 Aftercare	-	**One credit (Commissioning implementation)**	**One credit (Commissioning implementation)**
ENE 01 Reduction of energy use and carbon emissions	-	**Four credits (Energy performance or Prediction of operational energy consumption)**	**Six credits (Energy Performance) and Four Credits (Prediction of operational energy consumption)**
ENE 02 Energy Monitoring	**One Credit (First sub-metering credit)**	**One Credit (First sub-metering credit)**	**One Credit (First sub-metering credit)**
WAT 01 Water Consumption	**One credit**	**One credit**	**Two credits**
WAT 02 Water Monitoring	**Criterion 1 only**	**Criterion 1 only**	**Criterion 1 only**
MAT 03 Responsible Sourcing of Materials	**Criterion 1 only**	**Criterion 1 only**	**Criterion 1 only**
WST 01 Construction Waste Management	-	-	**One credit**
WST 03 Operational Waste	-	**One credit**	**One credit**

Table 3: Minimum BREEAM standards for a Very Good, Excellent and Outstanding Buildings[2]

[2] BREEAM, BREEAM UK New Construction, Non-Domestic Buildings, Technical Manual, SD5078, v3.0

3.6 ENVIRONMENTAL SECTION WEIGHTINGS

Environmental weightings are fundamental to any building environmental assessment method as they provide a means of defining, and therefore ranking, the relative impact of environmental issues. BREEAM uses an explicit weighting system derived from a combination of consensus-based weightings and ranking by a panel of experts. The outputs from this exercise are then used to determine the relative value of the environmental sections used in BREEAM and their contribution to the overall BREEAM score.

The table below outlines the weightings for each of the nine environmental sections included in the BREEAM New Construction scheme, specifically for shell and core assessments:

Environmental Section	Weighting
Management	11%
Health & Wellbeing	8%
Energy	14%
Transport	11.5%
Water	7%
Materials	17.5%
Waste	7%
Land Use & Ecology	15%
Pollution	9%
Total	100%
Innovation	*10%*

Table 4: BREEAM Environmental section weightings[3]

Each of the above environmental sections consists of a differing number of assessment issues and BREEAM credits. As a result, each individual assessment issue and credit varies in terms of its contribution to a building's overall score.

[3] BREEAM, BREEAM UK New Construction 2018, Non-Domestic Buildings, Technical Manual, SD5078, v3.0

3.7 TIME BOUND PERFORMANCE REQUIREMENTS

Various aspects of BREEAM require time bound performance to be demonstrated. This ensures that the relevant advice/ actions occur at a stage of the project where it can still influence the design/ development. Further discussion with the design team will take place in relation to these items with additional evidence to be collated.

Typically, if the time bound elements are not met, they cannot be achieved retrospectively.

Time bound requirements exist within:

Credit Reference	Credit Name	Report Required	RIBA Stage (Mandatory in bold)
MAN01	Part A: Stakeholder Consultation	Consultation information including minutes of meetings, feedback, consultation plan etc.	**2 (C)**
MAN01	Part B: Sustainability Champion	AP reports for each RIBA Stage	**1 (A-B)**
MAN02	Part A: Elemental Life Cycle Cost (LCC)	Life Cycle Cost Report	**2 (C)**
MAN02	Part B: Component Level LCC Plan	Life Cycle Cost Report (repeat / update)	**4 (E-F)**
MAN04	Part A: Commissioning and Testing Schedule and Responsibilities	Appointment of commissioning manager (and complex systems commissioning manager)	**4 (E-F)**
HEA06	Security of Site and Building	Security Needs Assessment	**2 (C)**
ENE01 / 04	Reduction of CO2 Emissions	BRUKL Output (with and without renewables)	**2 (C)**
ENE04	Part A: Passive Design - Low Carbon Design	Passive Design analysis	**2 (C)**
ENE04	Part B: Low or Zero Carbon Technologies	Low Zero Carbon Feasibility Report	**2 (C)**
MAT01	Environmental Impacts from Construction Products	Building Life Cycle Assessments (LCA)	**2 (C)**
MAT06	Material Efficiency	Materials Efficiency Report - optimize material use	**1 (A-B), Repeat at 2,3,4**
WST05	Adaption to Climate Change	Structural and Fabric Resilience Appraisal	**1 (A-B)**

Credit Reference	Credit Name	Report Required	RIBA Stage (Mandatory in bold)
WST06	Functional Adaptability	Functional adaptation strategy appraisal	**1 (A-B)**
LE02-LE05	Ecology	Ecology Report to cover items LE02-LE05. Appointment letter required	**1 (A-B)**
POL03	Part A: Flood Risk	Flood Risk Assessment	2 (C)

Table 5: BREEAM 2018, Time Bound Performance Requirements

3.8 STAGES OF ASSESSMENT

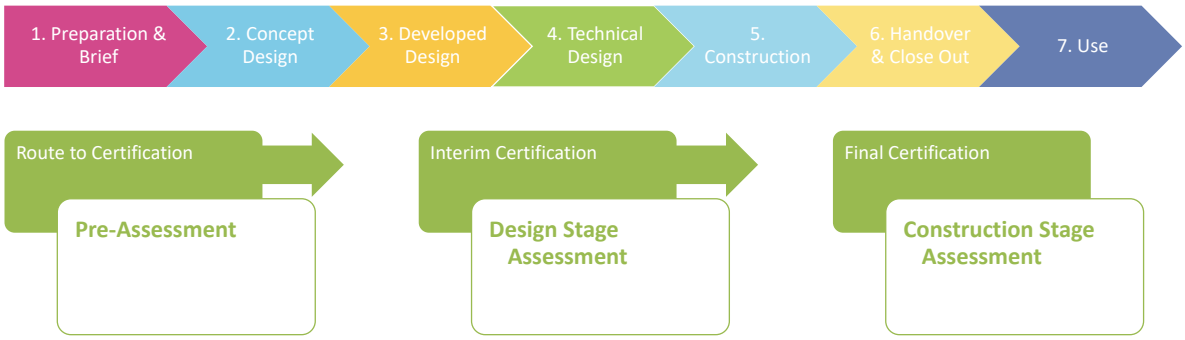


Figure 3: Simplified BREEAM process by RIBA Workstage

3.8.1 REGISTRATION

In order to undergo a BREEAM assessment, the first step is for a Licensed BREEAM Assessor to register the project with BRE Global as a live assessment.

Registration fixes the project to the relevant assessment scheme for a period of five years from the last live date of that scheme. In simple terms this means that a project is to be submitted recommending certification within five years from the date of the replacement of that assessment version.

It is a simple process, entailing submission to BRE of project information and payment of a fee. This has been undertaken.

Note: if the assessment/ project is transferred to a different assessor prior to submission of certification recommendation, the corresponding transfer of registration is subject to a fee.

If the registration of a project occurs before planning is submitted, it mitigates any risk associated with delays in the planning process e.g. if pre-planning performance against one version of BREEAM is considered, but not registered, yet post planning BREEAM has been updated. Then the newer version of BREEAM would apply which may be incrementally harder to achieve the same level of required performance.

Typically, in projects where there are multiple buildings, each is registered separately. It is usual for the assessor to liaise with BRE to confirm an approach to assessment e.g. combinations/ splits in assessment.

3.8.2 PRE-ASSESSMENT AND ESTABLISHING A STRATEGIC ROUTE TO CERTIFICATION

A Pre-Assessment is a voluntary stage of the BREEAM process. It is not submitted to BRE for certification; however, some Planning Authorities or Clients may ask for one to be created/ presented to demonstrate that the project team have identified a route to certification.

A Pre-Assessment should be used:

- To ensure awareness of requirements;
- To inform an approach to achieving certification;
- As a design tool to set performance parameters; and,
- To establish an indicative scoring range.

Whilst possible to undertake a Pre-Assessment without the contribution or input of a licensed BREEAM Assessor or qualified BREEAM Accredited Professional (AP), their involvement is recommended to ensure that all the aspects of the assessment are considered. Appointing a BREEAM AP at early stages also can assist in scoring specific BREEAM credits.

Carbon Consult Ltd, have both Licensed Assessors and BREEAM Accredited Professionals.

3.8.3 CERTIFIED ASSESSMENTS

There are two formal stages of BREEAM assessment

1. Design Stage, resulting in Interim Certification
2. Construction Stage, resulting in Final Certification

The corresponding assessment at each stage is submitted to BRE in the form of a **recommendation for certification** by the appointed assessor.

If the project is operating to short timescales, or for any other reason, it is possible to assess and certify the project solely based on the As-Built scenario. Typically, various parts of evidence relating to the Design are still required along with information pertaining to the Construction. This approach will also achieve Final Certification.

This two-stage approach to formal assessment also mitigates risk associated with design aspects which otherwise would not be considered until installed.

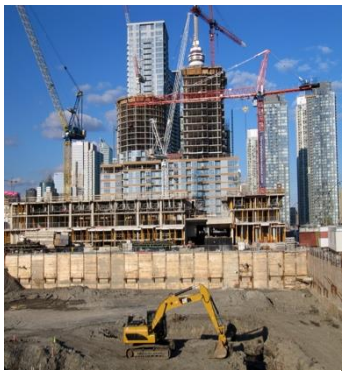
Design Stage

The Design Stage Assessment is based on documentary evidence of design and can be submitted to BRE for certification any time up to completion.
The types of evidence required to demonstrate compliance include:

- Commitments
- Drawings
- Specifications
- Models
- Feasibility/ Investigation reports

Construction Stage

The Construction Stage Assessment is based on documentary evidence of actions undertaken and the following-through of commitments, design decisions and specifications. The Construction assessment typically commences in parallel with construction and is submitted to BRE for certification after handover.
The types of evidence required to demonstrate compliance include:



- Monitoring data
- Verification statements
- Visual evidence
- Specialist verifications

3.9 CERTIFICATION

Upon completion of each stage of assessment, the assessor compiles a Certification recommendation report.


BREEAM UK

Final Certificate

Aurora
Finzels Reach
Counterslip
Bristol
BS1 6EU

BREEAM UK

BREEAM New Construction 2014: Office

Carbon Consult Limited

Outstanding

★★★★★

bre

This recommendation objectively summarises the performance of the building based on the documentary evidence of compliance presented to them by the project team.

The **Certification recommendation is submitted to BRE** (the certifying body for BREEAM) along with a complete set of auditable documents. Upon receipt, BRE assign and undertake a level of Quality Assurance on the submission and if deemed appropriate, will issue the corresponding certification.

It should be noted that the Quality Assurance stage can take some time depending on the level of QA assigned and BRE's own workload.

At the QA stage, BRE hold the right to ask for any further evidence of compliance, information or explanation. This may mean the assessor will need to liaise with the project team for further evidence.

BRE charge a certification fee in each case, which will be confirmed by the assessor.

3.10 ROLES AND RESPONSIBILITIES

BREEAM Assessor

- BREEAM Registration
- Assessment and verification of performance
- Compilation of Audit Trail
- Recommendation for Certification

The **BREEAM Assessor** is required to maintain a position of independence from the project team to ensure impartiality in assessment.

A **BREEAM Advisory/ Accredited Professional** (which can be part of the same organisation which provide the assessor) can hold a position between the Assessor and project team. Through which they can provide support to the team in the collation of evidence to demonstrate compliance as well as assisting the team in understanding requirements.

BREEAM Advisory/ Accredited Professional

- Team Support
- Consultation and Guidance

A degree of overlap can occur between the Assessor and the Advisory Role and often, provided no conflict of interest occurs can be undertaken by the same individual or same organisation.

Design/ Construction Team, Inc. Client

- Documentary evidence of Compliance e.g.
  - Drawings
  - Specifications
  - Calculations
  - Manufacturer literature

It is the **Project Design/ Construction team** (including client and stakeholders) who will be required to demonstrate the compliance with the various performance requirements through presentation of evidence, as per the requests of the assessor. The design/ construction team can be supported by **various specialists** who can produce specific reporting or compliance information.

Suitably Qualified Specialists

- Specialist Studies/ Reporting
- Surveys/ Investigations
- Design Advice

BRE Global Ltd

- Technical Clarification
- Independent Quality Assurance
- Certification

Upon completion of the assessment, the Assessor will recommend certification to **BRE Global Ltd**, who in turn undertake an independent review. Following which, assuming all deemed appropriate, they will issue the project certification. It should be noted that BRE hold the right to request any further project information or clarity to demonstrate compliance, which will be requested through the Assessor.

CHAPTER: 4 PRE-ASSESSMENT & DEVELOPMENT OF ASSESSMENT STRATEGY

4.1 METHODOLOGY

4.1.1 PRE-ASSESSMENT

In order to establish the most appropriate route to certification, Carbon Consult have undertaken a Pre-Assessment of the project considering a set of assessment criteria, filtered within the relevant BREEAM mechanism, to reflect an industrial development with supporting functions.

This set of criteria reflect basic high level project details:

- Current BREEAM scheme: 2018
- New Construction
- Shell Only
- Scheme Type: Industrial

Indicative performance of the project has been established based on:

1. Requirement to achieve a BREEAM Excellent Rating
2. Meet local planning and client requirements
3. Initial knowledge of the project and locational information

During this consideration, Carbon Consult have used their knowledge and experience to categorise likely performance against each performance requirement as either:

Category	Definition
Basic Credits in Scope	- Known to be within current design - Ties-in with the client design brief - Expected design performance - Standard practice

Additional Credits to achieve a higher score / rating	- Could be achieved with additional:
	  ○ effort;
	  ○ investigation;
	  ○ expenditure; and,
	  ○ design development.
	- Performance unknown at this stage

Table 6: Classification of scoring within Carbon Consults' BREEAM Pre-Assessment

Taking these two categories together, an indicative scoring range can be demonstrated with required actions and documentary evidence requirements noted.

Note: Credits will not be shown as Achieved until all the required documentary evidence is in place and no further action is anticipated to demonstrate compliance.

4.2 FINDINGS

Appendix 1, shows the full set of assessment criteria against which the project will be measured.

4.2.1 INDICATIVE SCORING

Based on the classification of performance as outlined within 4.1.1 above, we anticipate the following scoring scenario:

Recommendation	Score	Rating
Basic	70.19%	Excellent rating
Plus – Additional items	76.17%	Excellent rating

Table 7: Indicative outcome of BREEAM Pre-Assessment

Note: we would always recommend a scoring buffer over and above the threshold for each rating in order to manage any risk.

Figure 4: Graphic representation of BREEAM Pre-Assessment

4.2.2 SCORING SUMMARY

Basic Scores:

The basic prediction of 70.19% (Excellent) is based on items where likely performance is known, is underway or is anticipated. There are a few additional credits for a higher scenario which would provide additional buffer and potentially achieve a score of 76.17% (Excellent rating).

Additional Scores to achieve a higher BREEAM rating:

Those items identified as “Additional” require additional: design development, investigation, commissions or other actions to be achieved during the next design stages.

These items could be considered “at risk” pending further clarification. These additional credits can be sought to push the score to a higher score.

4.2.3 INDICATIVE SCORING PER SECTION:

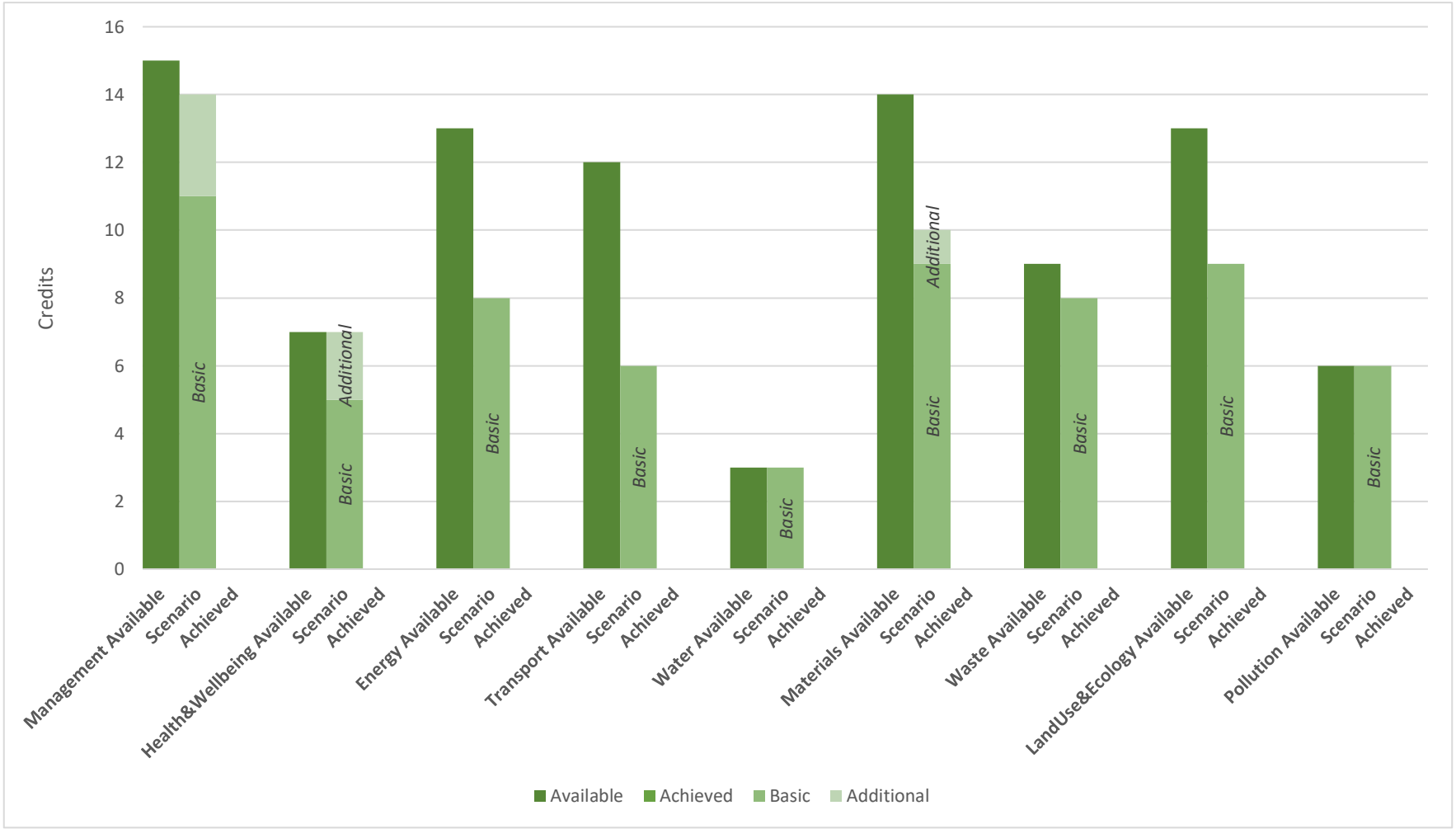


Figure 5: Graphic representation of Pre-Assessment Indicative scoring by section

CHAPTER: 5 ROUTE TO CERTIFICATION

5.1 BREEAM APPROACH

Newlands Road is being assessed under the latest BREEAM 2018 scheme version. It falls under the Commercial building type, the principal function being 'Industrial'.

The other function areas, such as the office space, are provided primarily to support the principal industrial function and its occupants and are therefore considered to be ancillary uses.

5.2 REGISTRATION AND EARLY-STAGE CREDITS

The project has already been registered with the BRE to fix the scheme version. A few credits under BREEAM 2018 requires early input. Reports and the collation of various evidence are underway.

5.3 SITE WIDE ACTIONS

BREEAM credits often form a building specific of site wide requirement. A few site-wide items include:

- Flood Risk Assessment and Drainage Strategy;
- Low and Zero Carbon Technologies feasibility and incorporation;
- Establishing ecological value, mitigation and enhancement; and,
- Baseline noise survey and identification of sensitive receptors.

5.4 TIME BOUND PERFORMANCE ELEMENTS

A number of performance requirements within BREEAM are bound to specific stages of a design development e.g. by the end of Concept Design.

It is essential therefore to commence the required actions at the listed times. Failure to do so may mean that an item is not achievable. and the collation of various evidence are underway.

5.5 APPOINTMENT OF SPECIALISTS

In order to support the achievement of a number of BREEAM credits, suitably qualified specialists are required. These should be complimentary to the main design team and their contribution used to inform design decisions.

In each case, BREEAM defines the relevant expectations of the specialist and requires demonstration of qualification and also whether any specific reporting is required to demonstrate compliance. Further information for these items are detailed in the BREEAM credit tracker.

5.6 FORMAL ASSESSMENT

The formal stages of assessment are typically an iterative process, whereby the team meet with the assessor to agree targets, ownership, actions, necessary appointments and anticipated timings for the submission of documentary evidence for assessment.

The assessor is usually able to provide feedback on submissions prior to formally accepting as documentary evidence of compliance. In addition, our approach at Carbon Consult includes the development of submission templates to assist the team with submission of documentary evidence.

Upon completion of the formal assessment, we will compile a comprehensive audit trail and present our recommendation to BRE for certification. We will maintain the audit trail on our files for a period post submission.

BRE do not set a specific timeline for the completion of the various stages of assessment. The Design Stage assessment is typically completed prior to any significant works on site and the Construction Stage assessment commences at a similar time progressing throughout and post construction.

APPENDIX A – BREEAM PRE ASSESSMENT TRACKER

BREEAM Pre-Assessment

Scheme	BREEAM New Construction 2018 - Industrial (Shell Only)

Project Name	Newlands Road, Cardiff
Assessment Stage	Pre-Assessment
Our Reference	CCL_261

Issue date	07.04.2022
Prepared by	Fleur Baguley, Carbon Consult Limited
Checked by	Fleur Baguley, Carbon Consult Limited
Revision no.	1.1 Pre Assessment
Notes	Summary of BREEAM Credits to target
	Requirement for BREEAM Excellent (>70%)

Potential Credits
Credits changed / moved from potential
Items to be included in Prelims

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Recommended Scenario: Basic Credits in Scope - 70.19% - Excellent	Recommended Scenario: Additional / Potential Credits - 76.17% - Excellent	Discussion
Management									
Man 01		**Part A: Project Brief and Design - Project Delivery planning**							
1 credit	Req 1	Documentation confirming that the project delivery stakeholders have met prior to completion of Concept Design to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery	2		Client / PM	1	1		It is recommended that full consultation occur early enough in the design process as to inform design decisions. Consultation has taken place. Evidence to be provided to cover BREEAM topics. Templates available.
	Req 2	The following has been considered in defining the roles and responsibilities for each key phase of the project: a. End user requirement b. Aims of the design and design strategy c. Particular installation and construction requirements/limitation d. Occupiers budget and technical expertise in maintaining any proposed systems e. Maintainability and adaptability of the proposals f. Operational energy g. Requirements for the production of project and end user documentation h. Requirements for commissioning, training and aftercare support	2		Client / PM				
	Req 3	Documentation/ Design drawings demonstrating how the project delivery stakeholder contribution and the outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Community Strategy and the Concept design	2		Client / PM				
Man 01		**Part B: Project Brief and Design - Stakeholder Consultation**							
1 credit	Req 4	Documentation confirming that prior to completion of the Concept Design stage, all relevant third party stakeholders have been consulted with by the design team covering the minimum consultation content	2		Client / PM	1	1		As above
	Req 5	Documentation/ Design drawings demonstrating how stakeholder contributions and outcomes of the consultation exercise have influenced or changed the Initial Project Brief and Concept Design	2		Client / PM				
	Req 6	Documentation confirming that prior to completion of the detailed design (RIBA Stage 4), consultation feedback has been given to and received by all relevant parties.	4		Client / PM				
Man 01		**Part C: Project Brief and Design - BREEAM Advisory Professional**							
Pre-Requisite	Req 8	Pre-assessment, contract document or similar to confirm that the project team, including the client, formally agree strategic performance targets	1 or 2		Client / PM		Pre-Requisite		Required
1 credit	Req 9	Appointment letter/ meeting minutes and other documents confirming a BREEAM AP has been appointed to facilitate the setting and achievement of BREEAM performance target(s) for the project during concept design stage and to: 9a - Work with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM, from their appointment and throughout Concept Design. 9b - Monitor progress against the performance targets agreed under criterion 8 above throughout all stages after their appointment where decisions critically impact BREEAM performance. 9c - Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8 on the previous page. 9d - Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 9e - Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.	1 & 2		Carbon Consult	1	1		It is recommended that a BREEAM Advisory Professional is appointed to the project team to advise and support in the achievement of the overall BREEAM rating.
1 credit	Req 10	Criteria 8 and 9 have been achieved.	2		Carbon Consult	1	1		As above
	Req 11	Letter / meeting minutes and other documents confirming the involvement of the BREEAM AP in the project at an appropriate time and level to: 11a - Work with the project team, including the client, to consider the links between BREEAM issues and to assist them in maximising the project's overall performance against BREEAM throughout Developed Design. 11b - Monitor progress against the performance targets agreed under criterion 8 throughout all stages where decisions critically impact the specification and tendering process and the BREEAM performance. 11c - Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8 on the previous page. 11d - Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 11e - Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.	4		Carbon Consult				
Man 02		**Part A: Life Cycle Cost and Service Life Planning - Elemental Life Cycle Cost**							
2 credits	Req 1	Copy of an Elemental Life Cycle Cost Analysis/Plan carried out at Process stage (RIBA Stage 2) with design option appraisals in line with the 'Standardised method of life cycle costing for construction procurement PD 156865:2008	2		QS	2		2	In order to achieve these BREEAM credits, a full Life Cycle Costing study should be commissioned at an early enough stage to inform design decisions. Shell only
	Req 2	Copy of an Elemental Life Cycle Cost Analysis/Plan showing: a. An outline plan for the project based on the buildings basic structure and envelope, appraising a range of options and based on multiple cash flow scenarios e.g. 20,30,50 or 60 years b. Include service life, maintenance and operation costs	2		QS				
	Req 3	Specification/drawings demonstrating appropriate examples of how the component level LCC Plan has influenced the building and system design/specification to minimise life cycle costs and maximise critical value	2		QS				
Man 02		**Part B: Life Cycle Cost and Service Life Planning - Component Level LCC Plan**							
1 credit	Req 4	Copy of a Component Level LCC plan developed by end of Process Stage (RIBA Stage 4) in line with PD 156865:2008 AND including the following component types (if present): a. Envelope b. Services c. Finishes d. External Spaces	4		QS	1		1	As above Shell Only: Component Level LCC plan must include all component types installed by the developer.
	Req 5	Specification/drawings demonstrating appropriate examples of how the component level LCC Plan has influenced the building and system design/specification to minimise life cycle costs and maximise critical value	4		QS				
Man 02		**Part C: Life Cycle Cost and Service Life Planning - Capital Cost Reporting**							
1 credit	Req 6	Confirmation of the capital cost for the building in pounds per square meter (£k/m2)	4		QS	1	1		The capital costing of the project can be reported.
Man 03		**Responsible Construction Practices - Pre Requisite**							
Pre-Requisite	PRE 1	Documentation/Written confirmation that all timber based products used on the project is 'Legally harvested and traded timber'			Contractor		Pre-Requisite		Required
Man 03		**Part A: Responsible Construction Practices - Environmental Management**							
1 credit	Req 2	Certificate/Written confirmation that all parties who at any stage manage the construction site operates an Environmental Management System compliant with criteria specified in BREEAM	3		Contractor	1	1		It is noted that a Construction Environmental Management Plan (CEMP) will be produced - this can be enhanced to cover BREEAM site management requirements. All contractors responsible for site activities at any stage e.g. demolition/ excavation and then principal construction contractors, should hold a relevant and suitable environmental management certificate.
	Req 3	Documentation/Written confirmation that all parties who at any stage manage the construction site implements best practice pollution prevention policies and procedures on site in accordance with PPG6	3		Contractor				
Man 03		**Part B: Responsible Construction Practices - BREEAM AP (site)**							
Pre-requisite	Req 5	Written confirmation/ evidence that the contractor and client have agreed the BREEAM target.	4		Contractor		Pre-Requisite		Required
1 credit	Req 6	Appointment letter/ evidence confirming the involvement a BREEAM AP in the project at an appropriate time and level to: 6a - 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 project's performance against the agreed performance targets throughout the Construction, Handover and Close Out stages. 6b - Monitor construction progress against the performance targets agreed under criterion 5 throughout all stages where decisions critically impact BREEAM performance 6c - Proactively identify risks and opportunities related to the procurement and construction process and the achievement of the targets agreed under criterion 5 6d - Provide feedback to the constructors and the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 6e - Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team and the provision to the assessor.	4		Contractor	1	1		It is recommended that a BREEAM Advisory Professional is appointed to support the construction team in the achievement of the BREEAM rating.

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Man 03		**Part C: Responsible Construction Practices - Responsible Construction Management**							
1 or 2 credits **1 credit Mandatory for Excellent**	Req 7,8	Specification/ Written confirmation that the principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks, covering items required in table 4.1 of BREEAM Man 3 credit.	3		Contractor	2	2		The Construction Environmental Management Plan (CEMP) can take into account the relevant responsible construction requirements of BREEAM.
	Req 9	Two credits can be achieved for additional 6 items in addition to requirement 7.	3		Contractor				
Innovation credit	Req 23	Specification / written confirmation to achieve all items in Table 4.1.			Contractor		Innovation credit - Insert Scoring into Section Below		Targeted (score recorded within innovation section at the bottom of the tracker)
Man 03		**Part D: Responsible Construction Practices - Monitoring of Construction Site Impacts**							
Pre-Requisite	PRE 10	Specification/ Written confirmation of the individual(s)responsible for monitoring, recording and reporting energy, water and Transport Consultant consumption data resulting from all construction processes. Confirmation is required that the person responsible has appropriate authority to request and access the data required.	3		Contractor		Pre-Requisite		Required
1 credit	**Utility consumption**								
	Req 11, 15	Criteria 10 has been achieved	3		Contractor	1	1		It is recommended that energy use during the construction phase is monitored by the construction team. Targets should be set and performance measured against.
	Req 12	Written confirmation that the contractor has set targets for the site energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation.	3		Contractor				
	Req 13	Site record/ Written confirmation of monitoring and recording of energy consumption (kWh) from the use of construction plant, equipment (mobile and fixed) and site accommodation	3		Contractor				
	Req 14	Report the total carbon dioxide emissions (total KgCO2/project value) from the construction process	3		Contractor				
	Req 13	Site records/ Written confirmation of monitoring of water consumption (m3) from the use of construction plant, equipment (mobile and fixed) and site accommodation	3		Contractor				
	Req 16	Specification/ written confirmation that the contractor has set targets for the potable water consumption (m³) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation.	3		Contractor				
	Req 17	Evidence to confirm monitoring and reporting the total net water consumption (m3), i.e. consumption minus any recycled water use	3		Contractor				
	Req 18	Use the collated data to report the total net water consumption (m³), i.e. consumption minus any recycled water use from the construction process via BREEAM Projects	3		Contractor				
1 credit	**Transportation of construction materials and waste**								
	Req 19	Criteria 10 has been achieved	3		Contractor	1	1		The opportunity to monitor transport associated with delivery and waste removal during the construction phase to be sought by the construction team
	Req 20	Site records/ Written confirmation that the contractor 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 cover: 20.a transportation of materials from the point of supply to the building site, including any transport, intermediate storage and point of supply. Monitor as a minimum: i. Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA) on page 210). ii Ground works and landscaping materials. 20.b transportation of construction waste from the construction gate to waste disposal processing or recovery centre gate. This monitoring must cover the construction waste groups outlined in the project's resource management plan.	3		Contractor				
	Req 21	Monitor and record data for the transportation movements as described in criterion 20	3		Contractor				
	Req 22	Report the total fuel consumption (litres) and carbon emissions (kgCO2 eq), plus total distance travelled (km)	3		Contractor				
Man 04		**Part A: Commissioning and Handover - Testing schedule and responsibilities**							**N/A for shell only**
Man 04		**Part B: Commissioning and Handover - Design and Preparation**							**N/A for shell only**
Man 04		**Part C: Commissioning and Handover - Testing and Inspecting Building Fabric**							
1 credit	Req 9	Specification/ Written confirmation the a thermographic survey and airtightness test will be carried out in accordance with the appropriate standard and by a suitably qualified professional (level 2 in thermography e.g. PCN, QCF or RQF or level 4 e.g. ABBE and air tightness testing by professional with membership with ATTMA or IATS)	4	N/T	Contractor	1			The building fabric would need to be tested and inspected to achieve this credit.
	Req 10	Specification/ Written confirmation that any defects identified will be rectified prior to building handover and close out AND any remedial work will meet the required performance characteristic of the building/element	4	N/T	Contractor				Not targetted
Man 04		**Part D: Commissioning and Handover - Handover**							**N/A for shell only**
Man 05		**Part A: Aftercare - Aftercare Support**							**N/A for shell only**
Man 05		**Part B: Aftercare - Commissioning Implementation**							**N/A for shell only**
Man 05		**Part C: Aftercare - Post Occupancy Evaluation**							**N/A for shell only**
					Totals	**15**	**11**	**3**	
				Weighted	12%		**8.80%**	**2.40%**	
Health and Wellbeing									
Hea 01		**Part A: Visual comfort - Glare Control**							**N/A for shell only**
Hea 01		**Part B: Visual comfort - Daylighting**							
1 credit	Req 4	Calculations/Design drawings/ Specification confirm that a minimum of 80% area achieve a point daylight factor of 2% and other occupied areas of the building are compliant with table 5.1 and 5.2: 1. a average daylight factor of 2% (or as per table 5.2) has been achieved in occupied areas And 2. a uniformity ration of at least 0.3 OR a minimum point daylight factor of at least 0.3 times the average daylight factor OR 3. A view if sky from desk or table height (0.7m) AND a room depth criterion d/w+d/HW<2/(1-RB)	3		M&E	1		1	These criteria apply to areas classified as "Occupied" in BREEAM terms. An occupied area is defined as a room or space that will have a user present, undertaking close work/ tasks for over 30 minutes This requirement may depend on the proposed usage of each space. Credit left as potential
	Req 4	For Occupied Areas: Calculations/ Design drawings/ Specification confirm that for Sales areas, 35% of area achieves At least 200 lux point daylight illuminances for 2650 hours per year or more and 80% of the other occupied building area a average daylight illuminance of at least 200 lux AND a minimum daylight illuminance at worst lit point of at least 60 lux has been achieved for 2650 hours per year or more.	3		M&E				
Innovation credit	Req 15	Calculations/ specifications to confirm that daylighting criteria have been met using either of the following options: 15.a Relevant building areas meet exemplary daylight factors and the relevant criteria in Table 5.8 15.b Relevant building areas meet exemplary average and minimum point daylight illuminance criteria in Table 5.9	3	N/T	Architect		Innovation credit - Insert Scoring into Section Below		Not targeted
Hea 01		**Part C: Visual Comfort - View Out**							
1 credit (2 for healthcare)	Req 5	Design drawings confirming that 95% of the floor area in 95% of the spaces for each relevant building area is within 8m of an external wall with window or opening with adequate view out	3		Architect	1	1		As above - likely to apply to office / meeting room areas only some look to be internal rooms. Desk layout 8-10m deep. External wall with daylight
	Req 6	Design drawings/ Calculations demonstrating that window/opening ≥20% of the surrounding wall area. Where the room depth is greater than 8 m, compliance is only possible where the percentage of window or opening is the same as, or greater than, the values in Table 1.0 of BS 8206: part 2	3		Architect				
Hea 01		**Part D: Visual comfort - External Lighting Levels**							
1 credit	Req 9	Specification/ Design drawings confirming illuminance levels for lighting in all external areas within the construction zone are specified in accordance with BS5489-1:2013 and BS EN 12464-2:2014	3		M&E	1	1		Note: Under HEA01 Part D the manual has elements to cover internal lighting, external lighting and zoning/control. Under a Shell only Assessment, only the external lighting elements are assessed.
	Req 10	Written confirmation where no external light fittings are specified (either separate from or mounted on the external building façade or roof) so that the criteria relating to external lighting do not apply and the credit can be awarded on the basis of compliance with criteria 7-8.	3		M&E				
Hea 02		**Part A: Indoor Air Quality - Indoor Air Quality Plan**							**N/A for shell only**
Hea 02		**Part B: Indoor Air Quality - Ventilation**							**N/A for shell only**
Hea 02		**Part C: Indoor Air Quality - Emission from Construction Products**							**N/A for shell only**
Hea 02		**Part C: Indoor Air Quality - Post Construction Indoor Air Quality Measurement**							**N/A for shell only**
Hea 04		**Part A: Thermal Comfort - Thermal modelling**							**N/A for shell only**
Hea 04		**Part B: Thermal Comfort - Design for future thermal comfort**							**N/A for shell only**
Hea 04		**Part C: Thermal Comfort - Thermal zoning and controls**							**N/A for shell only**
Hea 05		**Acoustic Performance**							
1 credit (shell only)	Req 1	Report/ Calculations confirming that the building meets the appropriate acoustic performance standards and testing requirements for: a. Sound insulation - - compliance with Section 7 of BS 8233:2014 **b. Indoor ambient noise level - Section 7 of BS 8233:2014** c. Reverberation times - - Section 7 of BS 8233:2014	2		Acoustician	1	1		For Shell only assessments, only the criteria relating to indoor ambient noise levels are assessed. An acoustician should be appointed to the project team to ensure suitable levels are achieved.
	Req 2	Appointment letter/ correspondence confirming that a suitably qualified acoustician has been appointed to carry out a noise assessment (A programme of pre-completion acoustic testing is carried out by a compliant test body in accordance with the acoustic testing and measurement procedures outlined in the Methodology on the facing page section of this BREEAM Issue.)	2		Acoustician				
	Req 3	Evidence/ Written confirmation that the acoustician is suitably qualified i.e. holding a recognised acoustic qualification and membership of an appropriate professional body	2		Acoustician				

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Hea 06		**Part A. Safety and security - Security of site and building**							
1 credit	Req 1	Appointment letter, written confirmation that a Suitably Qualified Security Specialist (SQSS) has conducted an evidence-based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent).	2		Architect	1		1	It is recommended that a suitably qualified security specialist is consulted to ensure the safety and security of the buildings. A security needs assessment (SNA) will be required. Not full secure by design Credit left as potential
	Req 2	Meeting minutes, document highlighting security controls and recommendations by the SQSS for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA	2		Architect				
	Req 3	Specifications/ drawings/ written confirmation that the controls and recommendations shall be incorporated into proposals and implemented in the as-built development and any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	2		Architect				
Innovation credit	Req 4	Written confirmation/ report/ meeting minutes to confirm that a compliant risk based security scheme is used and the performance against the scheme has been confirmed by independent assessment and verification.	2	N/T	Architect		Innovation credit - Insert Scoring into Section Below		Not targeted
Hea 07		**Part A: Safe and Healthy Surroundings - Safe Access**							
1 credit	Req 1	Drawings/ Specifications confirming that dedicated and safe cycle paths are provided from the site entrance to any cycle storage, and connect to offsite cycle paths where applicable.	3		Architect	1	1		Documents note that pedestrian and cycle circulation will be provided as part of the development. These should take into account the BREEAM requirements. One entrance Pedestrian and cycle HGV parking Recycling/waste store in service area Car Parking area separate
	Req 2	Drawings/ Specifications confirming that dedicated and safe footpaths are provided on and around the site providing suitable links for the following: 2.a The site entrance to the building entrance, 2.b Car parks (where present) to the building entrance 2.c The building to outdoor space 2.d Connecting to off-site paths where applicable.	3		Architect				
	Req 3	Drawings/ Specifications confirming that pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths.	3		Architect				
	Req 4	Drawings / Specifications confirming that delivery areas are not accessed through general parking areas and do not cross or share the following: 4.a pedestrian and cyclist paths 4.b outside amenity areas accessible to building users and general public.	3		Architect				
	Req 5	Drawings/ Specifications confirming that There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking.	3		Architect				
	Req 3	Specifications/ drawings confirming that 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.	3		Architect				
Hea 07		**Part B: Safe and Healthy Surroundings - Outside Space**							
1 credit	Req 1	Drawings/ Specifications confirming that there is an outside space providing building users with an external amenity area that must: – be of an appropriate size to provide enough amenity for the predicted number of building users – be an outdoor landscaped area, for example a garden, balcony or terrace; the majority of the space should be open to the sky – 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.).	3		Architect	1	1		It is recommended that the outdoor landscaped areas associated with each plot take into account the provision of external amenity areas for building users. Benches - attenuation pond Woodland walk? Local public footpaths?
					Totals	**7**	**5**	**2**	
				Weighted	7%		**5.00%**	**2.00%**	
Energy									
Ene 01		**Part A: Reduction of Energy Use and Carbon Emissions - Energy Performance**							
Up to 9 credits **4 credits mandatory for Excellent**	Req 1	A copy of the Building Regulations Output Document from the approved software England Wales (Part L): Approved Documents checks (BRUKL Output Document) based on the EPR_{NC}	3		M&E	9	6		An Energy Performance Ratio (EPR) is established through calculation and credits achieved based on a scale of performance. Shell Only: The calculation is based on the building's heating and cooling energy demand only. 4 credits mandatory for 'Excellent' 6 credits available based on BRUKL with 20KW PV array
Ene 01		**Part B: Reduction of Energy Use and Carbon Emissions - Prediction of Operational Energy Consumption**							**N/A for shell only**
Ene 02		**Part A: Energy Monitoring - Sub-metering of End-Use Categories**							**N/A for shell only**
Ene 02		**Part B: Energy Monitoring - Sub-metering of high energy load and tenancy areas**							**N/A for shell only**
Ene 03		**External Lighting**							
1 credit	Req 1	Specification/Written confirmation that the building has been designed to operate without the need for external lighting (including on buildings, signs and at entrances) **OR**	2	N/A	M&E	1	1		The external lighting strategy should take into account energy efficiency and control. 70 l/cw to be minimum requirement for external lighting Lighting Lighting above loading bay will need to be kept on
	Req 2	Specification/Calculations confirming that the external light fittings within construction zone are specified with: 2.a Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt 2.b Automatic control to prevent operation during daylight hours 2.c Presence detection in areas of intermittent pedestrian traffic.	3		M&E				
Ene 04		**Part A: Low carbon Design - Passive Design Analysis**							
1 credit	Req 1	Although the First credit within Hea04 Thermal Comfort is not applicable to the project, to be able to award the credit for Passive design the following criteria must still be achieved: 1. Thermal modelling has been carried out using software in accordance with CIBSE AM11 Building Energy and Performance Modelling. 2. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11). 3.b.ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in either of the following standards as appropriate; CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes.	2	N/T	M&E	1			
	Req 2	Report confirming that an analysis of the proposed building design/development to influence decisions made during Concept Design (RIBA Stage 2) and to identify opportunities for the implementation of passive design solutions As a minimum, the passive design analysis should cover: 1. Site location 2. Site weather 3. Microclimate 4. Building layout 5. Building orientation 6. Building form 7. Building fabric 8. Thermal mass or other fabric thermal storage 9. Building occupancy type 10. Daylighting strategy 11. Ventilation strategy 12. Adaptation to climate change.	2	N/T	M&E				The production of a Passive Design Analysis study is to be investigated to inform design decisions. Please note that the thermal modelling criteria is still applicable to the achievement of this item Not targetted
	Req 3	Specification/Drawings confirming that the building uses passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the analysis	3	N/T	M&E				
	Req 4	Calculations confirming the reduced total energy demand and carbon dioxide (CO_2) emissions resulting from the passive design measures.	3	N/T	M&E				
Ene 04		**Part B: Low Carbon Design - Free Cooling**							
1 credit	Req 5	First credit has been achieved	2	N/T	M&E	1			Nat vent plus heating or VFR system
	Req 6,7	Report from criterion two confirmed the analysis of free cooling and identified opportunities for the implementation of free cooling solutions	2	N/T	M&E				
	Req 8	Specification/Drawings confirming that the building uses a free cooling strategy to reduce the cooling energy demand i.e. it does need active cooling. The free cooling analysis should demonstrate consideration of the following technologies: 1. Night time cooling (which could include the use of a high exposed thermal mass) 2. Ground coupled air cooling 3. Displacement ventilation (not linked to any active cooling system)	2	N/T	M&E				
Ene 04		**Part C: Low Carbon Design - Low and Zero Carbon Technologies**							
1 credit	Req 9	Report confirming that a feasibility study has been carried out by the completion of Concept Design (RIBA Stage 2) by an energy specialist	2		M&E	1	1		It is recommended that in order to maximise the benefit of on-site renewable energy technology, a full LZC feasibility study is produced and used to inform the design. Shell Only: The LZC feasibility study must be completed as part of the Shell only design, based on the expected building use and loads specified in the design brief, or where these are not specified, for likely scenarios.
	Req 10	The report establishes the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy sources for the building or development	2		M&E				
	Req 11	Specification/Drawings confirm that a local LZC technology(s) have been specified for the building in line with the recommendation from the feasibility study	2		M&E				
	Req 12	The built form should allow for the future installation of the most cost-effective LZC options.	2		M&E				

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Ene 05		**Part A: Energy efficient cold storage - Refrigeration Energy Consumption**							**N/A**
Ene 05		**Part B: Energy efficient cold storage - Indirect Greenhouse Gas Emissions**							**N/A**
Ene 06		**Part A: Energy Efficient Transportation Systems - Energy Consumption**							**N/A for shell only**
Ene 06		**Part B: Energy Efficient Transportation Systems - Energy Efficient Features**							**N/A for shell only**
Ene 07		**Part A: Energy Efficient Laboratory Systems - Design Specification**							**N/A**
Ene 07		**Part B: Energy Efficient Laboratory Systems - Best Practice Energy Efficient Measures**							**N/A**
Ene 08		**Energy Efficient Equipment**							**N/A**
					Totals	**13**	**8**	**0**	
				Weighted	9.5%		**5.85%**	**0.00%**	
Transport									
Tra 01		**Transport Assessment and Travel Plan**							
2 credits	Req 1	A copy of travel plan prepared during feasibility and design stage, based on site specific transport assessment	2		Transport Consultant	2	2		A transport assessment and a framework travel plan would be required for this credit Coverage in line with BREEAM requirements is recommended. Key Transport
	Req 2	A copy of the site-specific travel assessment or statement which covers as a minimum: 2.a Existing travel patterns and opinions of existing building or site users towards cycling and walking, identifying constraints and opportunities, if relevant 2.b Travel patterns and transport impact of future building users 2.c Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children) 2.d Reporting of the number and type of existing accessible amenities, see Table 7.1 below, within 500m of the site 2.e Disabled access (accounting for varying levels of disability and visual impairment) 2.f Calculation of the existing public transport Accessibility Index (AI), see Methodology on the next page 2.g Current facilities for cyclists	2		Transport Consultant				
	Req 3	The travel plan includes proposals to increase or improve sustainable modes of transport and movement of people and goods during the building's operation and use.	2		Transport Consultant				
	Req 4	Meeting minutes / other documents to confirm that If the occupier is known, then they are involved in the development of the travel plan	2		Transport Consultant				
	Req 5	Contract/ commitment letter/ specifications confirming that the travel plan will be implemented post construction and be supported by the building's management in operation.	2		Transport Consultant				
Tra 02		**Sustainable Transport Measures**							
Pre-Requisite	Req 1	Tra 1 credits are achieved.	2		Transport Consultant		Pre-Requisite		Required
Tra 02		**Part A: Sustainable Transport Measures - Transport Options Implementation**							
10 credits	Req 2	Drawings/ Specifications/ maps/ other evidence to confirm that the sustainable transport measures were identified as per Table 7.4 of BREEAM TRA 2.	2		Transport Consultant	10	4		The Accessibility Index of the project to be confirmed relative to the local public transport nodes and frequency of services. Other areas of sustainable transport to be explored such as, electric vehicle charging, transport information, cyclist facilities etc. Likely staff numbers to be confirmed
	Req 3	Confirm the Accessibility Index for this site as per table 7.3.	2		Transport Consultant				Car parking spaces - 58 car parking spaces 10% of car parking spaces for electric charging stations? yes - 20% 12 EV spaces Car sharing? 5%? 3 Cycle Spaces - 10% staff? No Lockers - Not sought Cycle facilities? Not sought Local Amenities? Yes 4 credits thought possible for the site
					Totals	**12**	**6**	**0**	
				Weighted	14.5%		**7.25%**	**0.00%**	
Water									
Wat 01		**Water Consumption - domestic water consuming components**							**N/A for shell only**
Up to 5 credit **1 credit mandatory for Good and above**	Req 1	Design drawings/Specification confirming the type and area (m2) of the main activity areas	2	N/A	Architect / M&E				
	Req 2	Report total net water consumption in L/person/day, compared to the baseline performance table using the BREEAM WAT01 calculator	2	N/A	Architect / M&E				
	Req 2b	Specification/ Manufacturers literature confirming the technical details of the sanitary components including: • WCs: Flush type (single/dual), effective flush volume (litres), • Urinals: Operation (cistern/pressure, manual/automatic, waterless), flush volume (litres), number of urinal bowls • Taps: Flow rate of each tap (litres/minute) at 3±0.2 bar • Showers: Flow rate of each shower (litres/minute) at T ≤ 30˚ C) and 3±0.2 bar • Baths • Dishwasher: Litres/cycle for domestic appliances or litres/rack for domestic or commercial sized appliances • Washing machines (domestic and commercial or industrial sized) **OR** Where detailed documentary evidence is not available at this stage; a letter of instruction to a contractor/supplier or a formal letter from the developer giving a specific undertaking, providing sufficient information to allow the water calculations to be completed	2	N/A	Architect / M&E				
	Req 4a	Specification/ Design drawings/ Written confirmation that the rainwater harvesting system has/will be specified and installed in compliance with BS8515:2009 Rainwater Harvesting Systems - Code of practice	2	N/T	Architect / M&E				
	Req 3a	Specification/ Written confirmation of the storage capacity for the proposed system: Rainwater: in accordance with BS8515 'intermediate approach': 1. Collection area (m2) 2. Rainfall (average mm/year) 3. Hydraulic filter efficiency (%) 4. Yield co-efficient (%) **OR** Rainwater: in accordance with BS8515 'detailed approach': 1. Daily rainfall collection (litres)	2	N/T	Architect / M&E				This credit is not assessed for shell only. However re sanitaryware - FB to send BREEAM benchmarks for future fit out of core areas 20.12.2021 - FB advised via email that rainwater harvesting is not required
	Req 4b	Specification/ Written confirmation hat the greywater systems will be in compliance with BS8525-1:2010 Greywater Systems - Part 1 Code of Practice	2	N/T	Architect / M&E				
	Req 3b	Specification/ Written confirmation of the greywater source and the proposition collected (%). Applicable building components include the following: a. Wash hand basin taps b. Shower c. Kitchen taps - kitchenette d. Kitchen taps - pre-rinse nozzle e. Dishwasher - food preparation area d.. Other If others please state the typical greywater yield (litres) and the frequency of yield (days)	2	N/T	Architect / M&E				
	Req 3c	Specification/ Written confirmation of the components and proportions of the components using greywater and/or rain water yield (%) Applicable building components include the following a. WC Flushing b. Urinal Flushing c. Other If others please state the type of component and the proportion	2	N/T	Architect / M&E				
Innovation credit	Req 7	Criteria 1 to 4 are achieved.	2	N/T	Architect / M&E		Innovation credit - Insert Scoring into Section Below		
	Req 8	Calculation / Wat 1 tool confirming that the water consumption (litres/person/day) for the assessed building achieves the 65% improvement described as exemplary performance in Table 8.1 of BREEAM manual.	2	N/T	Architect / M&E				
Wat 02		**Water Monitoring**							
1 credit	Req 1	Specification/ Design drawings confirming that a water meter has been specified on the mains water supply to each building including on supplies with boreholes and private sources	3		M&E	1	1		A pulsed output, BMS linked, water meter is recommended.
	Req 3	Specifications / Drawings confirm that for each meter (main and sub) following is in place: 3.a Install a pulsed or other open protocol communication output AND 3.b Connect it 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, confirmation is required that the system used enables connection when the BMS becomes operational.	3		M&E				
Wat 03		**Water leak detection**							
1 credit	Req 1	Specification/ Design drawings/ Manufacturers literature confirming that there will be a leak detection system capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter.	3		M&E	1	1		In combination with the building water meter, a leak detection system is recommended. This may comprise of a number of linked, pre-programmed meters, which through connection to the BMS can monitor for unexpected flow levels and raise alarm. Core Areas to be fitted out
	Req 2	Specification/ Manufacturers literature confirming the leak detection system specified will be: a. A permanent automated water leak detection system that alerts the building occupants to the leak OR an in-built automated diagnostic procedure for detecting leaks is installed b. Activated when the flow of water passing through the water meter/ data loggers is at a flow rate above a pre-set maximum for a pre-set period of time c. Able to identify different flow and therefore leakage rates .e.g. continuous, high/low, over set time periods d. Programmable to suite the owner/occupier water consumption criteria e. where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant	3		M&E				

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Wat 04		**Water efficient equipment**							
1 credit	Req 1	Identify all water demands from uses other than those listed under Assessment scope - Table 8.1 (Wat1) that could be realistically mitigated or reduced. Where there is no water demand from uses other than domestic-scale, sanitary use components in the building, this issue is not applicable. **Non-domestic scale, non-sanitary water uses -** This includes, but is not limited to the following: – Swimming pools – Recreational hot tubs and hydrotherapy pools – Equipment used for irrigation – Vehicle wash equipment – Project-specific industrial processes – Water filtration and treatment processes – Building services (e.g. cooling towers and humidification systems) **Vehicle wash** A commercial-scale automatic, semi-automatic or manual system for washing vehicles. This includes wheel and chassis wash, fixed gantry and screen wash systems using brushes, spray or handheld jet hoses.	3		Landscape Architect / M&E	1	1		Water demand for external areas should be minimised Any vehicle wash system? No
	Req 2	Specification/ Calculations demonstrating a meaningful reduction in the unregulated water demand through as a result of the design or specification	3		Landscape Architect / M&E				
					Totals	**3**	**3**	**0**	
				Weighted	2.0%		**2.00%**	**0.00%**	
Materials									
Mat 01		**Environmental impacts from construction products - Building Life Cycle Assessments (LCA)**							
6 credits (Super structure)	Req 1	**Comparison with the BREEAM benchmark during Concept Design (offices, industrial and retail buildings only)** 1a. A copy of either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool confirming that a building LCA on of the superstructure design has been carried out using the BREEAM compliant methodology. 1b. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications).	2		Architect / LCA Consultant	6	3	1	In order to achieve full credits under this item, a separate and specific study/ life cycle assessment should be conducted. This should commence at an early design stage to inform design decisions. Please note should the concept design stage credits be sought, the results must be uploaded to BRE Projects before planning submission.
	Req 2	**Comparison with the BREEAM benchmark during Technical Design (offices, industrial and retail buildings only)** During Technical Design, demonstrate the environmental performance of the building as follows: 2.a As criterion 1.a 2.b Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design. Where a project has not achieved criterion 1, criterion 2 may still be achieved.	2		Architect / LCA Consultant				
	Req 3 & 4	**Option appraisal during Concept Design (all building types)** Criterion 1 is achieved. A copy of LCR confirming that during Concept Design, opportunities were identified for reducing environmental impacts as follows: 4.a Carry out building LCA options appraisal of 2 to 4 significantly different superstructure design options (applicable to the Concept Design stage) according to BREEAM compliant methodology. 4.b Use a building LCA tool that is recognised by BREEAM (as suitable for assessing superstructure during Concept Design) according to BREEAM compliant methodology 4.c For each design option, fulfil the same functional requirements specified by the client and all statutory requirements (to ensure functional equivalency). 4.d Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. 4.e Record the following in the Mat 01/02 Results Submission Tool: The differences between the design options; the design option selected by the client to be progressed beyond Concept Design; the reasons for selecting it and the reasons for not selecting the other design options. 4.f Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications).	2		Architect / LCA Consultant				
	Req 5	**Options appraisal during Technical Design (all building types)** Evidence confirming that during Technical Design opportunities are identified for reducing environmental impacts as follows: 5.a Carry out building LCA options appraisal of 2 to 3 significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage. 5.b Use a building LCA tool that is recognised by BREEAM (as suitable for assessing superstructure during Technical Design) according to the BREEAM compliant methodology 5.c As criteria 4.c to 4.e above Where an options appraisal summary document was produced during Concept Design, update it to include the Technical Design options. 5.d Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design. Where a project has not achieved criteria 3 and 4, criterion 5 may still be achieved.	2		Architect / LCA Consultant				
1 credit	Req 6 & 7	**Substructure and hard landscaping options appraisal during Concept Design (all building types)** Criteria 3 and 4 are achieved. Evidence confirming that during Concept Design opportunities are identified for reducing environmental impacts as follows: 7.a Carry out building LCA options appraisal of a combined total of at least six significantly different substructure or hard landscaping design options (at least two shall be substructure and at least two shall be hard landscaping). 7.b Using a building LCA tool that is recognised by BREEAM (as suitable for assessing substructure and hard landscaping during Concept Design) according to the methodology 7.c As criteria 4.c to 4.f above	2		Architect / LCA Consultant	1	1		
Innovation credit - 1	Req 10	**One credit – LCA and LCC alignment (all building types)** Criteria 3 to 5 are achieved.	2		Architect / LCA Consultant		Innovation credit - Insert Scoring into Section Below		
	Req 11	Evidence confirmed that Elemental LCC plan and Component Level LCC options appraisal credits are achieved. (Man 02 Life cycle cost and service life planning)	2		Architect / LCA Consultant				
	Req 12	Evidence confirming to Include design options appraised for criteria 3 to 4 (and 6 to 7 and 8 to 9 , if pursued) during Concept Design in Assessment scope - The elemental LCC plan	2		Architect / LCA Consultant				
	Req 13	Evidence confirming to Include the design options appraised for criterion 5 during Concept Design in the 'Component level LCC option appraisal' (in Man 02 Life cycle cost and service life planning)	2		Architect / LCA Consultant				
	Req 14	Record of an options appraisal summary document including the relevant cost information from the 'elemental LCC plan' and 'Component level LCC option appraisal confirming the integration of the aligned LCA and LCC options appraisal activity within the wider design decision-making process.	2		Architect / LCA Consultant				
Innovation credit - 2	Req 15	**One credit – Third Party Verification (all building types)** Criteria 1 to 7 are achieved (as applicable).	2		Architect / LCA Consultant		Innovation credit - Insert Scoring into Section Below		
	Req 16	A suitably qualified third party either carries out the building LCA work or verifies the building LCA work (if by others), and produces a report describing how they have checked the building LCA work accurately represent the designs under consideration during Concept Design and Technical Design with reference to the requirements of criteria 1 to 7 (and 8 to 14 if pursued).	2		Architect / LCA Consultant				
	Req 17	For each LCA option, itemise in the report the checks made by the suitably qualified third party including, as a minimum, the quality requirements shown in Table 9.4 on page 232.	2		Architect / LCA Consultant				
	Req 18	Include details of the suitably qualified third party's relevant skills and experience and a declaration of their third party independence from the project client and design team in the report	2		Architect / LCA Consultant				
Mat 02		**Environmental impacts from construction products - Environmental Product Declarations (EPD)**							
1 credit	Req 1	Specifications of construction products with EPD that achieve a total EPD points score of at least 20, according to the Methodology in BREEAM manual.	2	N/T	Architect / Contractor	1			
	Req 2	Mat1 /2 calculator tool showing the details of each EPD including the material category classification.	2	N/T	Architect / Contractor				
Mat 03		**Responsible Sourcing of Construction Products - Prerequisite**							
Pre-Requisite	Req 1 **Mandatory for all**	Policy/ contract/ specification/ written confirmation that all timber and timber-based products used on the project are legally harvested and traded timber as per the UK Government's Timber Procurement Policy (TPP)	3		Contractor		Pre-Requisite		Required
Mat 03		**Part A: Responsible Sourcing of Construction Products - Enabling sustainable procurement**							
1 credit	Req 2	A copy of the sustainable procurement plan used by the design team to guide specification towards sustainable construction products. The plan must: 2.a Be in place before Concept Design. 2.b Include sustainability aims, objectives and strategic targets to guide procurement activities. 2.c Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. 2.d Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. In addition, if the plan is applied to several sites or adopted at an organisational level it must: 2.e Identify the risks and opportunities of procurement against a broad range of social, environmental and economic issues following the process set out in BS ISO 20400:2017	3		Contractor	1	1		The Contractor is encouraged to put in place a full Sustainable Procurement policy.

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Mat 03		**Part B: Responsible sourcing of Construction Products - Measuring Responsible Sourcing**							
3 credits	Req 3a	Specification/ Design Drawings confirming details of the following locations/elements and their constituent materials: Location/Use Categories 1. Frame 2. Upper Floors 3. Roof (incl roof lights) 4. Stairs and ramps 5. External Wall (inc cladding, lining, rendering and finishes) 6. Windows and External doors 7. Internal walls and partitions 8. Substructures (incl foundations, basement excavations, retaining walls, lowest floor construction) 9. External works (incl roads, paths and pavings) 10. Finishes (incl wall, floor, ceiling etc.) 11. Building services (incl heat source, heating and air conditioning, ventilation, fuel installation and system, etc) Material categories: 1. Timber or timber-based products 2. Concrete or cementitious 3. Metal 4. Stone or aggregate 5. Clay-based 6. Gypsum 7. Glass 8. Plastic, polymer, resin, paint, chemicals and bituminous 9. Animal fibre, skin, cellulose fibre 10. Other.	3		Contractor	3	1		The potential for the contractor to source materials sustainably should be investigated.
	Req 3b	A copy of the output from the BREEAM Mat 03 calculator confirming that maximum credits are achieved for a certain number of element types for the construction products specified or procured	3		Contractor				
	Req 3c	A copy of the relevant responsible sourcing scheme certificate(s) for the relevant specifications/products	3		Contractor				
Mat 05		**Designing for Durability and Resilience**							
1 credit	Req 1	Design drawings/ Specifications confirming that protection measures are 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: 1.a Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). 1.b Damage from any vehicle or trolley movements within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. 1.c External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building façade and where delivery areas or routes are within 2 metres of the façade, i.e. specifying bollards or protection rails. 1.d Potential malicious damage to building materials and finishes, in public and common areas where appropriate.	2		Architect	1	1		A specific Durability and Resilience study is recommended to ensure the building is fit for purpose and materials/ features are specified for their longevity.
	Req 2	Design drawings/ Specification confirming that key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through one of the following: 2.a The element or product achieving an appropriate quality or durability standard or design guide (table 9.14) . If none are available, use BS 7543:2015 as the default appropriate standard OR 2.b A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors	2		Architect				
	Req 3	Design drawings/ Specification confirming that convenient access to the roof and façade are provided for cost-effective cleaning, replacement and repair in the building's design.	2		Architect				
	Req 4	Design drawings/ Specification confirming that the roof and façade are designed to prevent water damage, ingress and detrimental ponding.	2		Architect				
Mat 06		**Material Efficiency**							
1 credit	Req 1	Report/ Documentation confirming that opportunities have been identified, targets are set and appropriate measure investigated to optimise the use of materials each of the following stages: 1.a Preparation and Brief 1.b Concept Design 1.c Developed Design 1.d Technical Design 1.e Construction	1		Architect	1	1		A specific Material Efficiency study is recommended at a time at which is can support design decisions and inform waste planning throughout project development and construction.
	Req 2	Design drawings/ Specification confirming that the implementation of material efficiency measures were developed and recorded as per Table 9.15 during: 2.a Developed Design 2.b Technical Design 2.c Construction	1		Architect				
	Req 3	Report confirming the targets and actual material efficiencies achieved.	3		Architect				
					Totals	**14**	**8**	**1**	
				Weighted	22.0%		**12.57%**	**1.57%**	
Waste									
Wst 01		**Part A: Construction Waste Management - Pre-Demolition Audit**							**N/A**
Wst 01		**Part B: Construction Waste Management - Construction resource efficiency**							
3 credits	Req 3	A copy of the Resource Management Plan (RMP) for the non-hazardous waste (on-site construction and dedicated off-site manufacture or fabrication), demolition and excavation waste generated, covering the following as a minimum: 1. A target benchmark for resource efficiency i.e. m3 of waste per 100m2 or tonnes of waste per 100m2 2. Procedures and commitments for minimising non-hazardous waste in line with the benchmark 3. Procedures for minimising hazardous waste 4. A waste minimisation target and details of waste minimisation actions undertaken 5. Procedures for estimation, monitoring, measuring and reporting hazardous and non-hazardous site waste 6. Procedures for sorting, reusing and recycling construction waste into defined waste groups 7. Procedures for reviewing and updating the plan 8. The name or job title of the individual responsible for implementing the above.	3		Contractor	3	2		It is recommended that the contractor operates a full site waste management plan with targets and processes for collecting and monitoring data and identifying opportunities.
	Req 4	Specification/ Written confirmation that construction waste related to onsite-construction and dedicated off site manufacture/fabrication (excluding demolition and excavation waste) meet or is lower than the following: • 1st Credit: 13.3m3 or 11.1tonnes per 100m^2 (gross internal floor area) • 2nd credit: 7.5m3 or 6.5tonnes per 100m^2 (gross internal floor area) • 3rd credit: 3.4m3 or 3.2tonne per 100m^2 (gross internal floor area) • Innovation credit: 1.6m3 or 1.9tonne per 100m2 (gross internal floor area)	3		Contractor				
Wst 01		**Part C: Construction Waste Management - Diversion of resources from landfill**							
1 credit	Req 5	Specification/ Written confirmation that percentage of non-hazardous construction (onsite-construction and dedicated off site manufacture/fabrication), demolition and excavation waste generated by the project will be diverted from landfill. 1st Credit: Non demolition projects - 70% by volume or 80% by tonnage Demolition project - 80% by volume or 90% by tonnage	3		Contractor	1	1		Following and in combination with the above - setting targets for the diversion of waste from landfill.
	Req 6	Specification/ Documentation/ Written confirmation that waste materials will be sorted into separate key waste groups either onsite or through a licensed contractor for recovery .	3		Contractor				
Innovation credit	Req 7	Non-hazardous construction waste generated, excluding demolition and excavation waste, is less than or equal to the exemplary level resource efficiency benchmarks <1.6m3 or <1.9tonnes per 100m2	3	N/T	Contractor		Innovation credit - Insert Scoring into Section Below		
	Req 8	Innovation Credit: Non Demolition project - 85% by volume or 95% by tonnage Demolition project - 85% by volume or 95% by tonnage Excavation project - 95% by volume or 95% by tonnage	3	N/T	Contractor				
Wst 02		**Use of Recycled and Sustainably Sourced Aggregates - Pre-requisite**							
Pre-Requisite	Req 1	Evidence that a pre-completion audit has been completed If demolition occurs on site, to encourage the reuse of site-won material on site, as per Wst1 criterion 1	2	N/T	Civils / Structural Engineer		Pre-Requisite		Required
Wst 02		**Use of Recycled and Sustainably Sourced Aggregates - Project Sustainable Aggregate Points**							
1 credit	Req 2	Document confirming that all aggregate uses and types are identified on the project Table 10.5 and Table 10.6	2		Civils / Structural Engineer	1	1		Craddys have received information and consider this credit possible
	Req 3	Specification/ documentation confirming the quantity in tonnes for each identified use and aggregate type.	2		Civils / Structural Engineer				
	Req 4	Confirmation of the regions in which the aggregate sources are located and	2		Civils / Structural Engineer				
	Req 5	Calculations showing the distance in kilometres travelled by all aggregates by transport type.	2		Civils / Structural Engineer				
	Req 6	Wst2 Calculator tool indicating project sustainable aggregate points between 3.5 - 6	2		Civils / Structural Engineer				
Innovation credit	Req 7	Wst2 Calculator tool indicating project sustainable aggregate points between >6	2		Civils / Structural Engineer		Innovation credit - Insert Scoring into Section Below		

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Wst 03		**Operational Waste**							
1 credit Mandatory for Excellent	Req 1	Design drawings/ Specification confirming that there will be a dedicated space(s) to cater for the segregation and storage of operational recyclable waste generated by the assessed building; the facility must be: a. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams b. Accessible to building occupants / facilities operators for the deposit of materials and collections c. Of appropriate capacity to the building type, size, number of units (if relevant) and predicted waste volumes	2		Client / Architect	1	1		
	Req 1b	Meeting minutes/ Written confirmation of the likely building waste streams and indicative volumes	2		Client / Architect				The design/ layouts should provide for designated recycling waste storage and collection, to enable users to operate full recycling policies during operation.
	Req 2	Design drawings/ Specification confirming that where consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operation, the following facilities are provided as part of its waste management strategy: a. Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space. b. Vessel(s) for composting suitable organic waste resulting from the building's daily operation and use OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility. c. Where organic waste is to be stored/composted on site, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes.	2	N/A	Client / Architect				David - waste strategy Internal bins / food waste (within building) / check if tap is required Tenant item
Wst 04		**Speculative Finishes (Offices Only)**							**N/A**
Wst 05		**Adaptation to Climate Change - Resilience of structure, fabric, building services and renewables installation**							
1 credit	Req 1	A copy of the climate change adaptation strategy appraisal; A systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and where feasible, mitigate against these impact, covering the following stages as minimum: a. Hazard Identification b. Hazard Assessment c. Risk Estimation d. Risk Evaluation e. Risk Management	2		Architect / Structural Engineer	1	1		
	Req 2	Written confirmation that the climate change adaptation strategy appraisal for structural and fabric resilience was conducted before or during the Concept Design (RIBA Stage 2) in accordance with the requirements above.	2		Architect / Structural Engineer				It is recommended that an Adaptation to Climate Change study occur to inform the design on hazard, risks and mitigation.
	Req 3	Written confirmation that an update during Technical Design is developed demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective.	2		Architect / Structural Engineer				
Wst 05		**Adaptation to Climate Change - Responding to Climate Change**							**N/A**
Wst 06		**Part A: Design for disassembly and adaptability - Recommendations**							
1 credit	Req 1	A copy of the building specific functional adaptation strategy study undertaken by Concept Design (RIBA Stage 2) which includes recommendations for measures to be incorporated to facilitate future adaptation. This should consider: – 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.	2		Architect / M&E / Structural Engineer	1	1		Whilst designed with a specific purpose in mind, it is recommended that a disassembly and adaptability study occur to allow future adaptation or alternative usage.
	Req 2	A copy of recommendations or solutions based on the study during or prior to Concept Design, that aim to enable and facilitate disassembly and functional adaptation	2		Architect / M&E / Structural Engineer				
Wst 6		**Part B: Design for disassembly and adaptability - Implementation**							
1 credit	Req 3	Criteria 1 and 2 are achieved	4		Architect / M&E / Structural Engineer	1	1		Following on and linked to the above - requiring implementation of design features/ processes for disassembly/ adaptation.
	Req 4	Specification/ Design Drawings confirming the implementation of functional adaptation measures as below: 4.a How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. 4.b Changes to the recommendations and solutions during the development of the Technical Design. 4.c Justification of any omissions This should cover as a minimum: – 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.	4		Architect / M&E / Structural Engineer				
	Req 5	A copy of building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	4		Architect / M&E / Structural Engineer				
					Totals	**9**	**8**	**0**	
				Weighted	8.0%		**7.11%**	**0.00%**	
Land Use and Ecology									
LE 01		**Part A: Site selection - Previously developed land**							
1 credit	Req 1	Design drawings (including existing and proposed site plan)/ Report/ Photographs confirming: a. Type and duration of previous land use b. Area (m2) of previous land use c. Location and footprint (m2) of proposed development and temporary works Note: At least 75% of the proposed development footprint must be previously developed land	1	N/T	Architect	1			
LE 01		**Part B: Site selection - Contaminated land**							
1 credit	Req 2	A copy of the specialist's land contamination report that identifies: a. The degree of contamination. b. The contaminant sources/types. c. The options for remediating sources of pollution which present an unacceptable risk to the site.	1		GI Specialist	1	1		To achieve this credit contaminated land would need to be remediated. Further investigation required but credit may be possible
	Req 3a	A copy of the remediation strategy and implementation plan for the site	1		GI Specialist				
	Req 3b	Written confirmation that the remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan recommended by the contaminated land professional	1		GI Specialist				
LE 02		**Identifying and Understanding the Risk and Opportunities of the Project - Prerequisite**							
Pre-Requisite	Req 1	A confirmation of the assessment route for the project has been determined using BREEAM Guidance Note GN34 BREEAM Ecological Risk Evaluation Checklist.	1		Ecologist		Pre-Requisite		Required
	Req 2	Evidence/ Written confirmation from the client or contractor that the compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	1		Ecologist		Pre-Requisite		Required
LE 02		**Part A: Identifying and Understanding the Risk and Opportunities of the Project - Survey and Evaluation**							
1 credit	Req 3	**Route 1** (as identified within GN34) A copy of the BREEAM Ecological Risk Evaluation Checklist indicating **Assessment route 1** for the evaluation of site	1	N/A		1	1		
	OR								
	Req 4a	**Route 2** (as identified within GN34) A copy of appointment/ confirmation indicating SQA's early involvement in site configuration and, where necessary, SQA can influence strategic planning decisions	1		Ecologist				It is recommended that a full ecological investigation in line with BREEAM is conducted at RIBA stage 1. Recommendations for improvement on site will also gain further credits.
	Req 4b	Evidence/ Written confirmation that the ecologist is suitably qualified i.e. qualification, experience, professional membership and appointment of SQA	1		Ecologist				Phase 1 undertaken Planning info to be clarified Great crested newts??
	Req 5	A copy of appropriate level survey and evaluation carried out prior to the completion of the preparation and brief, to determine the ecological baseline of the site, taking account of the zone of influence to establish: 5.a Current and potential ecological value and condition of the site, and related areas within the zone of influence. 5.b Direct and indirect risks to current ecological value 5.c Capacity and feasibility for enhancement of the ecological value of the site and, where relevant, areas within the zone of influence.	1		Ecologist				FB to send over Ecology requirements e.g. GN40 etc
	Req 6	Correspondence showing that data are collated and shared with project team to inform the site preparation, design or construction works.	1		Ecologist				

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
LE 02		**Part B: Identifying and understanding the risks and opportunities for the project - Determining the ecological outcomes for the site (Routes 1 and 2)**							
1 credit	Req 7	Survey and evaluation criteria (criteria 3-6 above) relevant to the chosen route have been achieved.	1		Ecologist	1	1		As above
	Req 8	Correspondence / Meeting minutes showing that during Concept Design, the project team liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the sites	2		Ecologist				
	Req 9	Documents showing the determination process for the ecological outcome for the site, this must involve the identification, appraisal and selection of specific solutions and measures sufficiently early to influence key project planning decisions. This must be done in accordance with the following hierarchy of action: 9.a avoidance 9.b protection 9.c reduction or limitation of negative impacts 9.d on site compensation and, 9.e enhancement, considering the capacity and feasibility within the site, or where viable, off-site.	2		Ecologist				
	Req 10	Evidence/ Specification confirming that the optimal ecological outcome for the site is selected after liaising with representative stakeholders and the project team.	2		Ecologist				
Innovation Credit	Req 11	Criteria 8 to 10 are achieved.	2		Ecologist		Innovation credit - Insert Scoring into Section Below		
	Req 12	Report confirming that while determining the optimal ecological outcome for the site consider, in addition to those outlined in criteria 8 to 10, the wider site sustainability-related activities and the potential for ecosystem service related benefits.	2		Ecologist				
	Req 13	Following credits are achieved: 13.a - Hea07 - Achieved both credits 13.b - Pol03 - Achieved credits for 'Surface water run-off' and 'Minimising watercourse pollution' 13.c - Pol05 - Achieved credits	2		Ecologist				
LE 03		**Managing negative impacts on ecology - Pre-requisite**							
Pre-Requisite	Req 1	LE2 credit is achieved.	2		Ecologist		Pre-Requisite		Required
	Req 2	The client or contractor has confirmed that compliance is monitored against all relevant UK, and EU or International legislation relating to the ecology of the site	2		Ecologist		Pre-Requisite		Required
LE 03		**Part A: Managing negative impacts on ecology - Planning, liaison, implementation and data**							
1 credit	Req 3	Written confirmation that roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief.	1		Ecologist	1	1		As above
	Req 4	Written confirmation/ Contract/ Program confirming that site preparation and construction works have been planned for and are implemented at an early project stage to optimise benefits and outputs.	2		Ecologist				
	Req 5	Specifications/ Drawings/ Report to confirm that the project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions, and measures have been selected (as per LE2), during site preparation and construction works.	2		Ecologist				
LE 03		**Part B: Managing negative impacts on ecology - Managing negative impacts of the project**							
1 credit OR	Req 6	**Route 1** (as identified within GN34) Criteria 3 and 4 have been achieved	2	N/A		2	2		As above
	Req 7	Written confirmation that negative impacts from site preparation and construction works have been managed according to the hierarchy and no overall loss of ecological value has occurred.	2	N/A					
OR									
	Req 7	**Route 2** (as identified within GN34) Criteria 3-5 have been achieved	2		Ecologist				
2 credits or	Req 8a	Written confirmation that negative impacts from site preparation and construction works have been managed according to the hierarchy and: - no overall loss of ecological value has occurred.	2		Ecologist				
1 credit	Req 8b	- the loss of ecological value has been minimised	2		Ecologist				
LE 04		**Change and Enhancement of Ecological Value - Pre requisite**							
Pre-Requisite	Req 1	LE 03 has been achieved. Including the following, specific to the aims of this issue: 1.a Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes 1.b Site preparation and construction works have been planned for and implemented at a stage that is sufficiently early in the project to optimise benefits and outputs.	1		Ecologist		Pre-Requisite		Required
Pre-Requisite	Req 2	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	1		Ecologist		Pre-Requisite		Required
LE 04		**Part A: Change and Enhancement of Ecological Value - Enhancement of Ecology**							
1 credit OR	Req 3	**Route 1:** Specifications/ drawings/ site reports/ ecologist's report confirming that the project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site.	1	N/A		3	1		Biodiversity Net Gain enables credits to be awarded here depending on the level of improvement
LE04: ROUTE 1, PART A (above) OR ROUTE 2. PARTS A and B (below)									
LE 04		**Part A: Change and Enhancement of Ecological Value - Enhancement of Ecology**							
Up to 3 credits	Req 6	**Route 2:** Ecologist's report LE04 calculator confirming that Credits are awarded on a scale of 1 to 3, based on the calculation of the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN 36 - BREEAM, CEEQUAL, HQM Ecology Assessment Issues – Route 2 One credit for 75-94% Two credits for 95-104% Three credits 105-109%	2		Ecologist				
LE 04		**Part B: Change and Enhancement of Ecological Value - Liaison, implementation and data collation**							
1 Credit	Req 4	**Route 2:** A copy of the Ecology Report/ drawings/ specifications confirming that the project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented the solutions and measures selected in a way that enhances ecological value in the following order: 5.a On site; and where this is not feasible, 5.b Off site within the zone of influence.	2		Ecologist	1	1		
	Req 5	Confirmation that data collated is provided to the local environmental records centres nearest to, or relevant for, the site.	2		Ecologist				
Innovation credit	Req 7	Calculation of the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in either GN 35 - BREEAM, CEEQUAL, HQM Ecology Assessment Issues – Route 1 or GN 36 - BREEAM, CEEQUAL, HQM Ecology Assessment Issues – Route 2 Achieving a significant net gain of ecological value (Percentage score of over 110)	2		Ecologist		Innovation credit - Insert Scoring into Section Below		
LE 05		**Long term ecology management and maintenance - Pre requisite**							
Pre-Requisite	Req 1	Written confirmation that compliance is being monitored for all relevant UK, EU and international legislation relating to the ecology has been compiled with during the design and construction process	1		Ecologist		Pre-Requisite		Required
	Req 2	Where pursued, LE 04 has been achieved, including the following specific aims of this issue: 2.a Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes. 2.b Site preparation and construction works have been planned for and implemented at a stage that is sufficiently early in the project to optimise benefits and outputs.	1		Ecologist		Pre-Requisite		Required
LE 05		**Part A: Long term ecology management and maintenance -Planning, liaison, data, monitoring and review management and maintenance**							
1 credit	Req 3	Minutes/ Specifications/ documents confirming the project team liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, on solutions and measures implemented to: 3.a monitor and review implementation and the effectiveness 3.b develop and review management and maintenance solutions, actions or measures.	3		Ecologist	1	1		In order to maximise ecological performance of the site, it is recommended that an ecological management plan is developed firstly for the construction phase and then for the first five years of operation of the site.
	Req 4	Written confirmation/ contract/ specification confirming that team is committed to 4.a Monitoring and reporting of on the ecological outcomes for site implemented at the design and construction stage 4.b Monitoring and reporting of outcomes and successes from the project 4.c Arrangements for the ongoing management of landscape and habitat connected to the project (on and, where relevant, off site) 4.d Maintaining the ecological value of the site and its relationship or connection to its zone of influence 4.e Maintaining the site in line with the any sustainability linked activities, e.g. ecosystems benefits (LE 02). 4.f Remedial or other	3		Ecologist				
	Req 5	Written confirmation/ copy of information pack indicating that as part of the tenant or building owner information supplied, include a section on Ecology and Biodiversity to inform the owner or occupant of local ecological features, value and biodiversity on or near the site.	3		Ecologist				

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
LE 05		**Part B: Long term ecology management and maintenance - Landscape and ecology management plan (or similar) development**							
1 credit	Req 6	A copy of the Landscape and ecology management plan, or similar, (or letter of commitment) is developed in accordance with BS 42020:2013 covering as a minimum the first five years after project completion and includes: 6.a Actions and responsibilities, prior to handover, to give to relevant individuals 6.b The ecological value and condition of the site over the development life. 6.c Identification of opportunities for ongoing alignment with activities external to the development project and which supports the aims of BREEAM's Strategic Ecology Framework 6.d Identification and guidance s to trigger appropriate remedial actions to address previously unforeseen impacts 6.e Clearly defined and allocated roles and responsibilities	3		Ecologist	1	1		As above
	Req 7	Confirmation that the landscape and management plan or similar will be updated as appropriate to support maintenance of the ecological value of the site	3		Ecologist				
					Totals	**13**	**10**	**0**	
				Weighted	19.0%		**14.62%**	**0.00%**	
Pollution									
Pol 01		**Part A: Impact of Refrigerants**							**N/A for shell only**
Pol 01		**Part B: Impact of Refrigerants - Leak detection**							**N/A for shell only**
Pol 02		**Local Air Quality**							**N/A for shell only**
Pol 03		**Flood and Surface Water Management - Pre-requisite**							
Pre-Requisite	Req 1a	Appointment letter/ correspondence confirming that a suitably qualified drainage consultant has been appointed to carry out, and demonstrate the developments compliance.	2		Civils		Pre-Requisite		Required
	Req 1b	Evidence/ Written confirmation that the drainage consultant is suitably qualified i.e. qualification, experience, professional membership	2		Civils		Pre-Requisite		Required
Pol 03		**Part A: Flood and Surface Water Management - Flood Resilience**							
2 credits	Req 2	A site specific Flood Risk Assessment (FRA) confirming that the assessed development is situated in a flood zone having a low annual probability of flooding. In order to comply the FRA must detail the risk of flooding from the following sources: 1. Fluvial (rivers) 2. Tidal 3. Surface water: sheet run-off from adjacent land (urban or rural) 4. Ground water: most common in low-lying areas underlain by permeable rock (aquifers) 5. Sewers: combines, foul or surface water sewers 6. Reservoirs, canals and other artificial sources The content should be based on historic trends but also account for predicted changes to the climate which may impact on the flood rick to the site in the future.	2		Civils	2	2		The flood zone for the site is noted as Low Risk
1 credit	Req 3	**OR** A site specific Flood Risk Assessment (FRA) confirming that the assessed development is situated in a flood zone having a medium or high annual probability of flooding and is not within the Functional Floodplain. The FRA takes all current and future sources of flooding into consideration.	2		Civils				A site specific FRA undertaken by Craddys
	Req 4	To increase the resilence and resistance of the delveopment to flooding one of the following must be achieved: 4a. Design drawings confirming that the ground level of the building and access to both the building and the site, are designed (or zoned) so they are at least 600mm above the design flood level of the flood zone in which the assessed development is located Or 4b. Design drawings/ Specification/ Written confirmation that the final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlines in section 5 of BS 8533:2017	2		Civils				
Pol 03		**Part B: Flood and Surface Water Management - Surface water run off**							
		Surface Water Run Off Rate							
Pre-Requisite	Req 5	Written confirmation that the surface water run-off design solutions are bespoke, i.e. they take account of the specific site requirements and natural or man-made environment of and surrounding the site.	2		Civils		Pre-Requisite		Required
1 credit	Req 6	**For Brownfield Sites** Report/ Calculations confirming that drainage measures have been specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) for the developed site shows 30% improvement than it was for the pre-development site for the 1-year AND 100 year return period events	2	N/A	Civils	1	1		
	Req 7	**For Greenfield Sites** Report/ Calculations confirming that drainage measures have been specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) for the developed site shows that is no greater than it was for the pre-development site for the 1-year AND 100 year return period events	2		Civils				Please note the differing requirements between greenfield and brownfield sites
	Req 8	Documentation confirming the relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SUDS are in place.	2		Civils				
	Req 9	Report/ Calculation confirming that an allowance has been made for climate change in accordance with current best practice planning guidance	2		Civils				
		Surface Water Run Off Volume							
1 credit	Req 10	Report confirming that flooding of the property will not occur in the event of local drainage system failure	2		Civils	1	1		Water Run Off Volume to be reviewed - Infiltration not possible so attenuation will be installed on site
	Req 10b	Drainage drawings confirming the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels.	2		Civils				
	Req 11	**AND EITHER** Report/ Calculations confirming that the drainage measures specified ensure that the post development run-off volume, over the developments lifetime, is no greater than it would have been prior to the assessed site's development for the 100 year 6 hour event including an allowance for climate change	2	N/T	Civils				
	Req 12	Report/ Calculations confirming that any additional predicted volume of run-off for the 100 year 6 hour event including an allowance for climate change is prevented from leaving the site by using infiltration or other Sustainable Drainage Systems (SuDS) techniques.	2	N/T	Civils				
	Req 13	**OR** Written justification why criteria 10 and 11 above cannot be achieved i.e. where infiltration or other SUDs techniques are not technically viable options	2		Civils				
	Req 14	Report / Calculations confirming that the post development peak rate of run-off is reduced to a limiting discharge, defined as the highest flow rate from the following options: a. The pre development 1-year peak flow rate OR b. The mean annual flow rate Qbar OR c. 2l/s/ha Note: For the 1-year peak flow rate the 1-year return period event criterion applies	2		Civils				
	Req 15	Documentation confirming the relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SUDS are in place	2		Civils				
	Req 16	Report/ Calculation confirming that an allowance has been made for climate change in accordance with current best practice planning guidance	2		Civils				
Pol 03		**Part C: Flood and Surface Water Management - Minimising water course pollution**							
1 credit	Req 17	Report/ Calculations confirming that there is no discharge from the developed site for rainfall up to 5mm.	2	N/T	Civils	1			
	Req 18	Design drawings/ Specification confirming area at low risk of watercourse pollution and the specification of appropriate Sustainable Drainage Systems (SUDs) or source control systems	2	N/T	Civils				
	Req 19	Design drawings/ Specification confirming areas at high risk of contamination or spillage of substances such as petrol and oil and the specification of separators (or an equivalent system) to the surface water drainage systems.	2	N/T	Civils				
	Req 20	Design drawings/ Specification confirming where there building has chemical/ liquid gas storage areas, a means of containment is fitted to the site drainage system to prevent the escape of chemicals to natural watercourses.	2	N/T	Civils				Assume attenuation will not be provided to this level (i.e. first 5mm rainfall)
	Req 21	Specification/ Written confirmation that All water pollution prevention systems have been 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.	2	N/T	Civils				Car parking area Landscaping
	Req 22	Correspondence/ Written confirmation that a comprehensive and up-to-date drainage plan of the site will be produced and made readily available for the building/site occupiers.	2	N/T	Civils				
	Req 23	Documentation confirming the relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SUDS are in place	2	N/T	Civils				
	Req 24	Specification/ Written confirmation that all external storage and delivery areas are designed and detailed in accordance with the current best practice planning guidance	2	N/T	Civils				
Pol 04		**Reduction of night time light pollution**							
1 credit	Req 1	Specification/ Written confirmation where external lighting pollution has been eliminated through effective design that removed the need for external lighting without adversely affecting the safety and security of the site and its users **OR**	2		M&E	1	1		
	Req 2	Design Drawings/ Specification confirming the location and types of external light fittings and controls specified	2		M&E				
	Req 3	Specification/ Written confirmation that the external lighting strategy has been designed in compliance with ILP Guidance notes for the reduction of obtrusive light 2011	2		M&E				External lighting
	Req 4	Specification/ Written confirmation that all external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00	2		M&E				Design to include timeclock
	Req 5	Specification/ Written confirmation that safety or security lighting will be used between 23:00 and 07:00 and comply with the lowers levels of lighting recommended during these hours in ILP's Guidance notes Table 2	2		M&E				
	Req 6	Specification/ Written confirmation that illuminated advertisements where specified will be designed in compliance with ILP PLG 5.	2		M&E				

Credit Ref	Criteria	Action required	Recommended RIBA Stage - Highlighted where mandatory	Design Stage Evidence in Place	Owner	Credits Available	Basic Credits in Scope - 70.19% - Excellent	Additional / Potential Credits - 76.17% - Excellent	Discussion
Pol 05		Reduction of noise pollution							N/A for shell only
					Totals	6	5	0	
				Weighted	6.0%		5.00%	0.00%	
Innovation									
Man 1	Project brief and design (Simple buildings only)					1			
Man 3	Responsible Construction Practices					1	1		40/50 required for the CCS score / similar requirement in line with the table under MAN03.
Hea 1	Visual Comfort					1			
Hea 6	Safety and Security					1			
Ene 1	Reduction of Energy Use and Carbon Emissions (Zero carbon)					3			
Ene 1	Energy Monitoring					2			
Wat 1	Water Consumption					1			
Mat 1	Life Cycle Assessment			N/A		2	1		Would need the MAT01 credits undertaken at RIBA Stage 2
Mat 3	Responsible Sourcing of Materials					1			
Wst 1	Construction Site Waste Management					1			
Wst 2	Use of recycled and sustainably sourced aggregates			N/T		1			Would need the basic WST02 credits achieved first - this then accounts for where 6 or more points are scored
Wst 5	Adaptation to Climate Change					1			
LE 2	Identifying and understanding the risks and opportunities for the project			N/T		1			Checked - not possible unless all the POL03 credits are achieved (currently not enough attenuation)
LE4	Change and enhancement of ecological value (route 2 only)					1			
Pol 3	Pol 03 Flood and surface water management (Simple buildings only).					1			
					Max	10 10%	2 2%	0 0%	
						Total	Basic 70.19%	Additional 5.97% 76.17%	
							Excellent	Excellent	