

**The Printworks**  
**BREEAM Pre-Assessment Report**  
**HRW-BHE-XX-XX-RP-YS-003**

**0049225**

26 July 2023

Revision P02

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| Revision | Description                        | Issued by | Date     | Checked |
|----------|------------------------------------|-----------|----------|---------|
| P01      | Pre-Assessment BREEAM Report DRAFT | IA        | 14.06.23 | MD      |
| P02      | Pre-Assessment BREEAM Report       | IA        | 26.07.23 | MD      |

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# Glossary

| Term   | Definition                                                      |
|--------|-----------------------------------------------------------------|
| BREEAM | Building Research Establishment Environmental Assessment Method |
| EPD    | Environmental Product Declaration                               |
| LCA    | Life Cycle Assessment                                           |
| LCC    | Life Cycle Cost                                                 |
| VOC    | Volatile Organic Compound                                       |

# 1 Introduction

The Printworks, located at 819-829 High Road, is on track to achieve a minimum BREEAM 'Very Good' rating, with opportunity to achieve a BREEAM 'Excellent'. To achieve this, a minimum score of 55% is required for 'Very Good' and 70% for 'Excellent', along with achieving all minimum standards.

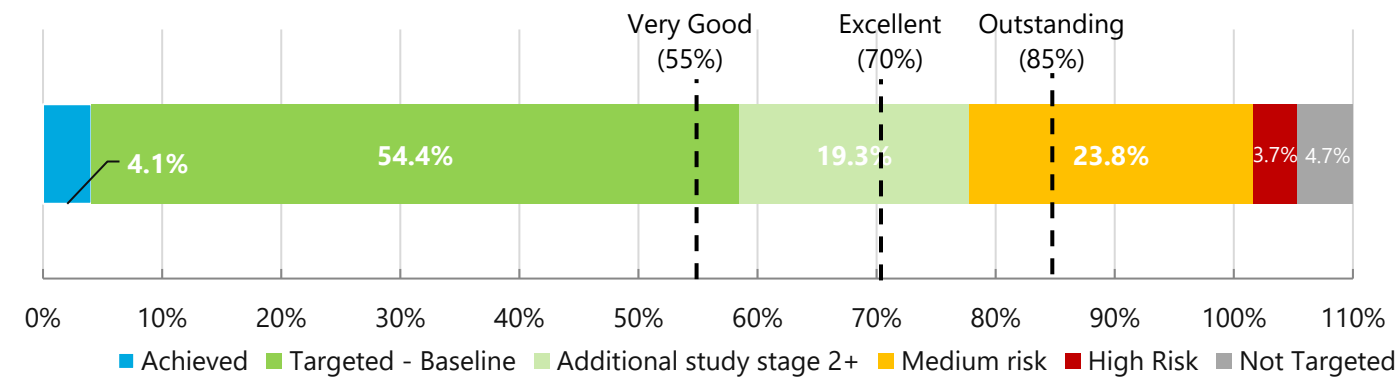
A combined BREEAM workshop and RIBA Stage 2 kick off meeting was undertaken on 16<sup>th</sup> May 2023 to ensure the design team and client are fully aware of their responsibilities in working towards a minimum BREEAM 'Very Good' rating. The development will be registered under BREEAM V6 New Construction Multi-Residential Accommodation, Residential college/school (halls of residence) category, as a Fully Fitted assessment. The registration number is TBC.

A pre-assessment has been undertaken based on available information, discussions with the design team and appointments to date. This builds on the pre-assessment undertaken at the pre-planning stage by Buro Happold, which included RIBA Stage 1 BREEAM items.

The current pre-assessment identifies a targeted score based on low risk and medium risk credits. It also identifies potential additional credits that may be achievable, however need some confirmation from the design team prior to us establishing whether they are achievable.

Figure 1-1 BREEAM Pre-assessment Score

Figure 1-1 shows a **pre-assessment score of 58.5%** consisting of 'Achieved' credits and 'Targeted – baseline', low risk credits. The project is on track towards achieving a minimum of BREEAM 'Very Good' with a 3.5% margin. Buro Happold recommends a minimum 5% margin past the 'Very Good' 55% threshold to safeguard the desired targeted score from credits which are not awarded or no longer applicable. The overall score can be elevated passed the 70% 'Excellent' threshold if a number of process based BREEAM credits are dealt with via additional appointments for stage 2 and thus achieving an 'Excellent' rating. Please note, not all credits under the "Additional study stage 2+" must be targeted to meet the project aspiration for 'Excellent'. Many of these credits under "Additional study stage 2" are dependent on further analysis and comments from the design team.



- **Achieved Credits** (Evidence Still Needed) **4.1%**
- **Low Risk achievable Credits** (Evidence Still Needed) **54.4%**
- **Additional Study Credits** (Appointment undertaken at stage 2 and evidence confirmed) **19.3%** (bringing total score past 75% threshold target for 'Excellence' with 5% buffer)
- **Medium Risk Credits** (Appointment needed after stage 2 and evidence confirmed) **23.8%**
- **High Risk credits** (many likely to be unachievable) **3.7%**
- **Not Targeted** **4.7%**

Figure 1-1 BREEAM Pre-assessment Score

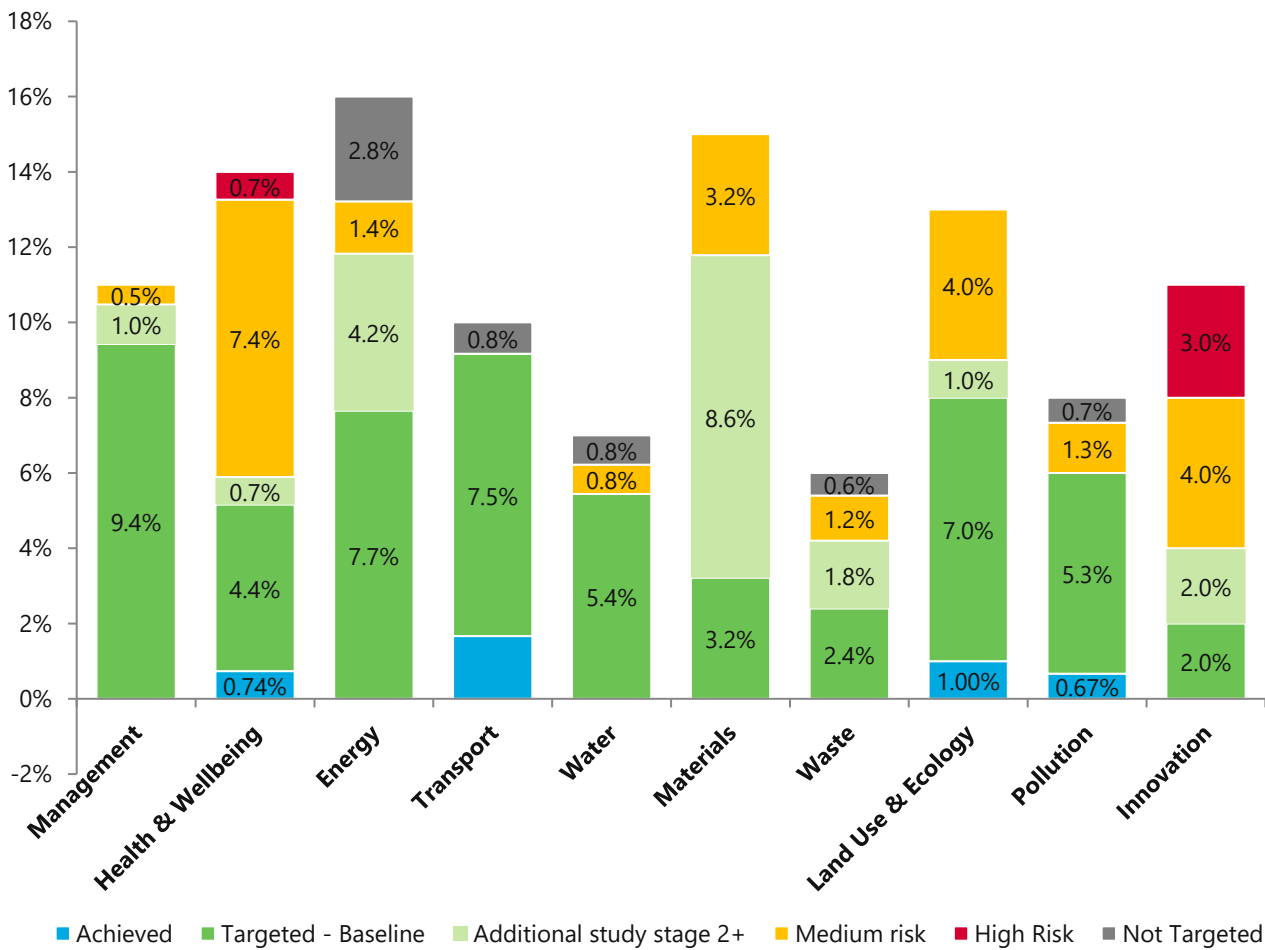


Figure 1- 2 Category Breakdown by Weighted category Score

Figure 1- 2 highlights the distribution of targeted credits and their weightings across the categories. The areas the development is expected to do well in are Management, Energy, Transport, and Land Use & Ecology.

This pre-assessment provides an initial evaluation of the likely rating that could be achieved under a formal assessment based on information received from the design team and commitments to date. It should be noted that all evidence is at risk until it is reviewed and approved by the Buro Happold BREEAM assessor.

## 2 BREEAM New Construction Pre-Assessment

### 2.1 Introduction

BREEAM (Building Research Establishment's Environmental Assessment Method) was the world's first sustainability rating scheme for the built environment and has contributed much to the strong focus in the UK on sustainability in building design, construction, and use. BREEAM is now an international standard that is locally adapted, operated and applied.

BREEAM V6 New Construction is the newest scheme, issued in August 2022. BREEAM V6 was updated to align the scheme with latest industry thinking regarding Sustainability specifically to align with the new Part L 2021 Building Regulations and the updated ventilation/VOC requirements.

There are 8 different environmental performance categories in BREEAM. Within each environmental performance category, there are a number of credits which developments are assessed against. Where evidence is provided demonstrating that the criteria of the credit have been met, the appropriate number of credits can be awarded. A weighting is applied to account for the varying importance of the different categories and then the category totals are added together to produce a single overall score on a scale of Pass, Good, Very Good, Excellent or Outstanding. The performance standard for each rating is summarised in Table 2—1.

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

Table 2—1 BREEAM Scoring Standards

To ensure performance against fundamental environmental issues are not overlooked in pursuit of a particular rating, BREEAM sets minimum standards of performance in key areas, including energy, water, waste, management and materials. To achieve a particular BREEAM rating, highlighted in Table 2—1, the minimum overall percentage score must be achieved , including the minimum standards in Table 2—2.

| BREEAM Issue                                         | Very Good                                                    | Excellent                                                    | Outstanding                                                  |
|------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Man 03 Responsible Construction Practices            | None                                                         | One Credit (Responsible Construction Management)             | One Credit (Responsible Construction Management)             |
| Man 04 Commissioning and Handover                    | On Credit (Commissioning-test schedule and responsibilities) | On Credit (Commissioning-test schedule and responsibilities) | On 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                                     | None                                                         | One Credit (Commissioning- implementation)                   | One Credit (Commissioning- implementation)                   |
| Ene 01 Reduction of Energy Use and Carbon Emissions  | None                                                         | Four Credits (Energy Performance)                            | Six Credits (Energy Performance)                             |
| 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 Construction Products | Criterion 1 only                                             | Criterion 1 only                                             | Criterion 1 only                                             |
| Wst 01 Construction Waste Management                 | None                                                         | None                                                         | One Credit                                                   |
| Wst 03 Operational Waste                             | None                                                         | One Credit                                                   | One Credit                                                   |

Table 2—2 Minimum Standards

Certification is carried out at two stages as summarised below.

- The **Design Stage** assessment and interim BREEAM rating confirms the proposed new building's performance at the design stage of the life cycle. Assessment and ideally certification will occur prior to the beginning of operations on-site. The BREEAM rating at this stage is labelled as 'interim' because it does not represent the building's final, new construction BREEAM performance; and
- The **Post Construction Stage** assessment and BREEAM rating confirms the final 'as built' performance of the building at the new construction stage of the life cycle. A final PC assessment is completed and certified after practical completion of the building works.

2.2 RIBA Stage Requirements

Figure 2-3 highlights the RIBA stages and the specific credits that have criteria associated with these stages.

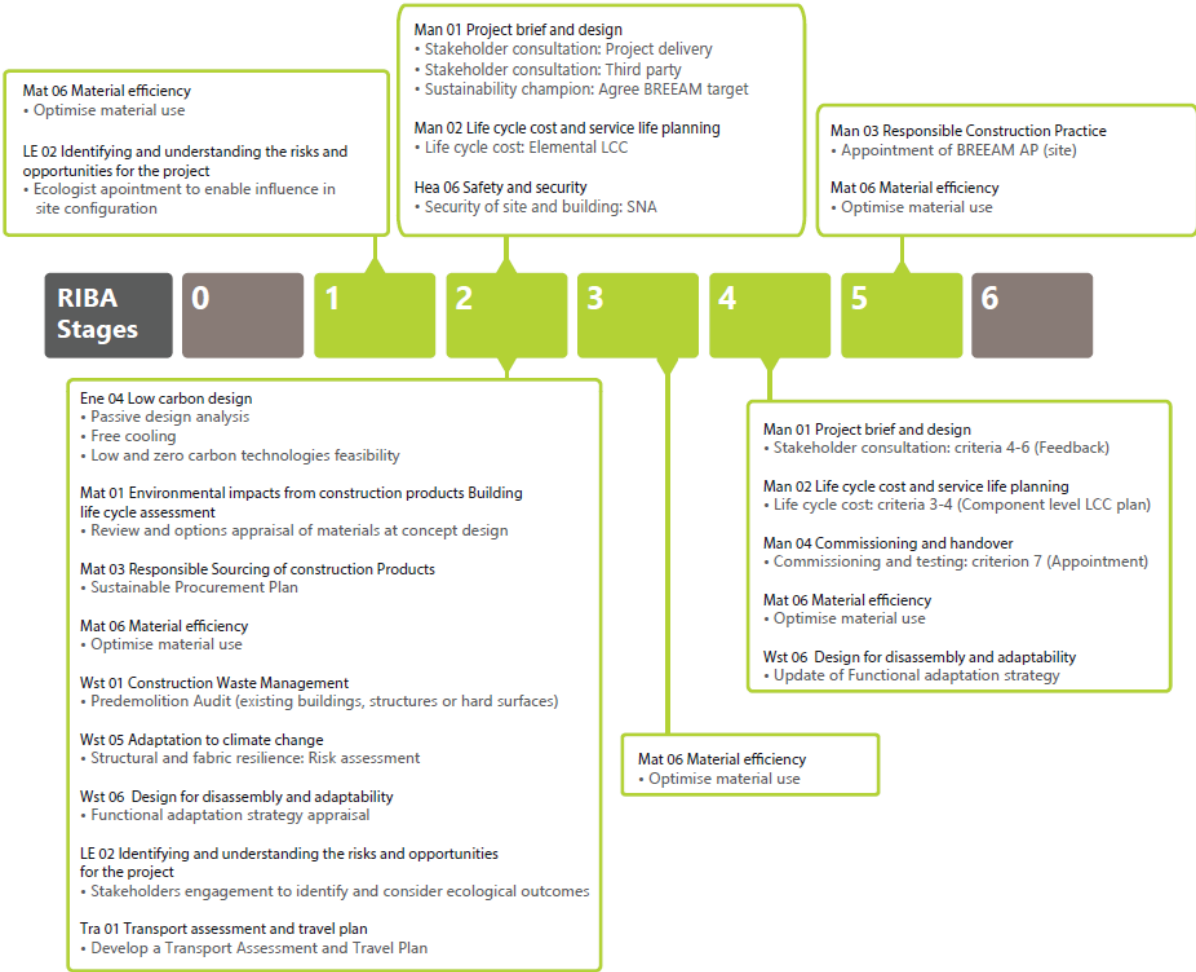


Figure 2-3 RIBA Stage Requirements

2.3 Early-Stage Requirements RIBA 1 & 2

Table 2- 4 Early Stage Requirements RIBA 1&2

Medium Risk Credits

| BREEAM Credit                                              | Contribution | Requirements                                                                                                                                                                                                    | Ownership           | Current Status /Compliance                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Man 01 Project Brief and Design – Project Delivery         | 0.52%        | Prior to completion of the Concept Design, the project delivery stakeholders meet to identify and define for each key phase of project delivery                                                                 | Project Manager     | Design team and client have met and defined their roles and responsibilities. Evidence including the project brief, directory, and corresponding emails have been forwarded as part of stage 2 completion. <b>The Project execution plan and responsibility matrix are pending.</b> Evidence is in the process of being reviewed. |
| Man 01 Project Brief and Design – Stakeholder Consultation | 0.52%        | Design team consult with all interested parties on matters that cover the minimum consultation content. Must be able to demonstrate how stakeholder contributions have influenced the brief and concept design. | Project Manager     | Some consultation has been undertaking as part of the pre-application. Evidence has been sent through, which includes the statement of community involvement. Additional evidence likely required.                                                                                                                                |
| Man 01 Project Brief and Design - BREEAM AP Concept Design | 0.52%        | BREEAM AP to be involved in the project to highlight risks and opportunities and agree targets with the client.                                                                                                 | Project Manager     | Mark Dowson, BREEAM AP, has been involved from concept design.                                                                                                                                                                                                                                                                    |
| Man 02 Life Cycle Cost                                     | 1.05%        | Elemental life cycle cost assessment carried out in stage 2, in line with PD 156865: 2008                                                                                                                       | Cost Consultant     | Require confirmation if credit will be targeted. <b>Appointment Required</b>                                                                                                                                                                                                                                                      |
| Hea 06 Security                                            | 0.74%        | A Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2).                                                    | Security Specialist | Require confirmation if credit will be targeted. <b>Appointment Required</b>                                                                                                                                                                                                                                                      |
| Hea 07 Outside Space                                       | 0.74%        | There is an outside space providing building users with an external amenity area.                                                                                                                               | Architect           | Project courtyards and roof terrace comply with credit criteria.                                                                                                                                                                                                                                                                  |
| Ene 01 Reduction of energy and CO <sub>2</sub> emissions   | 6.26%        | Part L compliance energy modelling to achieve an EPR of a minimum of 0.4 for BREEAM Excellent.                                                                                                                  | Sustainability      | Buro Happold are undertaking Part L modelling which will be available before the end of stage 2.                                                                                                                                                                                                                                  |
|                                                            | 2.78%        | Stage 3 Operational energy modelling analyses of proposed building design and development during Technical Design                                                                                               | Sustainability      | Operational Energy modelling, criteria 2-9, not in scope and <b>require additional appointment.</b> BH sent through fee for instruction                                                                                                                                                                                           |
| Ene 04 Low Carbon Design                                   | 1.40%        | Passive design analysis including free cooling analysis and LZC feasibility study to be undertaken by the end of Concept design.                                                                                | MEP                 | <b>Appointment Required.</b> Buro Happold sent through fee for instruction.                                                                                                                                                                                                                                                       |

| BREEAM Credit                                                                                          | Contribution | Requirements                                                                                                                                                                                                                                                             | Ownership                  | Current Status /Compliance                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                        |              |                                                                                                                                                                                                                                                                          |                            | Note that Criteria 2 passive design analysis is required for Ene 01.                                                                                                                                                                                                                                                                                                                   |
| Tra 01 Transport assessment and Travel Plan                                                            | 1.67%        | Travel assessment and Travel Plan to be undertaken at concept design.                                                                                                                                                                                                    | Transport Consultant       | Arup transport assessment and travel plan are compliant with credit criteria.                                                                                                                                                                                                                                                                                                          |
| Tra 02 Sustainable Transport measures                                                                  | 8.33%        | Credits awarded according to the existing Accessible Index (AI) of the project and total number of points achieved for the options implemented.                                                                                                                          | Transport Consultant       | AI=20 per PTAL report. Design team to confirm transport measures with projected score of 9 credits per BH email 12/07/23.                                                                                                                                                                                                                                                              |
| Mat 01 Environmental Impacts from Construction Products – LCA                                          | 6.43%        | During the Concept Design, carry out a building LCA options appraisal on of the superstructure/substructure/MEP design. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design.                                                                | LCA Consultant             | <b>Appointment Required.</b><br>Buro Happold has sent through fee for instruction.                                                                                                                                                                                                                                                                                                     |
| Mat 01 Environmental Impacts from Construction Products – Building Services LCA Exemplary level credit | 1.00%        | During the Concept Design, carry out a building Services LCA options appraisal. Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design.                                                                                                        | LCA Consultant             |                                                                                                                                                                                                                                                                                                                                                                                        |
| Mat 03 Responsible Sourcing of Construction Products – Sustainable Procurement Plan                    | 1.07%        | A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products.                                                                                                                                         | Project Manager            | Requires confirmation if credit will be targeted. Requirements have been sent to the design team.                                                                                                                                                                                                                                                                                      |
| Mat 06 Material Efficiency                                                                             | 1.07%        | Develop strategies to implement or action the materials efficiency requirements set under the Preparation and Brief stage.<br><br>Set requirements that inform decisions throughout the design and construction of the project regarding optimising the use of materials | Architect, MEP, Structural | Considered a MEDIUM risk target. Requirements and templates have been sent to the design team.<br><br>MEP and Structural evidence has been sent through for Stage 1 and in the process of being reviewed.<br><br>Circular Economy workshop and MAT 06 templates to be completed by design team if credits are to be targeted.<br><br>Requires confirmation if credit will be targeted. |
| Wst 01 Construction Waste Management                                                                   | 0.60%        | Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.                                                                                                                                                  | Project Manager            | <b>Require additional appointment</b><br>Requirements have been sent to the design team.                                                                                                                                                                                                                                                                                               |
| Wst 05 Adaptation to Climate Change                                                                    | 0.60%        | Conduct a climate change adaptation strategy and develop recommendations or solutions based on the appraisal during Concept Design.                                                                                                                                      | Design Team                | Requirements and templates have been sent to the design team.<br><br>Requires confirmation if credit will be targeted.                                                                                                                                                                                                                                                                 |

| BREEAM Credit                                                                  | Contribution | Requirements                                                                                                                                                                         | Ownership         | Current Status /Compliance                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wst 06 Design for disassembly and adaptability                                 | 0.60%        | Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of Concept Design.                               | Design Team       | Requirements and templates have been sent to the design team.<br><br>Requires confirmation if credit will be targeted.                                                                                                                                             |
| LE 01 Previously Occupied Land                                                 | 1.00%        | At least 75% of the developments footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure. | Client/ Architect | F3 has submitted evidence which achieve credit criteria.                                                                                                                                                                                                           |
| LE 02 Identifying and understanding the risk and opportunities for the project | 1.00%        | Ecologist to be appointed to ensure early involvement in site configuration and strategic planning.                                                                                  | Ecologist         | Buro Happold ecological appraisal report complies with criteria 4. <b>Evidence pertaining to criteria 5 required.</b><br><br>Logika has been appointed for Stage 2. Requirements for determining ecological outcomes criteria 7 have been sent to the design team. |
| Pol 01 Reduction of Noise Pollution                                            | .67%         | Avoiding or reducing the impact of external noise from the building.                                                                                                                 | Acoustician       | Previously issued Noise Impact Assessment report complies with credit criteria                                                                                                                                                                                     |

Table 2- 4 Early Stage Requirements RIBA 1&2

2.4 Medium Risk Credits

Error! Reference source not found. identifies the medium risk credits which require additional study. These medium risk credits are is not stage 2 dependent and are not required to meet a BREEAM 'Very Good' score. The following medium risk credits need to be reviewed by team and client to establish which credits can be achieved to help enable an 'Excellent' rating and ensure an adequate margin. These credits require additional allocation of fee, are performance based and/or are more challenging to be achieved from the project.

| BREEAM Credit                                                               | Contribution | Requirements                                                                                                                                                                                                         | Ownership            | Current Status /Compliance                                                                                                                                                                                         |
|-----------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Man 03 Responsible Construction Management                                  | 1.00%        | Achieve and Implement all responsible construction management measures per Table 4.1 in BREEAM UK New Construction V6 Manual                                                                                         | Principal Contractor | To be confirmed by the contractor as to whether they can commit to implementing all of the responsible construction practise actions during constructions. This is an exemplary credit as seen in project tracker. |
| Man 04 Testing and inspecting Building Fabric                               | 0.52%        | Air tightness testing and thermographic survey with subsequent remediation works                                                                                                                                     | Principal Contractor | Requires contractor to commit to undertaking testing and inspecting on building fabric post construction and complete remediation work if required.                                                                |
| Hea 01 Control from glare from sunlight                                     | 0.74%        | Glare Control Assessment and Strategy                                                                                                                                                                                | MEP                  | Requirements have been sent to the design team.                                                                                                                                                                    |
| Hea 01 Daylighting                                                          | 1.47%        | Daylighting analysis to confirm compliance                                                                                                                                                                           | Architect            | Requirements have been sent to the design team.                                                                                                                                                                    |
| Hea 01 View out                                                             | 0.74%        | View out analysis                                                                                                                                                                                                    | Architect            | Requirements have been sent to the design team. <b>Design team currently undertaking analysis.</b>                                                                                                                 |
| Hea 01 Exemplary -Internal and external lighting levels, zoning and control | 1.00%        | Lighting in each zone can be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. Dimming and control gear should avoid flicker and noise. | MEP                  | Confirmation of scope required                                                                                                                                                                                     |
| Hea 02 Indoor Air Quality                                                   | Prerequisite | A site-specific indoor air quality plan has been produced in accordance with Guidance Note 6 (GN06).                                                                                                                 | IAQ Consultant       | Requirements and templates have been sent to the air quality consultant.                                                                                                                                           |
| Hea 02 Ventilation                                                          | 1.00%        | The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building                                                                                                  | MEP                  | Confirmation needed as to whether the development could achieve this criteria. To be discussed with services engineer.                                                                                             |
| Hea 02 Post Construction Indoor Air Quality Measures                        | 0.74%        | Formaldehyde (100µg/m³ averaged over 30 minutes) and total volatile organic compound (TVOC) (500µg/m³over 8 hours) concentration in indoor air is measured post                                                      | Primary Contractor   | Stage 2 - Letter of commitment . Inclusion of the requirements in specification for Main Contractor                                                                                                                |

|                                            |       |  |                                                                                                                                                                                              |                            |                                                                                                                                                                                                                |
|--------------------------------------------|-------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            |       |  | construction and are below required levels                                                                                                                                                   |                            |                                                                                                                                                                                                                |
| Hea 07 Safe Access                         | 0.74% |  | Dedicated pedestrian and cyclist paths and delivery access routes.                                                                                                                           | Architect                  | To be reviewed as to whether this criteria is achievable within the design.                                                                                                                                    |
| Mat 03 Measuring Responsible Sourcing      | 2.14% |  | - Bulk building materials are responsibly sourced in accordance with the BREEAM methodology (i.e. BES 6001, ISO 14001, FSC). Credits are awarded for the % of available RSM points achieved. | Architect, MEP, Structures | Specification related. Contractor needs to commit and deliver a number of materials to be specified with responsible sourcing certificates.                                                                    |
| Wst 02 Project Aggregate Points            | 0.60% |  | Evaluation of aggregate types/suppliers to determine travel distances and number of points achievable                                                                                        | Structures                 | Previous Structural Report notes concrete properties to contain 35%-65% GGBS cement replacement. Requires confirmation with latest design.                                                                     |
| Le 01 Contaminated Land                    | 1.00% |  | A contaminated land specialist's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination.                                          | Ground Engineer            | A review of Phase 1 Land Contamination Assessment meets critiria 2a-b. Criteria 2c not met as <b>Remediation / mitigating requirements will require completion of site investigation</b>                       |
| Le 03 Managing Negative Impacts on Ecology | 1.00% |  | Planning and measures on-site, Define and allocate roles and responsibilities at Stage 2 to support and implement Le 02 measures.                                                            | Ecologist                  | Depends on the impact of ecology during construction, this can be achieved if there is no biological loss, ecologist has been contacted to confirm.                                                            |
| Pol 01 Leak Detection                      | .67%  |  | Compliant refrigerant leak detection system to be specified.                                                                                                                                 | MEP                        | Compliant refrigerant leak detection system would need to be committed to, additional fee associated – not confirmed by the design team as to whether this is being included. Confirmation at detailed design. |
| Pol 03 Minimising watercourse pollution    | .67%  |  | Requires no discharge for rainfall up to 5mm and design of SuDS for watercourse pollution prevention                                                                                         | MEP                        | Credit holds potential risk pending drainage report. To be confirmed by consultant as to whether this can be achieved.                                                                                         |

Table 2—5 Medium Risk Credits

### 3 Next steps and actions

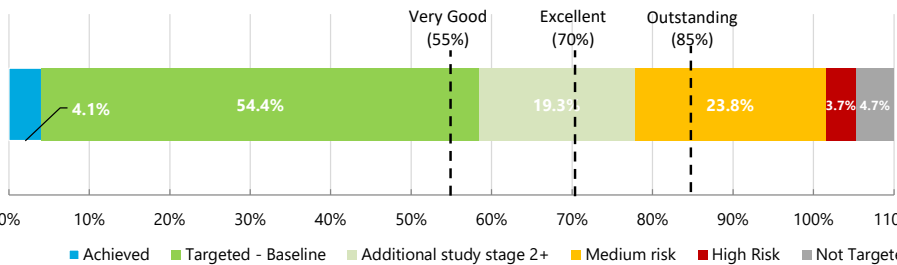
- Project team to **forward all Stage 2 information** for review by the BREEAM assessor and AP.
- Design team and client to review all additional studies, medium risk, and high risk credits to ensure and target which potential credits are achievable.
- Strategic decision to be made by the client on target rating to be achieved (Very Good or Excellent), including instruction of any additional studies required to achieve this goal.

# Appendix A BREEAM Pre-Assessment Tracker

# BREEAM UK New Construction V6

**BURO HAPPOLD**

|                            |                                                |                           |        |              |
|----------------------------|------------------------------------------------|---------------------------|--------|--------------|
| Project name               | The Printworks                                 | BREEAM SCORE SUMMARY      |        |              |
| Project Type               | Multi-Residential Accommodation - Fully fitted | MINIMUM REQUIRED          | 70.0%  | Excellent    |
| BRE Registration Reference | TBC                                            | TARGETED - BASELINE       | 58.5%  | Very Good    |
| Assessment stage           | Pre-assessment                                 | ADDITIONAL STUDY STAGE 2+ | 77.8%  | Excellent    |
| Date                       | 26/07/2023                                     | MEDIUM RISK               | 101.6% | Outstanding  |
| Tracker Revision           | 3                                              | HIGH RISK                 | 105.3% | Outstanding  |
|                            |                                                | ACHIEVED                  | 4.1%   | Unclassified |



| BREEAM Credits                                          | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RIBA Stage<br>Deadline        | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved        | Ownership                                                                                                                                                  | Assessment notes                                                                                                                                                 | Evidence / Actions Required                                                                                                   | Criteria Pts                                                             | Design Stage evidence                                                                                                                                                             |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------|------------------|-------------------|------------------------|----------------------------------|----------------|-----------|-----------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MANAGEMENT                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                      |                  |                   |                        |                                  |                |           |                 |                 |                                                                                                                                                            |                                                                                                                                                                  |                                                                                                                               |                                                                          |                                                                                                                                                                                   |
| Man 01 Project Brief and Design                         | Credit Aim: Encouraging an integrated design process and considering BREEAM performance targets early to influence decision-making and optimise building performance, while avoiding unnecessary costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                      |                  |                   |                        |                                  |                |           |                 |                 |                                                                                                                                                            |                                                                                                                                                                  |                                                                                                                               |                                                                          |                                                                                                                                                                                   |
| Project delivery planning                               | - Prior to completion of the RIBA Stage 2, the project delivery stakeholders have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery, considering the required items.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Stage 2                       | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |                 | Project Manager                                                                                                                                            | Evidence to be collated                                                                                                                                          | 23.05.24_Templates sent out in email. John O Donoghue said there isn't a PM per se. documents issued to Architect and BH team | Criteria 1-3                                                             | Client meeting minutes                                                                                                                                                            |
| Stakeholder consultation (interested parties)           | - Prior to completion of the RIBA Stage 2, consult with all interested parties on matters that cover the minimum consultation content<br>- Demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design<br>- Prior to completion of the RIBA Stage 4, consultation feedback has been given to, and received, by all relevant parties.                                                                                                                                                                                                                                                                                                             | Stage 2<br>Stage 4            | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 | Project Manager | Criteria 4-6                                                                                                                                               |                                                                                                                                                                  |                                                                                                                               | Consultation plan setting out the process and scope of the consultation. |                                                                                                                                                                                   |
| Prerequisite - BREEAM AP (Concept and Developed Design) | - The project team, including the client, formally agree strategic performance targets early in the design process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Stage 2                       | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 | Project Manager | BREEAM AP appointment letter needed during Stage 2 or immediately post-planning. Note BREEAM AP was involved in preparing the pre-assessment for planning. |                                                                                                                                                                  | 23.05.24_appointment letter sent out in email                                                                                 | Criteria 8-11                                                            |                                                                                                                                                                                   |
| BREEAM AP (Concept Design)                              | Involve a BREEAM AP in the project at an appropriate time and level to:<br>- 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.<br>- Monitor progress against the performance targets, identify risks and opportunities, give feedback and monitor evidence generated                                                                                                                                                                                                                                                                       | Stage 1<br>Stage 2            | 1                    | 0.52%            |                   | 1                      |                                  |                |           | Project Manager | Criteria 8-11   |                                                                                                                                                            |                                                                                                                                                                  |                                                                                                                               |                                                                          | Meetings minutes<br>Communication records<br>Formal notes of conversations<br>Other statements reporting on discussions related to Performance targets and maximising performance |
| BREEAM AP (Developed Design)                            | Involve the BREEAM AP in the project at an appropriate time and level to:<br>- 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 Developed Design.<br>- Monitor progress against the performance targets, identify risks and opportunities, give feedback and monitor                                                                                                                                                                                                                                                                                      | Stage 2<br>Stage 3<br>Stage 4 | 1                    | 0.52%            |                   | 1                      |                                  |                |           | Project Manager | Criteria 8-11   |                                                                                                                                                            |                                                                                                                                                                  |                                                                                                                               |                                                                          | Other statements reporting on discussions related to Performance targets and maximising performance                                                                               |
| Man 02 Life Cycle Cost and Service Life Planning        | Credit Aim: Promoting the business case for sustainable buildings through the enhanced understanding of capital cost and improving design, specification, maintenance and operation, by encouraging the use of life cycle costing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |                      |                  |                   |                        |                                  |                |           |                 |                 |                                                                                                                                                            |                                                                                                                                                                  |                                                                                                                               |                                                                          |                                                                                                                                                                                   |
| Elemental LCC                                           | - An elemental life cycle cost (LCC) analysis has been carried out, at process stage 2 together with any design option appraisals in line with "Standardised method of life cycle costing for construction procurement" PD 156865:2008<br>- The LCC analysis provides an indication of future replacement costs over a period of analysis as required by the client (e.g.20, 30, 50 or 60 years); and includes service life, maintenance and operation cost estimates.<br>- Demonstrate, using appropriate examples provided by the design team, how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.               | Stage 2                       | 2                    | 1.05%            |                   |                        | 2                                |                |           |                 |                 | n/a                                                                                                                                                        | Appointment needed - Elemental life cycle cost assessment carried out in stage 2, in line with PD 156865: 2008                                                   |                                                                                                                               |                                                                          | Check the dates for LCC and programme                                                                                                                                             |
| Component level LCC options appraisal                   | - A Component level LCC plan has been developed by the end of Process Stage 4 in line with PD 156865:2008 and includes the following component types (where present):<br>--Envelope, e.g. cladding, windows, and/or roofing<br>--Services, e.g. heat source, cooling source, and/or controls<br>--Finishes, e.g. Walls, floors and/or ceilings<br>--External Spaces, e.g. alternative hard landscaping, boundary protection.<br>- Demonstrate, using appropriate examples provided by the design team, how the component level LCC plan has been used to influence building and systems design/specification to minimise life cycle costs and maximise critical value.                                                       | Stage 4                       | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |                 | Cost Consultant                                                                                                                                            | Appointment needed - Component life cycle cost assessment in line with PD 156865: 2008                                                                           |                                                                                                                               |                                                                          |                                                                                                                                                                                   |
| Capital cost reporting                                  | - Report the capital cost for the building in pounds per square metre (£/m2), via the BREEAM Assessment Scoring and Reporting tool, Assessment Issue Scoring tab, Management section                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Stage 6                       | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |                 | Cost Consultant                                                                                                                                            | Report predicted capital cost for the building in pounds per square metre of gross internal floor area (£/k/ m²)                                                 |                                                                                                                               | Criteria 6                                                               | Predicted capital costs                                                                                                                                                           |
| Man 03 Responsible Construction Practices               | Credit Aim: Encouraging construction sites to be managed in an environmentally and socially considerate and responsible manner and monitoring to encourage continuous improvements and utility consumption reduction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                      |                  |                   |                        |                                  |                |           |                 |                 |                                                                                                                                                            |                                                                                                                                                                  |                                                                                                                               |                                                                          |                                                                                                                                                                                   |
| Prerequisite - Legally harvested and traded timber      | - All timber and timber based products used on the project is "Legally harvested and traded timber"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stage 5<br>Stage 6            | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |                 | Principal Contractor                                                                                                                                       | All timber and timber based products used on the project is "Legally harvested and traded timber".<br>'Letter from main contractor confirming only legal sources |                                                                                                                               | Criteria 1                                                               | Letter of commitment                                                                                                                                                              |
| Prerequisite - Healthcare NHS buildings only            | - The principal Contractor Construction operates an environmental management system (EMS) covering their main operations. The EMS must be either:<br>--Third party certified, to ISO 14001/EMAS or equivalent standard; or<br>--Have a structure that is in compliance with BS 855:2003 and has reached phase four of the implementation stage, "implementation and operation of the environmental management system", and has completed phase audits one to four, as defined in BS 8555.<br>- The principal Contractor Construction implements best practice pollution prevention policies and procedures on site in accordance with pollution prevention guidelines. Monitoring construction and demolition site pollution |                               | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |                 | n/a                                                                                                                                                        | Only applicable to healthcare buildings                                                                                                                          |                                                                                                                               |                                                                          |                                                                                                                                                                                   |

250715\_Printworks - BREEAM NC v6 tracker

| BREEAM Credits                                         | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership            | Assessment notes                                                                                                                                                                                                                               | Evidence / Actions Required                          | Criteria Pts   | Design Stage evidence                                                                                                                                                  |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|------------------|-------------------|------------------------|----------------------------------|----------------|-----------|-----------------|----------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental management                               | - The principal Contractor Construction operates an environmental management system (EMS) covering their main operations. The EMS must be either:<br>--Third party certified, to ISO 14001/EMAS or equivalent standard; or<br>--Have a structure that is in compliance with BS 8555:2016 and has reached phase four of the implementation stage, "implementation and operation of the environmental management system", and has completed phase audits one to four, as defined in BS 8555.<br>- The principal Contractor Construction implements best practice pollution prevention policies and procedures on-site in accordance with pollution prevention guidelines. Working at construction and Demolition-sites: PPG6                                                                                                                                                                                           | Stage 4                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Principal and demolition Contractor's ISO 14001 PPG6 - Best Practice Policies                                                                                                                                                                  |                                                      | Criteria 3-4   | Letter of commitment, condition included in ER.                                                                                                                        |
| Prerequisite - BREEAM AP (site)                        | The client and the contractor formally agree performance targets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 4                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Principal Contractor |                                                                                                                                                                                                                                                |                                                      | Criteria 5     |                                                                                                                                                                        |
| BREEAM AP (site)                                       | Involve a BREEAM AP in the project at an appropriate time and level to:<br>- 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 Construction, Handover and Close Out stages.<br>- Monitor progress against the performance targets, identify risks and opportunities, give feedback and monitor evidence generated                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stage 5<br>Stage 6     | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | BREEAM AP appointed by Contactor to monitor progress against the agreed BREEAM performance targets at Stages 5-6                                                                                                                               |                                                      | Criteria 6     | Letter of commitment                                                                                                                                                   |
| Responsible construction management                    | Achieve Responsible construction management items listed as required for one credit and six additional items for 2 credits.<br>Areas include: Risk evaluation and implementation; Training, awareness and feedback; Monitoring and reporting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Stage 5                | 2                    | 1.05%            |                   | 2                      |                                  |                |           |                 |          | Principal Contractor | Achieve and implement all responsible construction management measures in table 4.1                                                                                                                                                            |                                                      | Criteria 7-9   | Letter of commitment<br>EMS/EMAS certificate or for BS8555 a copy of the phase 4 audit                                                                                 |
| Prerequisite - Monitoring of construction site impacts | Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data (where measured) resulting from all on-site construction processes (and dedicated off-site monitoring) throughout the build programme.<br>To ensure the robust collection of information, this individuals(s) must have the appropriate authority and responsibility to request and access the data required. Where appointed, the sustainability champion could perform this role.<br>- Set targets for the site energy consumption in kWh (and where relevant, litres of fuel use) and potable water consumption (m³) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation.                                                                                                                                             | Stage 5                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Principal Contractor | Appointment of the responsible person for on site monitoring, recording and reporting energy use, water consumption and transportation data                                                                                                    |                                                      | Criteria 10    | Letter of commitment                                                                                                                                                   |
| Utility consumption (energy and water)                 | - Set targets for the site energy consumption in kWh (and where relevant, litres of fuel use) and potable water consumption (m³) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation.<br>- Monitor and record data for the energy consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Stage 5                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Energy and water monitoring data will be collected throughout development                                                                                                                                                                      |                                                      | Criteria 11-14 | Letter of commitment                                                                                                                                                   |
| Transport of construction materials and waste          | - 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:<br>- Transport of materials from the point of supply to the building site, including any transport, intermediate storage and point of supply, including:<br>-- Materials used in major building elements including insulation materials<br>-- Ground works and landscaping materials<br>- Transport of construction waste from the construction gate to waste disposal processing/recovery centre gate. This monitoring must be outlined in the waste management plan<br>Report separately for materials and waste, the total fuel consumption and CO2 emissions plus total distance travelled.                                                                                                                               | Stage 5                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Transport fuel consumption of construction materials and waste data will be collected throughout the development.                                                                                                                              |                                                      | Criteria 15-18 | Letter of commitment                                                                                                                                                   |
| Exemplary - Responsible construction management        | Achieve all of the Responsible construction management items.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | 1                    | 1.00%            |                   |                        |                                  | 1              |           |                 |          | Principal Contractor | Achieve and implement all responsible construction management measures (table 4.1)                                                                                                                                                             |                                                      | Criteria 19-22 | Letter of commitment                                                                                                                                                   |
| Man 04 Commissioning and Handover                      | Credit Aim: Encouraging a well-managed handover and commissioning process, which will ensure building services and fabric defects are identified and rectified and ensuring that the building responds to the needs of the occupants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                |                                                      |                |                                                                                                                                                                        |
| Commissioning - testing schedule and responsibilities  | - Prepare a schedule of commissioning and testing. The schedule identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric, it the appropriate standards for all commissioning activities to be conducted, where applicable, in accordance with: Building Regs, BSRIA and CIBSE guidelines.<br>- BMS - carry out commissioning of air and water systems, Include physical measurements of room temperatures, off-coil temperatures, are fully installed and functional to user interface with staff trained prior to handover.<br>- Appoint an appropriate project team member to monitor and programme pre-commissioning, commissioning and testing.<br>- The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria | Stage 3<br>Stage 4     | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Schedule is in place for commissioning and re-commissioning to appropriate standards, a team member is appointed responsible for monitoring this, contractor responsible for allowing budget and time in their program to complete this        |                                                      | Criteria 1-5   | Letter of commitment<br>Design reviews and advice on commissioning by the specialist commissioning manager<br>Appointment letter for specialist commissioning manager. |
| Commissioning - design and preparation                 | Appoint a appropriate project team member to:<br>- Undertake design reviews and giving advice on suitability for ease of commissioning.<br>- Provide commissioning management input to construction programming and during installation stages.<br>- Manage the commissioning, performance testing and handover or post-handover stages.<br>For buildings with complex building services and systems, this role needs to be carried out by a specialist commissioning manager                                                                                                                                                                                                                                                                                                                                                                                                                                        | Stage 3<br>Stage 4     | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Specialist commissioning manager appointed (Likely to be confirmed at Stage 3-4) to contribute to design reviews, giving advice on commission ability of services. 'Air tightness testing and thermographic survey with subsequent remediation |                                                      | Criteria 6,7   | Letter of commitment<br>CV                                                                                                                                             |
| Testing and inspecting building fabric                 | The commissioning and testing schedule and responsibilities credit is achieved.<br>- Carry out airtightness testing and a thermographic survey in accordance with the appropriate standard.<br>- Rectify any defects identified during post-construction testing and inspection prior to building handover and close out.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Stage 5                | 1                    | 0.52%            |                   |                        |                                  | 1              |           |                 |          | Principal Contractor | Air tightness testing and thermographic survey with subsequent remediation works.                                                                                                                                                              |                                                      | Criteria 8-10  | Letter of commitment of air tightness and thermographic survey                                                                                                         |
| Handover                                               | - Two building Use Guide (BUG) is developed prior to handover for distribution to the building occupiers (non-technical) and facilities managers (technical).<br>- A draft copy is developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users.<br>- Prepare two training schedules timed appropriately around handover and proposed occupation plans for the following users:<br>-- A non-technical training schedule for the building occupiers.<br>-- A technical training schedule for the premises facilities managers                                                                                                                                                                                                                                                                                              | Stage 5                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Development of a Building User Guide (BUG) and training schedule for users or facilities managers.                                                                                                                                             |                                                      | Criteria 11,12 | Letter of commitment                                                                                                                                                   |
| Man 05 Aftercare                                       | Credit Aim: Encouraging aftercare support during the first year of the building operation, to ensure the building operates in accordance with the design intent and in response to the building occupants' needs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                |                                                      |                |                                                                                                                                                                        |
| Aftercare Support                                      | - There will be operational infrastructure and resources in place to provide aftercare to the building occupiers(s), which includes the following as a minimum:<br>--a meeting between the aftercare team/individual and the building occupier/management<br>--On-site facilities management training, to include a walkabout of the building and introduction to and familiarisation with the building systems.<br>-- Initial aftercare support provision for at least the first month of building occupation.<br>-- Longer term aftercare support provision for at least the first 12 months from occupation, e.g. a helpline, nominated individual or other appropriate system to support building users/management.<br>- There will be operational infrastructure and resources in place to collect and monitor energy and water consumption data for a minimum of 12 months, once the building is occupied.     | Stage 6                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Project Manager      | Operational infrastructure and resources in place to provide Aftercare Support.                                                                                                                                                                | A letter of commitment to provide Aftercare support. | Criteria 1,2   | Letter of commitment                                                                                                                                                   |

| BREEAM Credits                                                        | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership                        | Assessment notes                                                                                                                                                                                                                                                                                                 | Evidence / Actions Required                                                                              | Criteria Pts  | Design Stage evidence                                                                                                                                                                                                                      |
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| Commissioning - implementation                                        | - The following seasonal commissioning activities will be completed cover a minimum 12-month period, once the building becomes substantially occupied:<br>-- Complex systems - Specialist Commissioning Manager:<br>-- Testing of all building services under full load conditions.<br>-- Where applicable, testing should be also carried out during periods of extreme (high or low) occupancy.<br>-- Interviews with building occupants to identify problems or concerns regarding the effectiveness of the systems.<br>--Re-commissioning of systems (following any work needed to serve revised loads), and incorporating any revisions in O&M manuals.<br>-- Simple systems (naturally ventilated) - external consultant/aftercare team/facilities manager.<br>--Review thermal comfort, ventilation, and lighting, at three, six and nine month intervals after initial occupation, either by measurement or occupant feedback.<br>--Take all reasonable steps to re-commission systems following the review to take account of deficiencies identified and incorporate any relevant revisions in operating procedures into the O&M manuals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Stage 5                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Project Manager                  | Minimum requirement for Excellent and above Commissioning over 12-month period, testing services under full loads (weather, occupancy), recommissioning if necessary                                                                                                                                             | A letter of commitment to provide an seasonal commissioning                                              | Criteria 3    | Letter of commitment                                                                                                                                                                                                                       |
| Post-Occupancy Evaluation (POE)                                       | - The client makes a commitment to carry out post-occupancy evaluation (POE) exercise one year after initial building occupation. To gain in use performance feedback from building users to inform operational processes, including re-commissioning activities, and maintain or improve productivity, health, safety, and comfort. The POE is arrived out by an independent party<br>- The client will then disseminate the information on the building's post-occupancy performance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Stage 6                | 1                    | 0.52%            |                   | 1                      |                                  |                |           |                 |          | Project Manager                  | Post Occupancy Evaluation will be undertaken after 1 year of occupation by a independent third party                                                                                                                                                                                                             |                                                                                                          | Criteria 4-7  | Letter of commitment                                                                                                                                                                                                                       |
| HEALTH & WELLBEING                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                  |                                                                                                                                                                                                                                                                                                                  |                                                                                                          |               |                                                                                                                                                                                                                                            |
| Hea 01 Visual comfort                                                 | <b>Credit Aim:</b> Providing occupants with the conditions that facilitate good visual comfort by designing out the potential for glare, achieving good practice daylight factors and having an adequate view out and designing internal and external lighting systems to provide appropriate illuminance (lux) levels, thereby giving a more comfortable environment for occupants Internal lighting is zoned to allow for occupant control.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                  |                                                                                                                                                                                                                                                                                                                  |                                                                                                          |               |                                                                                                                                                                                                                                            |
| Control of glare from sunlight                                        | - Identify areas at risk of glare using a glare control assessment.<br>- Glare control assessment also justifies any areas deemed not at risk of glare<br>- Potential for glare is designed out in relevant areas where risk has been identified.<br>- The glare control strategy does not increase energy consumption used for lighting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stage 4                | 1                    | 0.74%            |                   |                        |                                  | 1              |           |                 |          | MEP                              | Glare Control Assessment and Strategy (i.e. External shading)                                                                                                                                                                                                                                                    | Glare control assessment<br>OR<br>Drawings of where blinds need to be installed .<br>BH to send criteria | Criteria 1-3  | Glare control assessment<br><br>OR<br><br>Drawings of where blinds need to be installed                                                                                                                                                    |
| Daylighting                                                           | - Occupied spaces have an Average daylight factor of 2% in 80% of spaces, with at least 80% of the room has a view of sky and the room depth criterion d/w + d/HW < 2/(1-RB) is satisfied.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Stage 2                | 2                    | 1.47%            |                   |                        |                                  | 1              | 1         |                 |          | Architect                        | Daylighting analysis to confirm compliance                                                                                                                                                                                                                                                                       | BH to send criteria                                                                                      | Criteria 4    | Statement / Report                                                                                                                                                                                                                         |
| View Out                                                              | - 95% of the floor area in 95% of spaces in relevant building area is within 8m of a wall which has a window or permanent opening that provides an adequate view out.<br>- The window/opening must be ≥ 20% of the surrounding wall area. Where the room depth is greater than 8m, compliance is only possible where the percentage of window/opening is the same as, or greater than, the values in table 1.0 of BS 8206. (i.e. 14m at 35% glazing area)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stage 2                | 1                    | 0.74%            |                   |                        |                                  | 1              |           |                 |          | Architect                        | If facade glazing is >35% depth of internal space can be >15m                                                                                                                                                                                                                                                    | BH to send criteria                                                                                      | Criteria 5-6  | Marked plans showing that 95% of the floor area in occupied spaces is within 14m of a wall which has a window or permanent opening that provides an adequate view out (35% glazing area).                                                  |
| Internal and external lighting levels, zoning and control             | <b>Internal Lighting</b><br>- All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts.<br>- Internal lighting in all relevant areas of the building is designed to provides an illuminance (lux) level appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. - - This can be demonstrated through a lighting design strategy that provides illuminance levels in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard.<br>- For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 sections 2.4, 2.20, and 6.10 to 6.20.<br><b>External Lighting</b><br>- All external lighting located within the construction zone is designed to provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. - To demonstrate this, external lighting provided is specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - lighting of work places - Part 2: Outdoor work places.<br><b>Zoning and occupant control</b><br>- Internal lighting is zoned to allow for occupant control in accordance with the criteria for relevant areas present within the building. i.e. In office areas, zones of no more than four workplaces;<br>Workstations adjacent to windows/atria and other building areas separately zoned and controlled.                                                                                                                                | Stage 4                | 1                    | 0.74%            |                   | 1                      |                                  |                |           |                 |          | MEP                              | Internal and external lighting illuminance levels to be designed in accordance with referenced CIBSE and BS standards, Note: Buildings consisting entirely of small rooms or spaces (less than 40m²) which do not require any subdivision of lighting zones or control will meet the zoning criteria by default. | Internal lighting zoning drawings and calculations to be provided in line with BREEAM requirements       | Criteria 7-13 | Internal lighting zoning drawings and calculations to be provided in line with BREEAM requirements<br><br>External lighting drawings, data sheets and control specifications to be provided<br><br>Confirmation letter of adherence        |
| Exemplary - Daylighting                                               | - Occupied spaces have an Average daylight factor of 3% in 80% of spaces<br>- Where used, a minimum point daylight factor of 1.2% OR 2.1% for spaces with glazed roofs, such as atria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | Architect                        | Daylighting analysis to confirm compliance                                                                                                                                                                                                                                                                       |                                                                                                          | Criteria 14   |                                                                                                                                                                                                                                            |
| Exemplary - Internal and external lighting levels, zoning and control | Lighting in each zone can be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. Dimming and control gear should avoid flicker and noise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | 1                    | 1.00%            |                   |                        |                                  | 1              |           |                 |          | Lighting Designer / MEP Engineer | Lighting in each zone can be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. Dimming and control gear should avoid flicker and noise.                                                                                             | Requirements to be included in MEP ER.                                                                   | Criteria 15   | Specifications demonstrating compliance                                                                                                                                                                                                    |
| Hea 02 Indoor air quality                                             | <b>Credit Aim:</b> Facilitating good indoor air quality by considering indoor air pollution early in the design process so that a mitigation strategy can be put in place, managing harmful emissions from construction products by specifying finishes and products that have been tested in accordance with the appropriate standards and specifying an appropriate ventilation strategy that maintains good indoor air quality.<br>A site-specific indoor air quality plan has been produced and implemented in accordance with Guidance Note 6 (GN06)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                  |                                                                                                                                                                                                                                                                                                                  |                                                                                                          |               |                                                                                                                                                                                                                                            |
| Prerequisite - Indoor air quality plan                                | The objective of the plan is to facilitate a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during occupation of the building. The indoor air quality plan must consider the following:<br>1.a Removal of contaminant sources<br>1.b Dilution and control of contaminant sources<br>1.c Procedures for pre-occupancy flush out and purge ventilation<br>1.d Third party testing and analysis<br>1.e Maintaining good indoor air quality in-use<br>1.f Any relevant local authority plans or policies (for example, Air Quality Management Areas or Local Air Quality Action Plans)<br>- The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building as follows:<br>- .a Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation<br>- b Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building<br>- .c Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 16798-3:2017. The specified filters should achieve supply air classification of at least SUP 2.<br>- d Occupied spaces have carbon dioxide (CO <sub>2</sub> ) or air quality sensors specified in accordance with Building Regulations AD F2 +<br>- e The ventilation strategy provides adequate ventilation rates throughout the year, including sufficient airflow rates in summer to prevent overheating and maintain required thermal comfort conditions, in accordance with CIBSE AM10 or CIBSE AM13 | Stage 2                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | IAQ Consultant                   | 23.06.01_GN06 template sent to samanthabarber@aqconsultants.co.uk                                                                                                                                                                                                                                                |                                                                                                          | Criteria 1    | IAQ plan                                                                                                                                                                                                                                   |
| Ventilation                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 2                | 1                    | 0.74%            |                   |                        |                                  | 1              |           |                 |          | MEP                              | Air intakes and exhausts at least 10m of horizontal distance apart<br>Carbon dioxide (CO <sub>2</sub> ) or air quality sensors specified<br>HVAC systems incorporate suitable filtration in line with BS EN 16798-3:2017                                                                                         | MEP Report                                                                                               | Criteria 2    | Minimise indoor concentration of pollutants by: providing fresh air, vent pathways limit ingress and build up of pollutants, HVAC in line with BS EN 16798-3, CO2 and air sensors provided and linked to the mechanical ventilation /alarm |

| BREEAM Credits                                   | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership                 | Assessment notes                                                                                                                                                                                                                    | Evidence / Actions Required                                                                                                                               | Criteria Pts   | Design Stage evidence                                                                                                                                     |
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| Emissions from construction products             | <b>1 credit</b> - Three of the five product types meet the emission limits, testing requirements and any additional requirements .<br>Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.<br><b>2 credits</b> All the product types listed meet the emission limits, testing requirements and any additional requirements.                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stage 4                | 2                    | 1.47%            |                   | 2                      |                                  |                |           |                 |          | Architect                 | Specifications confirm 3 out of 5 (one credit) or All (2 credits) of the product categories meet Volatile organic compound (VOC) emission levels                                                                                    | Letter of commitment .<br>Inclusion of the requirements in ER specification for Main Contractor                                                           | Criteria 3,4   | Specifications confirm 3 out of 5 (one credit) or All (2 credits) of the product categories meet Volatile organic compound (VOC) emission levels          |
| Post-construction indoor air quality measurement | - The formaldehyde concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 100µg/m³ averaged over 30 minutes (WHO, 2010).<br>- The formaldehyde sampling and analysis is performed in accordance with ISO 16000-2 and ISO 16000-3.<br>- The total volatile organic compound (TVOC) concentration in indoor air is measured post construction and does not exceed 300µg/m³ over 8 hours.<br>- The TVOC sampling and analysis is performed in accordance with ISO 16000-5 and ISO 16000-6 or ISO 16017-1.<br>- Where levels are found to exceed these limits, the project team confirms the measures that have, or will be, undertaken in accordance with the IAQ plan, to reduce the TVOC and formaldehyde levels to within the above limits.<br>- The measured concentration levels of formaldehyde (µg/m³) and TVOC (µg/m³) are reported, via the BREEAM Scoring and Reporting Tool.        | Stage 6                | 1                    | 0.74%            |                   |                        |                                  | 1              |           |                 |          | Primary Contractor        | Formaldehyde (100µg/m³ averaged over 30 minutes) and total volatile organic compound (TVOC) (500µg/m³ over 8 hours) concentration in indoor air is measured post construction and are below required levels                         | Stage 2 - Letter of commitment . Inclusion of the requirements in specification for Main Contractor<br>Stage 5 - Test results report                      | Criteria 5-11  |                                                                                                                                                           |
| Exemplary - Emissions from construction products | Achieve PC IAQ above<br>Three of the product types listed meet the emission limits, testing requirements and any additional requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | 1                    | 1.00%            |                   |                        |                                  |                | 1         |                 |          | Primary Contractor        | Exemplary level VOC emission levels are specified for 3 out of 5 of the product categories, beyond the 'Emissions from construction products' credit above.                                                                         | Test results                                                                                                                                              | Criteria 11-12 |                                                                                                                                                           |
| Hea 03 Safe Containment in Laboratories          | N/A to BREEAM New Construction V6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           | N/A - no laboratories present                                                                                                                                                                                                       |                                                                                                                                                           |                |                                                                                                                                                           |
| Hea 04 Thermal Comfort                           | Credit Aim: Thermal modelling informs the building design to provide a comfortable thermal environment that considers current climatic conditions, and projected climate change scenario conditions and giving occupants control over their environment through appropriate temperature control strategies and thermal zoning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                     |                                                                                                                                                           |                |                                                                                                                                                           |
| Thermal modelling                                | Thermal modelling has been carried out using software in accordance with CIBSE AM11(81) Building Energy and Performance Modelling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Stage 3<br>Stage 4     | 1                    | 0.74%            |                   | 1                      |                                  |                |           |                 |          | Sustainability consultant | Thermal comfort modelling (compliance to CIBSE Guide A for mechanical, TM52 for natural).                                                                                                                                           | Report                                                                                                                                                    | Criteria 1-4   | Thermal comfort report meeting all criteria                                                                                                               |
| Design for future thermal comfort                | Criteria 1-4 achieved.<br>The thermal modelling demonstrates that the relevant requirements set out in criterion 3 above are achieved for a projected climate change environment<br>If this criterion is not met, demonstrate how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements.<br>For air-conditioned buildings, the PMV and PPD indices based on the above modelling are reported via the BREEAM S&R Tool.                                                                                                                                                                                                                                                                                                                                                                                                                | Stage 3<br>Stage 4     | 1                    | 0.74%            |                   | 1                      |                                  |                |           |                 |          | Sustainability consultant | As above using future weather data (medium emissions scenario 2030 for mechanical, 2050 for natural)                                                                                                                                | Thermal comfort report meeting projected climate change environment<br><br>RIBA Stage 4 thermal comfort analysis – baseline and future climate. PMV, PPD. | Criteria 5-8   | Thermal comfort report meeting projected climate change environment<br><br>RIBA Stage 4 thermal comfort analysis – baseline and future climate. PMV, PPD. |
| Thermal zoning and controls                      | Criteria 1-4 achieved.<br>- The thermal modelling analysis has informed the temperature control strategy for the building and its users.<br>- The strategy for the proposed heating/cooling system(s) demonstrates that it has addressed the following:<br>-- Zones within the building and how the building services could efficiently and appropriately heat or cool these areas.<br>-- The degree of occupant control required for these zones, based on discussions with the end user.                                                                                                                                                                                                                                                                                                                                                                                                                                             | Stage 4                | 1                    | 0.74%            |                   | 1                      |                                  |                |           |                 |          | Sustainability consultant | The thermal modelling analysis has informed the temperature control (proposed heating or cooling systems) strategy for the building and its users                                                                                   | Design note on how this has informed the design                                                                                                           | Criteria 9-11  | Design note on how this has informed the design<br><br>Adherence letter                                                                                   |
| Hea 05 Acoustic performance                      | Credit Aim: Enabling occupants to experience best practice acoustic performance levels appropriate to the functional activities in occupied spaces.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                     |                                                                                                                                                           |                |                                                                                                                                                           |
| Acoustic performance                             | Acoustic performance for Residential institutions: The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant table below. These tables define criteria for the acoustic principles of:<br>3.a Sound insulation<br>3.b Indoor ambient noise level<br>3.c Room acoustics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Stage 2                | 4                    | 2.95%            |                   |                        |                                  | 4              |           |                 |          | Acoustician               | Acoustician to design to requirements. Where less than 5% of the assessed building's floor area is 'non-residential', these areas do not need to be assessed, only residential spaces are assessed against the residential criteria | BH acoustician                                                                                                                                            | Criteria       | Stage2. Appointment of the acoustician, report on performance standards and evidence of them contributing to the design.                                  |
| Hea 06 Security                                  | Credit Aim: Designing the building to consider and take into account security needs to ensure occupants safety and wellbeing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                     |                                                                                                                                                           |                |                                                                                                                                                           |
| Security of site and building                    | - A suitably qualified security specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to concept design.<br>- A SQSS develops a set of recommendations or solutions during or prior to Concept Design.<br>- The recommendations or solutions proposed by the SQSS are implemented. Any deviation would need to be justified, documented and agreed in advance with a suitably qualified security specialist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 2                | 1                    | 0.74%            |                   |                        | 1                                |                |           |                 |          | Security Specialist       | Security Needs Assessment required at Stage 2 . Can be achieved through Secured by Design compliance.                                                                                                                               |                                                                                                                                                           | Criteria 1-3   |                                                                                                                                                           |
| Exemplary - Security of site and building        | A compliant risk based security rating scheme has been used. SABRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | 1                    | 1.00%            |                   |                        | 1                                |                |           |                 |          | Security Specialist       | SABRE security assessment and certification scheme is followed on site                                                                                                                                                              |                                                                                                                                                           | Criteria 4-6   |                                                                                                                                                           |
| Hea 07 Safe and healthy surroundings             | Credit Aim: Providing external site areas that are safe for occupant use and enhancing the wellbeing of building users by giving access to an outdoor space.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                     |                                                                                                                                                           |                |                                                                                                                                                           |
| Safe access                                      | - Dedicated and safe cycle paths are provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable.<br>- Dedicated and safe footpaths are provided on and around the site providing suitable links for: site entrance to the building entrance, car parks (where present) to the building entrance, the building to outdoor space, connecting to off-site paths where applicable.<br>- Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths.<br>- Delivery areas are not accessed through general parking areas and do not cross or share: pedestrian and cyclist paths, outside amenity areas accessible to building users and general public.<br>- There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. | Stage 2-4              | 1                    | 0.74%            |                   |                        |                                  | 1              |           |                 |          | Architect                 | Dedicated pedestrian and cyclist paths and delivery access routes.                                                                                                                                                                  |                                                                                                                                                           |                |                                                                                                                                                           |

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| BREEAM Credits                                           | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership       | Assessment notes                                                                                                         | Evidence / Actions Required                                                                                                                                                                 | Criteria Pts | Design Stage evidence |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|------------------|-------------------|------------------------|----------------------------------|----------------|-----------|-----------------|----------|-----------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------|
| Outside space                                            | There is an outside space providing building users with an external amenity area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Stage 2-4              | 1                    | 0.74%            |                   |                        |                                  |                |           |                 | 1        | Architect       | Provision of outside amenity area (landscape, seating etc.)                                                              | 230711_Landscape DAS report show project courtyards and roof terrace design intent<br><br>23.05.24_credit criteria sent to arch/landscape arch for review and confirmation. Drawings needed |              |                       |
| ENERGY                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| Ene 01 Reduction of energy and CO <sub>2</sub> emissions | Credit Aim: Encouraging the design of energy efficient buildings with energy performance above national building regulations and encouraging the accurate modelling of operational energy consumption                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| Energy performance                                       | Calculate an Energy Performance Ratio for New Construction (EPR NC). Compare the EPR NC achieved with the benchmarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stage 3<br>Stage 3     | 9                    | 6.26%            |                   | 4                      |                                  | 2              |           | 3               |          | Sustainability  | Part L compliance energy modelling. Required for planning                                                                | Energy modelling showing Part L calculations, Minimum requirement to achieve is an EPRNC of 0.4. (0.6 for Outstanding)                                                                      |              |                       |
| Prediction of operational energy consumption             | - Energy design workshop focusing on operational energy performance<br>- Undertake sensitivity analysis to determine the factors that can significantly impact building energy consumption.<br>- Additional energy modelling during the design and post-construction stage to generate predicted operational energy consumption figures<br>- Risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process                                                                                                                                | Stage 3<br>Stage 4     | 4                    | 2.78%            |                   |                        | 4                                |                |           |                 |          | Sustainability  | Operational energy modelling analyses of proposed building design and development during Technical Design                |                                                                                                                                                                                             |              |                       |
| Exemplary - Energy performance                           | Up to 3 Credits - Beyond zero net regulated carbon<br>The building achieves an EPRnc ≥ 0.9 and zero net regulated CO2 emissions.<br>An equivalent percentage of the buildings modelled regulated operational energy consumption, is generated by carbon neutral on-site or near-site sources and used to meet energy demand from "unregulated" building systems or processes<br>2 Credits - Post-occupancy stage<br>- Achieve 2 credits in Ene 02<br>- Client or building occupier commits funds to pay for the post occupancy stage This requires an assessor to be appointed and to report on the actual energy consumption compared with the targets. |                        | 5                    | 5.00%            |                   | 2                      |                                  |                |           | 3               |          | Project manager | Post-occupancy stage report on the actual energy consumption                                                             |                                                                                                                                                                                             |              |                       |
| Ene 02 Energy monitoring                                 | Credit Aim: Helping to identify and reduce high energy demands where possible by accurate measurement of the energy consumption of the building by end use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| Sub-metering of end-use categories                       | - Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems.<br>- The energy consuming systems are metered using an appropriate energy monitoring and management system.<br>- The end energy consuming uses are identifiable to the building users.                                                                                                                                                                                                                                                            | Stage 4                | 1                    | 0.70%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer    | Install energy metering systems so that at least 90% of the estimated annual energy consumption of each fuel             | MEP Reports, drawings                                                                                                                                                                       |              |                       |
| Sub-metering of high energy load and tenancy areas       | - All electricity metering and management systems or separate electricity sub-meters with pulsed are provided, covering a significant majority of the energy supply to tenanted areas / relevant function areas or departments within the building.<br>- Sub-meter per floor plate in large single occupancy or single-tenancy buildings with one homogeneous function for example hotel bedrooms, offices                                                                                                                                                                                                                                               | Stage 4                | 1                    | 0.70%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer    | Applicable, because ENE01 Post occupancy evaluation is targeted.                                                         | MEP report, metering strategy, drawings                                                                                                                                                     |              |                       |
| Ene 03 External lighting                                 | Credit Aim: Reducing the building's energy consumption through the specification of energy efficient external lighting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| External lighting specification                          | External light fittings within the construction zone with:<br>- Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt<br>- Automatic control to prevent operation during daylight hours<br>- Presence detection in areas of intermittent pedestrian traffic.                                                                                                                                                                                                                                                                                                                                                           | Stage 4                | 1                    | 0.70%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer    | Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt and Automatic controls           | MEP to include requirements for externa lighting                                                                                                                                            |              |                       |
| Ene 04 Low Carbon Design                                 | Credit Aim: Reducing the building's energy consumption through the adoption of passive design solutions, free cooling and low or zero carbon (LZC) energy sources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| Passive design analysis                                  | - Achieve the first credit Hea 04 Thermal comfort<br>- The project team analyses the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures<br>- Implement passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting<br>- Quantify the reduced total energy demand and CO2                                                                                                                                                                                                                                                      | Stage 2                | 1                    | 0.70%            |                   |                        | 1                                |                |           |                 |          | MEP Engineer    | Passive design analysis received for Stage 2.to identify opportunities for the implementation of passive design measures | Passive Design and LZC technology feasibility study                                                                                                                                         |              |                       |
| Free cooling                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stage 2                | 1                    | 0.70%            |                   |                        |                                  |                |           | 1               |          | MEP Engineer    | Not targeted                                                                                                             |                                                                                                                                                                                             |              |                       |
| Low and zero carbon technologies                         | Technologies eligible to contribute to achieving the criteria must produce energy from renewable sources and meet all other ancillary requirements as defined by Directive 2009/28/EC. Heat pumps can only be considered as a renewable technology when used in heating mode                                                                                                                                                                                                                                                                                                                                                                             | Stage 2                | 1                    | 0.70%            |                   |                        | 1                                |                |           |                 |          | MEP Engineer    | LZC feasibility study received for Stage 2. Refer to BREEAM manual for LZC study content                                 | Passive Design and LZC technology feasibility study                                                                                                                                         |              |                       |
| Ene 05 Energy efficient cold storage                     | Credit Aim: Reducing the building's operational greenhouse gas emissions (CO <sub>2</sub> -eq) through the design, installation and commissioning of energy efficient refrigeration systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| Refrigeration energy consumption                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | 1                    | 0.70%            | 1                 |                        |                                  |                |           |                 |          | N/A             | No cold storage.                                                                                                         |                                                                                                                                                                                             |              |                       |
| Indirect greenhouse gas emissions                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | 1                    | 0.70%            | 1                 |                        |                                  |                |           |                 |          | N/A             | No cold storage.                                                                                                         |                                                                                                                                                                                             |              |                       |
| Ene 06 Energy efficient transportation systems           | Credit Aim: Reducing the building's energy consumption by specifying the optimum number and size of energy efficient transportation systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                 |                                                                                                                          |                                                                                                                                                                                             |              |                       |
| Energy consumption                                       | - Analysis of the transportation demand and usage in accordance with BS EN ISO 25745 for at least two types of systems. Use of regenerative drives should be considered and the lowest energy consumption is specified.                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stage 4                | 1                    | 0.70%            |                   | 1                      |                                  |                |           |                 |          | Lift Specialist | Transportation analysis and lift/escalator energy consumption analysis, in accordance with BS EN ISO 25745               | BH to provide requirements to be included in Lift spec                                                                                                                                      |              |                       |
| Energy efficient features                                | The following energy efficient features are specified:<br>- The lifts operate in a standby condition during off-peak periods<br>- The lift car and display lighting provides an average lamp efficacy, of > 70 lamp lumens/circuit Watt.<br>- The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.                                                                                                                                                                                                                                                                    |                        | 2                    | 1.39%            | 1                 | 1                      |                                  |                |           |                 |          | Lift Specialist | Specification of lifts energy efficiency features (variable speed/voltage/frequency controls, lighting etc)              |                                                                                                                                                                                             |              |                       |

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| BREEAM Credits                              | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership            | Assessment notes                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Evidence / Actions Required                                                                                                                                                                                                     | Criteria Pts | Design Stage evidence |
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| Ene 07 Energy efficient laboratory systems  | Credit Aim: Reducing the building's operational greenhouse gas emissions (CO <sub>2</sub> -eq) by specifying best practice energy efficient laboratory equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Design specification                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Stage 1                | 1                    | 0.70%            | 1                 |                        |                                  |                |           |                 |          | n/a                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Best practice energy efficient measures     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | 4                    | 2.78%            | 4                 |                        |                                  |                |           |                 |          | n/a                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Ene 08 Energy efficient equipment           | Credit Aim: Demonstrating a meaningful reduction in the total unregulated energy demand of the building by using energy efficient equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Energy efficient equipment                  | <ul style="list-style-type: none"><li>- Identify the building's unregulated energy consuming loads and estimate their contribution to the total annual unregulated energy consumption of the building, assuming a typical/standard specification.</li><li>- Identify the systems and/or processes that use a significant proportion of the total annual unregulated energy demand of the development and its operation.</li><li>- Demonstrate a meaningful reduction in the total annual unregulated energy demand of the building.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                 | Stage 4                | 2                    | 1.39%            |                   | 2                      |                                  |                |           |                 |          | Project Manager      | Analysis of total annual unregulated energy consumption of the building. Laundry facilities with commercial-sized appliances - Specification of heat recovery from waste water, appliances eligible for the UK's Enhanced Capital Allowance Scheme for water<br><br>- Domestic-scale appliances (individual and communal facilities) available to purchase from the developer: 1. Fridges, fridge-freezers: A+, Washing machines: A+ +; Dishwashers: A+ , Washer-dryers: A | <ul style="list-style-type: none"><li>• Signed letter of commitment</li><li>• Calculations showing a meaningful reduction in the total annual unregulated energy consumption of the building,</li></ul>                         |              |                       |
| TRANSPORT                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Tra 01 Transport assessment and travel plan | Credit Aim: Recognising developments in proximity to good public transport networks, thereby helping to reduce transport-related pollution and congestion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Travel plan                                 | No later than Concept Design stage, undertake a site-specific transport assessment (or develop a travel statement) and draft travel plan, which can demonstrably be used to influence the site layout and built form.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Stage 2                | 2                    | 1.67%            |                   |                        |                                  |                |           |                 | 2        | Transport consultant | Travel plan and site-specific travel assessment/statement required during the feasibility and design stages.                                                                                                                                                                                                                                                                                                                                                               | 230712_Documents are compliant with criteria requirements and logged as evidence<br><br>230707_travel plan and transport assessment draft provided . BH to review for                                                           |              |                       |
| Tra 02 Sustainable transport measures       | Credit Aim: Recognising developments in close proximity of, and accessible to, local amenities which are likely to be frequently required and used by building occupants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Prerequisite - Achieve Tra 01               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Transport consultant |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Transport options implementation            | <p>Credits awarded according to the existing Accessible Index (AI) = PTAL 6b (AI ≥ 40 3 points = 6 credits) of the project, and the total number of points achieved for the options implemented.</p> <p>Points include:</p> <ul style="list-style-type: none"><li>- Site AI - 1 point (PTAL 6b)</li><li>- Public transport information system (1 point)</li><li>- Electric Charging provision (1 points)</li><li>- Install Cycle storage (1 point) and facilities (1 point)</li><li>- At least three existing accessible amenities (1 point)</li><li>- Ensure more than one new accessible amenity (3 points)</li></ul>                                                                                                                                                                                                                                                                                                                                       | Stage 2                | 10                   | 8.33%            |                   | 9                      |                                  |                | 1         |                 |          | Transport consultant | PTAL 6b - the best BREEAM: (1 per 2 beds + 1 per 10 staff)*50% = (220/2+10/10)*50% = 51 space<br>GLA = 102 spaces<br>Separate facilities for staff (lockers, laundrette, showers)                                                                                                                                                                                                                                                                                          | 230712_ BH sent email with AI confirmation of 20 which requires design team input on accessible amenities<br><br>23.05.30_Arup confirmed site has AI of 19-20.<br>Anticipate 9 pts achievable<br>23.05.24_ credit criteria sent |              |                       |
| WATER                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Wat 01 Water Consumption                    | Credit Aim: Reducing the demand for potable water through the provision of efficient sanitary fittings, rainwater collection and water recycling systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Water consumption                           | <ul style="list-style-type: none"><li>- The water consumption (L/person/day) for the assessed building is compared against a baseline performance with credits awarded based on % improvement.</li><li>- The efficiency of the following "domestic scale" water-consuming components must be included in the assessment (where specified)<ul style="list-style-type: none"><li>-- WCs</li><li>-- Urinals</li><li>-- Taps</li><li>-- Showers</li><li>-- Baths</li><li>-- Dishwashers</li><li>-- Washing Machines</li></ul></li><li>- Where a greywater and/or rainwater system is specified, its yield (L/person/day) is used to off-set non potable water demand for components that would otherwise be supplied using potable water.</li></ul> <p><small>Any prerequisite criteria must BS EN 15201 and prerequisite criteria must BS EN 15201</small></p>                                                                                                   | Stage 4                | 5                    | 3.89%            |                   | 3                      |                                  | 1              |           | 1               |          | MEP Engineer         | Low flow rate sanitary ware fittings specified                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                 |              |                       |
| Exemplary - Water consumption               | Where 65% improvement over the baseline performance is achieved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | n/a                  | Greywater/Rainwater required to achieve maximum credits                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                 |              |                       |
| Wat 02 Water Monitoring                     | Credit Aim: Specification of water meters to allow for management and monitoring of water use in the building. This encourages reductions in water use by identifying areas of high usage and investigating potential causes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Water monitoring                            | <ul style="list-style-type: none"><li>- A water meter is specified on the mains water supply to each building.</li><li>- Water-consuming plan or building areas, consuming 10% or more of the buildings total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plan or area.</li><li>- Each meter has a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system, e.g. BMS</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                            | Stage 4                | 1                    | 0.78%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer         | Metering of mains water supply plus sub-metering of areas consuming more than 10% of the total (sub metering by floorplate)                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                 |              |                       |
| Wat 03 Water Leak Detection                 | Credit Aim: Reducing the unintended water consumption due to leaks by installing leak detection systems and flow control devices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |
| Leak detection system                       | <ul style="list-style-type: none"><li>- A leak detection system which is capable of detecting a major water leak on the utilities water supply within the building and between the building and the utilities water meter is installed. It must be:</li><li>- A permeant automate water leak detection system that alerts the building occupants to the leak OR an in-built automated diagnostic procedure for detecting leaks is installed.</li><li>- Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of tie</li><li>- Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods.</li><li>- Programmable to suit the owner/occupiers' water consumption criteria</li><li>- Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant</li></ul> | Stage 4                | 1                    | 0.78%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer         | Leak detection system to be specified.                                                                                                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"><li>•Specification and drawings for leak detection system compliant with BREEAM requirements.</li></ul>                                                                                       |              |                       |
| Flow control devices                        | <ul style="list-style-type: none"><li>- Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Stage 4                | 1                    | 0.78%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer         | Flow control devices to be specified to the water supply to the WCs (even if sanitary fittings are not specified)                                                                                                                                                                                                                                                                                                                                                          | Specification and drawings                                                                                                                                                                                                      |              |                       |
| Wat 04 Water Efficient Equipment            | Credit Aim: Reducing water consumption for non-domestic scale, non-sanitary water uses by specifying efficient systems and improving the design efficiency of any water-using processes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |              |                       |

| BREEAM Credits                                                                      | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership                    | Assessment notes                                                                                                                                                                                 | Evidence / Actions Required                                                                                                                                                                                                                                                                                                                   | Criteria Pts | Design Stage evidence |
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| Water efficient equipment                                                           | - The design team has identified all unregulated water demands that could be realistically mitigated or reduced.<br>- System(s) or processes have been identified to reduce the unregulated water demand, and demonstrate, through either good practice design or specification, a meaningful reduction in the total water demand of the building.                                                                                                                                                 | Stage 4                | 1                    | 0.78%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer                 | Unregulated water demands to be identified and reduced.                                                                                                                                          | Statement showing how the system demonstrates a reduction in the total water demand of the building. If irrigation is used for the green roof, consider rain water harvesting/attenuation.                                                                                                                                                    |              |                       |
| MATERIALS                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Mat 01 Building Life Cycle Assessment (LCA)                                         | Credit Aim: Reducing buildings' environmental life cycle impacts through conducting Life Cycle Assessment and integrating its outcomes in the design decision-making process.                                                                                                                                                                                                                                                                                                                      |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Superstructure                                                                      | Stage 2 - Carry out building LCA options appraisal of 2 to 4 significantly different superstructure design options.<br>Stage 4 - Carry out building LCA options appraisal of 2 to 3 significantly different superstructure design options.                                                                                                                                                                                                                                                         | Stage 2                | 6                    | 6.43%            |                   |                        | 6                                |                |           |                 |          | LCA consultant               | LCA analysis for the environmental impact of superstructure materials required                                                                                                                   | require confirmation if credits to be targeted                                                                                                                                                                                                                                                                                                |              |                       |
| Substructure and hard landscaping options appraisal                                 | 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).                                                                                                                                                                                                                                                              | Stage 2                | 1                    | 1.07%            |                   |                        | 1                                |                |           |                 |          | LCA consultant               | LCA analysis for the environmental impact of substructure and landscaping materials required                                                                                                     |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Exemplary - Core building services                                                  | Carry out building LCA options appraisal of at least 3 significantly different core building services design options.                                                                                                                                                                                                                                                                                                                                                                              | Stage 2                | 1                    | 1.00%            |                   |                        | 1                                |                |           |                 |          | n/a                          | LCA analysis for the environmental impact of Core building services materials required                                                                                                           |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Exemplary - LCA and LCC alignment                                                   | Integrate the aligned LCA and LCC options appraisal activity within the wider design decision-making process.                                                                                                                                                                                                                                                                                                                                                                                      | Stage 4                | 1                    | 1.00%            |                   |                        |                                  | 1              |           |                 |          | LCA/LCC consultant           | Alignment of the design options within the LCA analyses with LCC analyses in Man02                                                                                                               |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Exemplary - Third party verification                                                | A suitably qualified third party either carries out the building LCA work or verifies the building LCA work                                                                                                                                                                                                                                                                                                                                                                                        | Stage 4                | 1                    | 1.00%            |                   |                        |                                  | 1              |           |                 |          | LCA consultant               | LCA analyses to be completed by a recognised third party.                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Mat 02 Environment Product Declarations (EPD)                                       | Credit Aim: To encourage availability of robust and comparable data on the impacts of construction products by rewarding the specification of products with environmental products declarations.                                                                                                                                                                                                                                                                                                   |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Specification of products with a recognised environmental product declaration (EPD) | Specify construction products with EPD that achieve a total EPD points score of at least 20.                                                                                                                                                                                                                                                                                                                                                                                                       | Stage 4<br>Stage 5     | 1                    | 1.07%            |                   | 1                      |                                  |                |           |                 |          | Architect / Structures       | Materials with EPDs to be specified, achieving at least 20 EPD points using the BREEAM tool.                                                                                                     | Materials specification<br>Enter the details of each EPD                                                                                                                                                                                                                                                                                      |              |                       |
| Mat 03 Responsible sourcing of construction products                                | Credit Aim: Recognising and encouraging responsible sourcing of construction products. This includes the source of products and the intermediary companies processing and transporting the product to site.                                                                                                                                                                                                                                                                                        |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Prerequisite - Legally harvested and traded timber                                  | - 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy                                                                                                                                                                                                                                                                                                                                                  |                        | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | n/a                          | To be included in contractor requirements.                                                                                                                                                       | BH To provide relevant clauses to be included in Main Contractor's specification                                                                                                                                                                                                                                                              |              |                       |
| Enabling sustainable procurement                                                    | A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products.<br>The plan must be in place before Concept Design.<br>Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible.<br>Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan | Stage 2                | 1                    | 1.07%            |                   |                        | 1                                |                |           |                 |          | LCA consultant               | Sustainable procurement plan required at Stage 2 and required to be used by the design team in specifying materials                                                                              | BH to provide template if credit confirmed                                                                                                                                                                                                                                                                                                    |              |                       |
| Measuring responsible sourcing                                                      | - Bulk building materials are responsibly sourced in accordance with the BREEAM methodology (i.e. BES 6001, ISO 14001, FSC). Credits are awarded for the % of available RSM points achieved.<br>- 1 credit - Superstructure ≥ 10%<br>- 2-3 credits - As above, plus Internal finishes and Substructure and hard landscaping ≥ 20% / 30%                                                                                                                                                            |                        | 3                    | 3.21%            |                   | 1                      |                                  | 2              |           |                 |          | Architect / Structures / MEP | Design team/contractor to specify and source materials with responsible sourcing certification (i.e. BES 6001, FSC) for the Superstructure, Internal finishes, Substructure and hard landscaping | •Specifications for all relevant materials to include compliance to Responsible Sourcing Materials.<br>•Certificates (BES 6001 / FSC) for any specified manufacture.<br>•Mat 03 table filled in for all relevant materials, with targets made for the level of responsible sourcing where not currently known.<br>Signed letter of commitment |              |                       |
| Exemplary - Measuring responsible sourcing                                          | As above, plus core building services ≥ 50%                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | As above                     | Credit not targeted. Requires all core building services to be BES 6001 or equivalent                                                                                                            |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Mat 04 Insulation                                                                   | N/A to BREEAM New Construction 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |              |                       |
| Mat 05 Designing for durability and resilience                                      | Credit Aim: Increasing the lifespan of the building through designing for durability and protection from degradation and specifying appropriate construction products.                                                                                                                                                                                                                                                                                                                             |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                              |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |              |                       |

| BREEAM Credits                                                           | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership            | Assessment notes                                                                                                                                                       | Evidence / Actions Required                                                                                                                                                                                                                                   | Criteria Pts | Design Stage evidence |
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| Protecting vulnerable parts of the building from damage                  | - The building incorporates suitable durability and protection measures or designed features/ solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This includes:<br>-- Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares<br>-- Protection against any internal vehicular movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas<br>-- Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building facade for all car parking areas and within 2m for all delivery areas. | Stage 4                | 1                    | 1.07%            |                   | 1                      |                                  |                |           |                 |          | Architect            | Protection measures within the design to reduce damage to the building's fabric or materials                                                                           | Drawings and specifications confirming measures to protect building from internal/external damage<br><br>•Marked plans / statement of the measures to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring |              |                       |
| Protecting exposed parts of the building from material degradation       | - The relevant building elements incorporate appropriate design and specified to limit long and short term degradation due to environmental factors.<br>- The element or product achieving an appropriate quality or durability standard or design guide, use BS 7543:2015(165) as the default. OR<br>- A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors.<br>- Include convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design.<br>- Design the roof and façade to prevent water damage, ingress and detrimental ponding.                                                                   | Stage 4                |                      |                  |                   | 1                      |                                  |                |           |                 |          | Architect            | Elements designed to limit degradation due to environmental factors.                                                                                                   | •Fill in the relevant sections of the attached Mat 05 table<br>•Provide confirmation / drawings showing that the design Includes convenient access to the roof and façade for cost-effective cleaning, replacement and repair. Also the Design of             |              |                       |
| Mat 06 Material Efficiency                                               | Credit Aim: Encouraging the reduction of environmental impacts through optimising the use of materials during all stages of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Material Efficiency                                                      | - Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life.<br>- This is carried out by the design/construction team in consultation with the relevant parties at each of the following stages:<br>-- Preparation and brief<br>-- Concept design<br>-- Developed design<br>-- Technical design<br>-- Construction                                                                                                                                                                                                                                                                          | Stages 1-6             | 1                    | 1.07%            |                   |                        |                                  | 1              |           |                 |          | Design team          | Report on opportunities and methods to optimise the use of materials                                                                                                   | 230601_criteria emailed to design team<br><br>BH to coordinate: CE Workshops, CE reports and MAT 06 Tables to be completed by design team IF CREDITS ARE TARGETED.                                                                                            |              |                       |
| WASTE                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Wst 01 Construction waste management                                     | Credit Aim: Improving resource efficiency through developing a pre-demolition audit and a Resource Management Plan, maximising the recovery of material during demolition and diverting non-hazardous waste from landfill.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Pre-demolition audit                                                     | Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications                                                                                                                                                                                                                                                                                                                                                                                                                   | Stage 2                | 1                    | 0.60%            |                   |                        | 1                                |                |           |                 |          |                      | Pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition                                                            | 230712_Design team has not confirmed if audit will be undertaken                                                                                                                                                                                              |              |                       |
| Construction resource efficiency                                         | Prepare a compliant Resource Management Plan (RMP) covering:<br>- Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication, including demolition and excavation waste<br>- Accurate data records on waste arisings and waste management routes.<br>- Meet or improve upon the benchmarks                                                                                                                                                                                                                                                                                                                                                                                               |                        | 3                    | 1.80%            |                   | 2                      |                                  |                |           | 1               |          | Principal Contractor | Waste reduction to be included in contractor requirements. (Construction waste resource efficiency of ≤ 13.3m3 or 11.1 tonnes of waste generated per 100m² GIA)        | Signed letter of commitment Resource Management Plan                                                                                                                                                                                                          |              |                       |
| Diversion of resources from landfill                                     | The percentages of non-demolition (95%) and demolition (95%) waste (where applicable) generated by the project have been diverted from landfill.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        | 1                    | 0.60%            |                   | 1                      |                                  |                |           |                 |          | Principal Contractor | Diversion from landfill to be included in contractor requirements.                                                                                                     | Signed letter of commitment                                                                                                                                                                                                                                   |              |                       |
| Exemplary - Construction resource efficiency and diversion from landfill | - ≤ 1.9 of construction waste generated per 100m2<br>- 95% of Demolition/Excavation waste is diverted from landfill<br>- 90% of Non Demolition waste is diverted from landfill<br>- Waste data obtained from licensed external waste contractors is reliable and verifiable, by using data from EA/SEPA/EA Wales/NIEA Waste Return Forms or from a PAS 402:2013 compliant company                                                                                                                                                                                                                                                                                                                                                        |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | Principal Contractor | Credit not targeted. ≤ 1.9 Tonnes of waste generated per 100m² GIA                                                                                                     |                                                                                                                                                                                                                                                               |              |                       |
| Simple Buildings - Pre-demolition audit                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stage 2                | 1                    |                  | 1                 |                        |                                  |                |           |                 |          | n/a                  | N/A - not a simple building                                                                                                                                            |                                                                                                                                                                                                                                                               |              |                       |
| Simple buildings - Construction resource efficiency                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | 1                    |                  | 1                 |                        |                                  |                |           |                 |          | n/a                  |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Simple Buildings - RMP                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | 2                    |                  | 2                 |                        |                                  |                |           |                 |          | n/a                  | N/A - not a simple building                                                                                                                                            |                                                                                                                                                                                                                                                               |              |                       |
| Measurements and Reporting                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | 1                    |                  | 1                 |                        |                                  |                |           |                 |          | n/a                  |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Simple buildings - Diversion from landfill                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          | n/a                  |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Simple Buildings - Exemplary Level Criteria                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          | n/a                  | N/A - not a simple building                                                                                                                                            |                                                                                                                                                                                                                                                               |              |                       |
| Wst 02 Recycled and sustainably sourced aggregates                       | Credit Aim: Encouraging the use of recycled or secondary aggregate or aggregate types with lower environmental impact to reduce waste and optimise material efficiency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |
| Prerequisite - Pre-demolition audit                                      | If demolition occurs on site, to encourage the reuse of site-won material on site, complete a pre-demolition audit<br>- Identify all aggregate uses and types on the project<br>- Determine the quantity in tonnes for each identified use and aggregate type.<br>- Identify the region in which the aggregate source is located.<br>- Calculate the distance in kilometres travelled by all aggregates by transport type<br>Calculate the Project Sustainable Aggregate points (2.5 x 4 credits)                                                                                                                                                                                                                                        | Stage 2                | Achieved ?           |                  |                   |                        | Yes                              |                |           |                 |          | n/a                  | as above for Wst 01                                                                                                                                                    |                                                                                                                                                                                                                                                               |              |                       |
| Project sustainable aggregate points                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | 1                    | 0.60%            |                   |                        |                                  | 1              |           |                 |          | Structures           | Evaluation of aggregate types/suppliers to determine travel distances and number of points achievable                                                                  |                                                                                                                                                                                                                                                               |              |                       |
| Exemplary - Project sustainable aggregate points                         | Project Sustainable Aggregate points of 6 or more                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | Structures           | Sourcing aggregates from recycled/secondary and local sources, to achieve Project Sustainable Aggregate Points score meets or exceeds the exemplary level Performa (6) |                                                                                                                                                                                                                                                               |              |                       |
| Wst 03 Operational waste                                                 | Credit Aim: Encouraging the diversion of operational waste form landfill through the provision of space and facilities allowing the segregation and storage of recyclable waste.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                               |              |                       |

| BREEAM Credits                                                                  | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership          | Assessment notes                                                                                                                                                                                                                             | Evidence / Actions Required                                                                                                                                                                                                                                                                                                                  | Criteria Pts | Design Stage evidence |
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| Operational Waste                                                               | Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be:<br>- Clearly labelled, to assist with segregation, storage and collection for the recyclable waste streams<br>- Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors<br>- Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/ weekly operational activities and occupancy rates.<br>- Where there is consistent generation the following facilities are provided:<br>-- Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space.<br>-- Adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery.<br>-- 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. | Stage 4                | 1                    | 0.60%            |                   | 1                      |                                  |                |           |                 |          | Architect          | Operational recyclable and general waste requirements of building to be provided by waste consultant and included in design by Architect.                                                                                                    | 230713_BH review. missing information regarding criteria 6-9<br><br>230707_Arub has sent draft waste management plan and construction logistics plan for planning. BH to review for compliance<br><br>Layouts showing refuse area compliant with requirements.<br>•Specs to include clear labelling, to assist with segregation, storage and |              |                       |
| Wst 04 Speculative finishes                                                     | Credit Aim: To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Speculative floor and ceiling finishes                                          | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | 1                    | 0.60%            | 1                 |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Wst 05 Adaptation to climate change                                             | Credit Aim: To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Resilience of structure, fabric, building services and renewables installation  | - A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects<br>- Develop recommendations or solutions based on the climate change adaptation strategy appraisal, before or during Concept Design, that aim to mitigate the identified impact.<br>- Provide an update during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 2<br>Stage 4     | 1                    | 0.60%            |                   |                        | 1                                |                |           |                 |          | Design team        | Conduct a climate change adaptation strategy appraisal, develop recommendations and implement into the design                                                                                                                                |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Exemplary - Responding to climate change                                        | - Achievement of the Structural and fabric Resilience credit.<br>- Hea 04 Credit 2 modelling demonstrates relevant requirements are achieved for a projected climate change environment<br>- At least 6 Ene 01 credits have been achieved<br>- The passive design analysis credit of Ene 04 had been achieved<br>- Wat 01 Water consumption - 3 credits<br>- Mat 05 material degradation criteria has been achieved<br>- For Pol 03 a minimum of one credit is achieved for Flood Risk and two credits for Surface Water Run-Off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | n/a                | Dependant of Hea04, Ene01 (6 credits), Ene04, Wat01 (3 credits), Mat05, Pol03 (3 credits).                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Wst 06 Design for disassembly and adaptability                                  | Credit Aim: To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Design for disassembly and functional adaptability - recommendations            | - Study to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of Concept Design.<br>- Recommendations / solutions based on the study, that aim to enable and facilitate disassembly and functional adaptation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Stage 2                | 1                    | 0.60%            |                   |                        | 1                                |                |           |                 |          | Design team        | Functional adaptability strategy required at Stage 2 looking at feasibility, accessibility, versatility, adaptability, convertibility, expandability, refurbishment potential                                                                | relevant sections of the Functional adaptation strategy study template to be updated by each member of the project team at stage 2 and 4.                                                                                                                                                                                                    |              |                       |
| Design for disassembly and functional adaptability - implementation             | Provide an update, during Technical Design, on:<br>- How the recommendations or solutions proposed have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor.<br>- Changes to the recommendations and solutions during the development of the Technical Design.<br>- Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Stage 4                | 1                    | 0.60%            |                   |                        |                                  | 1              |           |                 |          | Design team        | Adaptability and disassembly guide communicating the implementation of the strategy required at Stage 4                                                                                                                                      | Plans and specifications showing functional adaptation measures<br><br>•Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective                                                                                                             |              |                       |
| LAND USE AND ECOLOGY                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| LE 01 Site selection                                                            | Credit Aim: Recognising the reuse of previously developed and contaminated land where appropriate remediation has taken place.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |
| Previously occupied land                                                        | At least 75% of the developments footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | 1                    | 1.00%            |                   |                        |                                  |                |           |                 | 1        | Client / architect | Evidence (drawings and reports) showing at least 75% of the site is on previously occupied land.                                                                                                                                             | 230718_previously occupied land study pdf confirmed compliant                                                                                                                                                                                                                                                                                |              |                       |
| Contaminated land                                                               | A contaminated land specialist's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. They have identified:<br>- The degree of contamination<br>- The contaminant sources/types<br>- The options for remediating sources of contamination which present an unacceptable risk<br>The client or principal contractor confirms that remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan as recommended by the contaminated land specialist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        | 1                    | 1.00%            |                   |                        |                                  | 1              |           |                 |          | Ground Engineer    | 230613_Review of Phase 1 Land Contamination Assessment. Criteria 2c not met as Remediation / mitigating requirements will require completion of site investigation<br><br>Previous scheme (hotel) report is used. NO contamination is found. | There are potentially significant risks associated with the site due to the former site and surrounding use. Therefore it is recommended that a site investigation is completed                                                                                                                                                              |              |                       |
| LE 02 Identifying and understanding the risks and opportunities for the project | Credit Aim: Identifying and understanding the ecological risks and opportunities associated with the site to inform the determination of the strategic outcome for the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                    |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                              |              |                       |

250715\_Printworks - BREEAM NC v6 tracker

| BREEAM Credits                                                                           | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership                              | Assessment notes                                                                                                                                                                                                                                                                                                                  | Evidence / Actions Required                                                                                                                                | Criteria Pts | Design Stage evidence |
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| Prerequisite - Assessment route selection                                                | Compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 1                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Ecologist /<br>Principal<br>Contractor | Assuming route 2 for assessment (more detailed) as assumed that there will be some statutory requirements and regulations for the site ecology                                                                                                                                                                                    | Appointment of an Ecologist is required confirming that compliance will monitored against all relevant UK legislation relating to the ecology of the site. |              |                       |
| Survey and evaluation                                                                    | - Suitably Qualified Ecologist (SQE) is appointed at a project stage that ensures early involvement in site configuration and, where necessary, can influence strategic planning decisions.<br>- an appropriate level of survey and evaluation undertaken at stage 1 and shared with project team, to determine the ecological baseline of the site, taking account of the zone of influence to establish:<br>----Current and potential ecological value and condition of the site, and related areas within the zone of influence.<br>-- Direct and indirect risks to current ecological value<br>-- Capacity and feasibility for enhancement of the ecological value of the site and, where relevant, areas within the zone of influence | Stage 1                | 1                    | 1.00%            |                   | 1                      |                                  |                |           |                 |          | Ecologist                              | 23.06.13_Ecological Appraisal Report complies with criteria<br><br>23.05.24_received documents from JR. Documents under review for compliance<br><br>Conversation with Jenny Ross (BH ecologist), 17/May/2020 - Site visit did take place & report is available.                                                                  | Ecologist appointed.<br>Ecologist survey received<br><br>Missing documentation which satisfies criteria 5, emails, mm, etc                                 |              |                       |
| Determining the ecological outcomes for the site                                         | - During Concept Design, the project team liaise and collaborate with representative stakeholders to identify the optimal ecological outcome for the site.<br>- The ecological outcome for the site is determined by identifying, appraising and selecting specific solutions and measures.<br>- The optimal ecological outcome for the site is selected after liaising with representative stakeholders and the                                                                                                                                                                                                                                                                                                                           | Stage 2                | 1                    | 1.00%            |                   |                        |                                  | 1              |           |                 |          | Ecologist                              | Project team liaison with stakeholders (local government, local community groups at Stage 2 to identify and consider the ecological outcome of the site.                                                                                                                                                                          | Ecologist report is required, where the optimal ecological outcomes identified for the site.                                                               |              |                       |
| Exemplary - Determining ecological outcomes for the site                                 | - Determining the optimal ecological outcome for the site consider wider site sustainability-related activities and the potential for ecosystem service related benefits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        | 1                    | 1.00%            |                   |                        |                                  |                |           | 1               |          | n/a                                    | Credit not targeted.                                                                                                                                                                                                                                                                                                              |                                                                                                                                                            |              |                       |
| LE 03 Managing impacts on ecology                                                        | Credit Aim: Recognition of steps taken to avoid impacts on existing site ecology as far as possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                        |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                            |              |                       |
| Prerequisite – Ecological risks and opportunities                                        | LE 02 has been achieved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 2                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Ecologist                              | Contractor to confirm compliance is monitoring against relevant UK and EU legislation                                                                                                                                                                                                                                             | A letter of commitment                                                                                                                                     |              |                       |
| Planning and measures on-site                                                            | - Roles and responsibilities for managing negative impacts on the ecology are clearly defined and allocated to support successful delivery of project outcomes at an early enough stage to influence the <b>Preparation and Brief or Concept Design</b> .<br>- The potential impact of site preparation and construction works on ecology are identified at an early project stage to optimise benefits and outputs.<br>- The project team, liaising and collaborating with representative stakeholders and, taking into consideration data collated and shared, have proposed solutions and selected measures to be implemented during site preparation and construction works.                                                           | Stage 2                | 1                    | 1.00%            |                   | 1                      |                                  |                |           |                 |          | Ecologist /<br>Principal<br>Contractor | Define and allocate roles and responsibilities at Stage 2 to support and implement measures                                                                                                                                                                                                                                       | Report                                                                                                                                                     |              |                       |
| Managing negative impacts                                                                | Negative impacts from site preparation and construction works have been managed according to the hierarchy. For sites where complex ecological systems are likely to be present on the and, either:<br>-- No overall loss of ecological value has occurred (2 credits)<br>OR<br>-- The loss of ecological value has been minimised (Minimising Loss) (1 credit)                                                                                                                                                                                                                                                                                                                                                                            | Stage 3<br>Stage 4     | 2                    | 2.00%            |                   |                        |                                  | 2              |           |                 |          | Ecologist /<br>Principal<br>Contractor | Impacts from site preparation and construction:<br>2 credits if no ecological loss<br>1 credit if loss has been limited as far as possible                                                                                                                                                                                        |                                                                                                                                                            |              |                       |
| LE 04 Change and enhancement of ecological value                                         | Credit Aim: Recognition of steps taken to enhance site ecology.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                        |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                            |              |                       |
| Prerequisite - Identifying and understanding the risks and opportunities for the project | - Criteria 2-3 in LE 03 have been achieved.<br>- The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stage 3<br>Stage 4     | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Ecologist                              | Contractor confirms compliance is monitoring against relevant UK and EU legislation and achieve LE 03 credit 1                                                                                                                                                                                                                    | Signed letter of commitment                                                                                                                                |              |                       |
| Liaison, implementation and data collation                                               | - The project team, liaising and collaborating with representative stakeholders and taking into consideration data collated and shared, have implemented the solutions and measures selected in a way that enhances ecological value<br>- Data collated are provided to the local environmental records centres nearest to, or relevant for, the site                                                                                                                                                                                                                                                                                                                                                                                      | Stage 4                | 1                    | 1.00%            |                   | 1                      |                                  |                |           |                 |          | Ecologist                              | Implementation of measures for ecological enhancement, first on site and then if not possible, off site.                                                                                                                                                                                                                          | GN40                                                                                                                                                       |              |                       |
| Enhancement of ecology                                                                   | The change in ecological value occurring as a result of the project.<br>- Minimising loss of ecological value (one credit)<br>- No net loss of ecological value (two credits)<br>- Net gain of ecological value (three credits)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Stage 4                | 3                    | 3.00%            |                   | 3                      |                                  |                |           |                 |          | Ecologist /<br>Landscape<br>Designer   | 230630_Senior ecologist email notes site's baseline habitats have negligible ecological value (hardscape and buildings) and any landscaping would result in a positive net gain. Draft plans show location of proposed landscaping to the site.<br><br>Credits awarded based on the calculation of the change in ecological value | GN40                                                                                                                                                       |              |                       |
| Exemplary - Change in ecological value                                                   | Significant net gain of ecological value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stage 3<br>Stage 4     | 1                    | 1.00%            |                   |                        |                                  |                | 1         |                 |          | n/a                                    | Significant net gain of ecological value (percentage score of 110 or above                                                                                                                                                                                                                                                        |                                                                                                                                                            |              |                       |
| LE 05 Long term ecology management and maintenance                                       | Credit Aim: Encouraging the long term maintenance and management of ecology on site to ensure both new and existing ecological features continue to thrive.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                        |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                            |              |                       |
| Prerequisite - Roles and responsibilities, implementation, statutory obligations         | - The client or contractor has confirmed that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site.<br>- Criteria 2-3 in LE 03 have been achieved, and at least one credit under LE 04 for 'Change and Enhancement of Ecology' has been awarded                                                                                                                                                                                                                                                                                                                                                                                                                       | Stage 4                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Ecologist                              | Contractor confirms compliance is monitoring against relevant UK and EU legislation and achieve LE 04 credit 1                                                                                                                                                                                                                    |                                                                                                                                                            |              |                       |
| Planning, liaison, data, monitoring and review management and maintenance                | - The project team liaise and collaborate with representative stakeholders taking into consideration data collated and shared, on solutions and measures implemented to:<br>-- Monitor and review the effectiveness with which the plans for LE 03 & LE 04 are implemented<br>-- develop and review management and maintenance solutions, actions or measures<br>- 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.                                                                                                                                                   | Stage 4                | 1                    | 1.00%            |                   | 1                      |                                  |                |           |                 |          | Ecologist /<br>Landscape<br>Designer   | Project team liaison with stakeholder for monitoring. Reviewing and maintenance of measures and inclusion of Ecology and Biodiversity in the building owner information supplied                                                                                                                                                  |                                                                                                                                                            |              |                       |
| Landscape and ecology management plan (or similar) development                           | - Landscape and ecology management plan, or equivalent, is developed in accordance with BS 42020:2013 Section 11.1 covering as a minimum the first five years after project completion<br>- The landscape and management plan or similar is updated as appropriate to support maintenance of the ecological value of the site.                                                                                                                                                                                                                                                                                                                                                                                                             | Stage 4                | 1                    | 1.00%            |                   | 1                      |                                  |                |           |                 |          | Landscape<br>Designer                  | Provision of a compliant landscape and ecology management plan.                                                                                                                                                                                                                                                                   |                                                                                                                                                            |              |                       |
| POLLUTION                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                                        |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                            |              |                       |

| BREEAM Credits                            | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership              | Assessment notes                                                                                                                                                                                                                                                                                               | Evidence / Actions Required                                                                                                                                                                                                                                                  | Criteria Pts | Design Stage evidence                                      |
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| Pol 01 Impact of refrigerants             | Credit Aim: Rewarding buildings that reduce the impact of refrigerant gas emissions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                        |                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                              |              |                                                            |
| Prerequisite - Ammonia refrigerants       | - All systems (with electric compressors) must comply with the requirements of BS EN 378:2008 (Parts 2 and 3) and where refrigeration systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | MEP Engineer           | Prerequisite electric compressors meet BS EN 378:2016 and if ammonia refrigerants are present they comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice                                                                                                                   | •Prerequisite if ammonia refrigerants are present to meet BS EN 378:2016<br>•Feasibility of direct effect life cycle CO2 emissions from refrigerants to be assessed so the systems using refrigerants have DELC CO2e emissions of ≤ 1000 kgCO2e/kW cooling/heating capacity. |              |                                                            |
| Impact of refrigerant                     | <b>Two Credits</b><br>- Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of ≤ 100 kgCO2e/kW cooling/heating capacity.<br>OR<br>- Where air-conditioning or refrigeration systems are installed the refrigerants used have a Global Warming Potential (GWP) ≤ 10<br><b>One Credit</b><br>- Where the systems using refrigerants have DELC CO2e emissions of ≤ 1000 kgCO2e/kW cooling/heating capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stage 4                | 2                    | 1.33%            |                   | 1                      |                                  |                |           | 1               |          | MEP Engineer           | Feasibility of direct effect life cycle CO2 emissions from refrigerants to be assessed by MEP                                                                                                                                                                                                                  | •Specifications confirming compliance (i.e. All systems are hermetically sealed)<br>•Data sheets of the                                                                                                                                                                      |              |                                                            |
| Leak detection                            | - All systems are hermetically sealed or only use environmentally benign refrigerants OR<br>- A permanent automated refrigerant leak detection system, that is robust and tested, and capable of continuously monitoring for leaks. In the event of a leak, the system must be capable of automatically responding and managing the remaining refrigerant charge to limit loss of refrigerant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stage 4                | 1                    | 0.67%            |                   |                        |                                  | 1              |           |                 |          | MEP Engineer           | Compliant refrigerant leak detection system to be specified.                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                              |              |                                                            |
| Pol 02 Local air quality                  | Credit Aim: Recognising buildings which limit their impact on local air quality, by consideration of the combustion plant and fuel used on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                        |                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                              |              |                                                            |
| Local air quality                         | - All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity<br>OR<br>- Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the NOx emissions level (measured on a dry basis at 0% excess) stated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stage 4                | 2                    | 1.33%            |                   | 2                      |                                  |                |           |                 |          | MEP Engineer           | All electric systems                                                                                                                                                                                                                                                                                           | MEP report will confirm the credits                                                                                                                                                                                                                                          |              |                                                            |
| Pol 03 Flood and surface water management | Credit Aim: Rewarding buildings and their sites that limit on-site and off-site local flooding and hence the damage this can cause.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                        |                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                              |              |                                                            |
| Prerequisite - Appropriate consultant     | An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Stage 2                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | Flood risk specialist  | Appointment of a suitably qualified professional to carry out a flood risk assessment                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                              |              | Appointment letter + programme of deliverables is required |
| Flood Resilience                          | Two Credits (Low Flood Risk)<br>- Where a site-specific flood risk assessment (FRA) confirms the development is situated in a flood zone that is defined as having a low annual probability of flooding (in accordance with current best practice national planning guidance). The FRA must take all current and future sources of flooding into consideration.<br>One Credit (Medium/High Flood Risk)<br>- Where a site-specific flood risk assessment (FRA) confirms the development is situated in a flood zone that is defined as having a low annual probability of flooding (in accordance with current best practice national planning guidance). The FRA must take all current and future sources of flooding into consideration.<br>- To increase the resilience and resistance of the development to flooding, one of the following must be achieved:<br>- 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<br>OR<br>- The final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlined in section 5 of BS 8533:2011                                               | Stage 2                | 2                    | 1.33%            |                   | 2                      |                                  |                |           |                 |          | SuDS/Runoff Consultant | 230711_Draft Flood Risk, Drainage Strategy and Drainage report reviewed for compliance<br><br>230613_ Previous flood risk assessment dated 29 July 2021 complies with criteria and confirms flood zone 1, low flood risk<br><br><del>Flood risk assumed to be Medium / High (Flood Zone 3 on flood maps)</del> | flood risk assessment                                                                                                                                                                                                                                                        |              |                                                            |
| Prerequisite - Surface water run-off      | -Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Stage 2                | Achieved ?           |                  |                   | Yes                    |                                  |                |           |                 |          | SuDS/Runoff Consultant | Appointment of a suitably qualified professional to carry out drainage and surface water runoff calculations                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                              |              |                                                            |
| Surface water run-off - Rate              | -For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a <b>30% improvement</b> for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events.<br>- For Greenfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events<br>- Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place<br>- Calculations include an allowance for climate change; this should be made in accordance with current best practice planning guidance.<br>- Where flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance AND EITHER<br>- Drainage design measures are specified to ensure that the post development run-off volume, over the development 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./ | Stage 2                | 1                    | 0.67%            |                   | 1                      |                                  |                |           |                 |          | SuDS/Runoff Consultant | 30% improvement in peak rate runoff post-development                                                                                                                                                                                                                                                           | Drainage report                                                                                                                                                                                                                                                              |              |                                                            |
| Surface water run-off - Volume            | - Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other Sustainable Drainage System (SuDS) techniques.<br>OR (only if the above cannot be achieved)<br>- Justification from the Appropriate Consultant indicating why this cannot be achieved<br>- Drainage design measures are specified to ensure that the post development peak rate of run-off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options:<br>-- The pre-development 1-year peak flow rate, or<br>-- The mean annual flow rate QBar, or<br>-- 2L/s/ha<br>- Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place<br>- For either option, the calculations must include an allowance for climate change; this should be made in                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stage 2                | 1                    | 0.67%            |                   | 1                      |                                  |                |           |                 |          | SuDS/Runoff Consultant | No increase in volume runoff post-development or limiting peak rate runoff to 1-year rate, Qbar or 2l/s/ha                                                                                                                                                                                                     | Drainage report                                                                                                                                                                                                                                                              |              |                                                            |

| BREEAM Credits                                           | Credit Criteria Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RIBA Stage<br>Deadline | Available<br>Credits | % Score<br>Value | Not<br>Applicable | Targeted -<br>Baseline | Additional<br>study stage<br>2 + | Medium<br>risk | High Risk | Not<br>Targeted | Achieved | Ownership                 | Assessment notes                                                                                                                                                                                                                                                                  | Evidence / Actions Required                                                                                                        | Criteria Pts | Design Stage evidence |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|------------------|-------------------|------------------------|----------------------------------|----------------|-----------|-----------------|----------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------|
| Minimising watercourse pollution                         | <ul style="list-style-type: none"><li>- There is no discharge from the developed site for rainfall up to 5mm (confirmed by the Appropriate Consultant).</li><li>- In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques.</li><li>- Where there is a high risk of contamination or spillage of substances such as petrol and oil, separators are installed in surface water drainage systems.</li><li>- Where the 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.</li><li>- All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as Pollution Prevention Guideline 3 (PPG 3) and/or where applicable the SUDS manual. For areas where vehicle washing will be taken place, pollution prevention systems must be in accordance with Pollution Prevention Guidelines 13</li></ul>                                                                                                                                                                                                                                                                                                              | Stage 2                | 1                    | 0.67%            |                   |                        |                                  | 1              |           |                 |          | SuDS/Runoff<br>Consultant | Potential credit. Required No discharge for rainfall up to 5mm and design of SuDS for watercourse pollution prevention                                                                                                                                                            |                                                                                                                                    |              |                       |
| Simple Buildings - Surface water run-off (credit 1)      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | 1                    |                  | 1                 |                        |                                  |                |           |                 |          | n/a                       | N/A - not a simple building                                                                                                                                                                                                                                                       |                                                                                                                                    |              |                       |
| Simple Buildings - Surface water run-off (credit 2)      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | 1                    |                  | 1                 |                        |                                  |                |           |                 |          | n/a                       | N/A - not a simple building                                                                                                                                                                                                                                                       |                                                                                                                                    |              |                       |
| Pol 04 Reduction of night time light pollution           | Credit Aim: Avoiding or reducing the impact of night time light pollution, through careful design and specification of light sources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                                                                   |                                                                                                                                    |              |                       |
| Reduction of night time light pollution                  | <ul style="list-style-type: none"><li>- The external lighting strategy has been designed in compliance with table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011</li><li>- All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00</li><li>- If safety or security lighting is provided and will be used between these hours, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes.</li><li>- Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 -</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stage 4                | 1                    | 0.67%            |                   | 1                      |                                  |                |           |                 |          | MEP Engineer              | External lighting automatically switch off 23:00-7:00 and meets ILP guidance requirements.                                                                                                                                                                                        | •Specifications confirming compliance<br>•External Lighting drawings<br>•Specifications of automatic control system                |              |                       |
| Pol 05 Reduction of noise pollution                      | Credit Aim: Avoiding or reducing the impact of external noise from the building.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                                                                   |                                                                                                                                    |              |                       |
| Reduction of noise pollution                             | <ul style="list-style-type: none"><li>- Where there are, or will be, no noise-sensitive areas or buildings within an 800m radius of the assessed development</li><li>OR</li><li>- Alternatively, where the building does have noise-sensitive areas or buildings within the 800m radius the credit may be awarded as follows:</li><li>- Where a noise impact assessment in compliance with BS 4142:2014 has been carried out and the following noise levels measure/determined:</li><li>- Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar</li><li>- The rating noise level resulting from the new noise source.</li><li>- Noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body.</li><li>-The noise level from the assessed building, as measured in the locality of the nearest or most exposed noise sensitive development, must be at least 5dB lower than the background noise throughout the day and night.</li><li>- Where the noise source(s) from the proposed site/building is greater than these, measures have been installed to attenuate the noise at its source to a level where it will comply.</li></ul> | Stage 4                | 1                    | 0.67%            |                   |                        |                                  |                |           |                 | 1        | Acoustician               | Testing pre and post-completion. Noise levels at sensitive receptors within 800m to be at least 5dB lower than background noise through day and night.                                                                                                                            | 230614_previously issued noise impact assessment complies with criteria<br><br>noise impact assessment compliant with BS 4142:2014 |              |                       |
| INNOVATION                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                                                                   |                                                                                                                                    |              |                       |
| Inn 01 Innovation                                        | Credit Aim: To support innovation within the construction industry through the recognition of sustainability related benefits which are not rewarded by standard BREEAM issues.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                      |                  |                   |                        |                                  |                |           |                 |          |                           |                                                                                                                                                                                                                                                                                   |                                                                                                                                    |              |                       |
| Exemplary level of performance in existing BREEAM issues |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | 10                   | 10.00%           |                   | 2                      | 2                                | 4              | 3         | -1              |          | See Relevant Issues Above | For information on the methodology for exemplary level credits refer to the Methodology section of the relevant BREFAM issues above<br>Innovation applications can be submitted to BRE Global by a licensed BREEAM Assessor using the formal Approved Innovation Application Form |                                                                                                                                    |              |                       |
| Approved Innovations                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        |                      |                  |                   |                        |                                  |                |           |                 |          | Assessor                  |                                                                                                                                                                                                                                                                                   |                                                                                                                                    |              |                       |

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