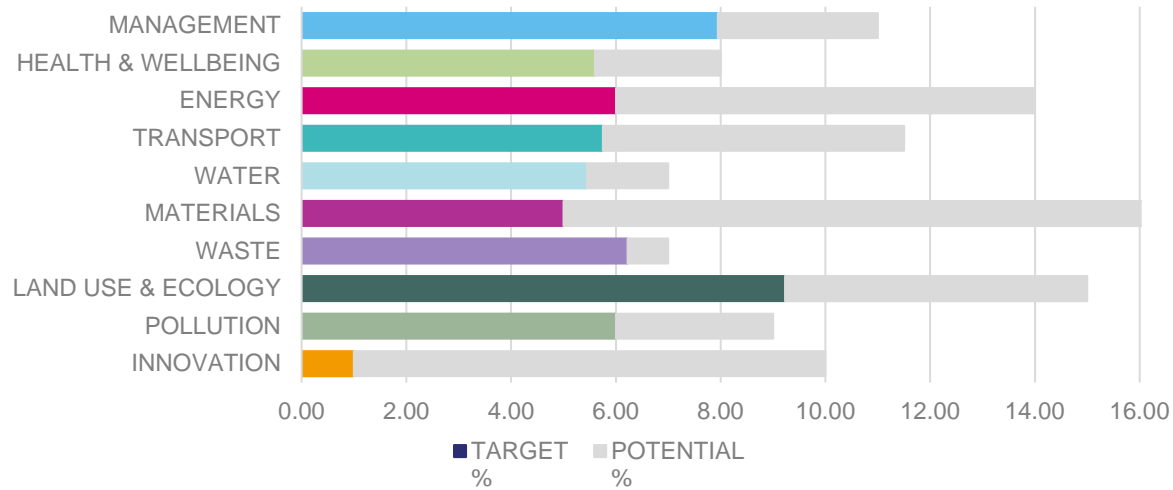
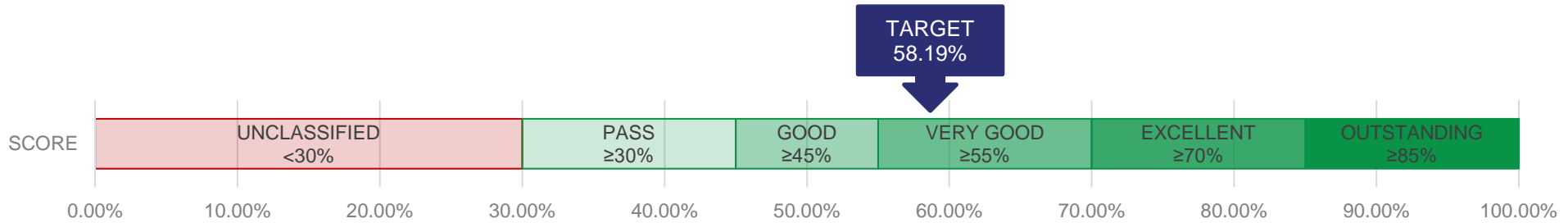


# BREEAM NC 2018 PRE-ASSESSMENT

## CATALYST, BICESTER

JULY 2019

The pre-assessment estimator outlines an indicative strategy to achieve a BREEAM NC 2018 rating of Very Good. This requires an overall score of 55%. Mandatory credits required are **written in red**. P indicates criteria that is a pre-requisite for other credits.



| MANAGEMENT            |   |   |                   | AVAILABLE | TARGET |
|-----------------------|---|---|-------------------|-----------|--------|
| Man 01                | Project Brief & Design                  | Project Delivery Planning                           | Concept Design    | 1         | 1      |
|                       |   | Stakeholder Consultation (Interested Parties)       | Concept Design    | 1         | 0      |
|                       |   | Formally Agree Strategic Performance Targets        | Concept Design    | P         | P      |
|                       |   | BREEAM AP (Concept Design)                          | Concept Design    | 1         | 1      |
|                       |   | BREEAM AP (Developed Design)                        | Developed Design  | 1         | 1      |
| Man 02                | Life Cycle Cost & Service Life Planning | Elemental LCC                                       | Concept Design    | 2         | 0      |
|                       |   | Component Level LCC Options Appraisal               | Technical Design  | 1         | 0      |
|                       |   | Capital Cost Reporting                              | Technical Design  | 1         | 1      |
| Man 03                | Responsible Construction Practices      | Legally Harvested & Traded Timber                   | Construction      | P         | P      |
|                       |   | Environmental Management                            | Construction      | 1         | 1      |
|                       |   | Formally Agree Strategic Performance Targets        | Construction      | P         | P      |
|                       |   | BREEAM AP (Site)                                    | Construction      | 1         | 1      |
|                       |   | Responsible Construction Management                 | Construction      | 2         | 2      |
|                       |   | Utility Consumption                                 | Construction      | 1         | 1      |
|                       |   | Transportation of Construction Materials & Waste    | Construction      | 1         | 1      |
| Man 04                | Commissioning & Handover                | Commissioning - Testing Schedule & Responsibilities | Developed Design  | 1         | 1      |
|                       |   | Commissioning - Design & Preparation                | Design Stage      | 1         | 1      |
|                       |   | Testing & Inspection Building Fabric                | Post-Construction | 1         | 0      |
|                       |   | Handover  | Handover          | 1         | 1      |
| Section Total         |   |   |                   | 18        | 13     |
| Section Score %       |   |   |                   | 11.00     | 7.94   |
| Single Credit Value % |   |   |                   | 0.61      |        |

| HEALTH AND WELLBEING  |                             |  |                  | AVAILABLE | TARGET |
|-----------------------|-----------------------------|--|------------------|-----------|--------|
| Hea 01                | Visual Comfort              | Daylighting  | Developed Design | 1         | 0      |
|                       |                             | View Out   | Developed Design | 1         | 1      |
|                       |                             | Internal & External Lighting Levels, Zoning & Controls | Technical Design | 1         | 1      |
| Hea 02                | Indoor Air Quality          | Indoor Air Quality Plan                                | Concept Design   | P         | 0      |
|                       |                             | Ventilation  | Technical Design | 1         | 0      |
| Hea 04                | Thermal Comfort             | Thermal Modelling                                      | Developed Design | 1         | 1      |
|                       |                             | Design for Future Thermal Comfort                      | Developed Design | 1         | 1      |
| Hea 05                | Acoustic Performance        | Indoor Ambient Noise Level                             | Developed Design | 1         | 1      |
| Hea 06                | Security                    | Security of Site & Building                            | Concept Design   | 1         | 1      |
| Hea 07                | Safe & Healthy Surroundings | Safe Access  | Developed Design | 1         | 0      |
|                       |                             | Outdoor Space  | Developed Design | 1         | 1      |
| Section Total         |                             |  |                  | 10        | 7      |
| Section Score %       |                             |  |                  | 8.00      | 5.60   |
| Single Credit Value % |                             |  |                  | 0.80      |        |

| ENERGY                |  |  | AVAILABLE        | TARGET |      |
|-----------------------|--|--|------------------|--------|------|
| Ene 01                | Reduction of Energy Use & Carbon Emissions | Energy Performance                               | Developed Design | 9      | 2    |
|                       |  | Energy Modelling & Reporting                     | Developed Design | 4      | 0    |
| Ene 02                | Energy Monitoring                          | Sub-Metering of End-Use Categories               | Technical Design | 1      | 1    |
|                       |  | Sub-Metering of High Energy Load & Tenancy Areas | Technical Design | 1      | 1    |
| Ene 03                | External Lighting                          | External Lighting                                | Developed Design | 1      | 1    |
| Ene 04                | Low Carbon Design                          | Passive Design Analysis                          | Concept Design   | 1      | 1    |
|                       |  | Free Cooling                                     | Concept Design   | 1      | 0    |
|                       |  | Low & Zero Carbon Technologies                   | Concept Design   | 1      | 1    |
| Ene 06                | Energy Efficient Transportation Systems    | Energy Consumption                               | Developed Design | 1      | 1    |
|                       |  | Energy Efficient Features - Lifts                | Technical Design | 1      | 1    |
| Section Total         |  |  |                  | 21     | 9    |
| Section Score %       |  |  |                  | 14.00  | 6.00 |
| Single Credit Value % |  |  |                  | 0.67   |      |

| TRANSPORT             |                                    |                                  | AVAILABLE   | TARGET |      |
|-----------------------|------------------------------------|----------------------------------|-------------|--------|------|
| Tra 01                | Transport Assessment & Travel Plan | Travel Plan                      | Feasibility | 2      | 2    |
| Tra 02                | Sustainable Transport Measures     | Transport Options Implementation | Feasibility | 10     | 4    |
| Section Total         |                                    |                                  |             | 12     | 6    |
| Section Score %       |                                    |                                  |             | 11.50  | 5.75 |
| Single Credit Value % |                                    |                                  |             | 0.96   |      |

| WATER                 |                                   |                                |                  | AVAILABLE | TARGET |
|-----------------------|-----------------------------------|--------------------------------|------------------|-----------|--------|
| Wat 01                | Water Consumption                 | Reduction in Potable Water Use | Technical Design | 5         | 3      |
| Wat 02                | Water Monitoring                  | Water Monitoring               | Technical Design | 1         | 1      |
| Wat 03                | Water Leak Detection & Prevention | Leak Detection System          | Technical Design | 1         | 1      |
|                       |                                   | Flow Control Devices           | Technical Design | 1         | 1      |
| Wat 04                | Water Efficient Equipment         | Unregulated Water Reduction    | Technical Design | 1         | 1      |
| Section Total         |                                   |                                |                  | 9         | 7      |
| Section Score %       |                                   |                                |                  | 7.00      | 5.44   |
| Single Credit Value % |                                   |                                |                  | 0.78      |        |

| MATERIALS             |   |   |                     | AVAILABLE | TARGET |
|-----------------------|---|---|---------------------|-----------|--------|
| Mat 01                | Building Life Cycle Assessment                | Superstructure  | Concept Design      | 6         | 0      |
|                       |   | Substructure & Hard Landscaping Options Appraisal               | Concept Design      | 1         | 0      |
| Mat 02                | Environmental Product Declarations            | Specification of Products with a Recognised EPD                 | Technical Design    | 1         | 0      |
| Mat 03                | Responsible Sourcing of Construction Products | Legally Harvested & Traded Timber                               | Construction        | P         | P      |
|                       |   | Enabling Sustainable Procurement                                | Concept Design      | 1         | 1      |
|                       |   | Measuring Responsible Sourcing                                  | Construction        | 3         | 1      |
| Mat 05                | Designing for Durability & Resilience         | Protect Vulnerable & Exposed Elements from Damage & Degradation | Technical Design    | 1         | 1      |
| Mat 06                | Material Efficiency                           | Minimise Environmental Impact of Materials                      | Preparation & Brief | 1         | 1      |
| Section Total         |   |   |                     | 14        | 4      |
| Section Score %       |   |   |                     | 17.50     | 5.00   |
| Single Credit Value % |   |   |                     | 1.25      |        |

| WASTE  |  |  | AVAILABLE             | TARGET |      |
|--------|--|--|-----------------------|--------|------|
| Wst 01 | Construction Waste Management                    | Construction Resource Efficiency   | Construction          | 3      | 3    |
|        |  | Diversion of Resources from Landfill   | Construction          | 1      | 1    |
| Wst 02 | Use of Recycled & Sustainably Sourced Aggregates | Project Sustainable Aggregate Points   | Construction          | 1      | 0    |
| Wst 03 | Operational Waste                                | Operational Waste  | Technical Design      | 1      | 1    |
| Wst 05 | Adaptation to Climate Change                     | Resilience of Structure, Fabric, Building Services & Renewables Installation | Concept Design        | 1      | 1    |
| Wst 06 | Functional Adaptability                          | Design for Disassembly & Functional Adaptability - Recommendations           | Concept Design        | 1      | 1    |
|        |  | Design for Disassembly & Functional Adaptability - Implementation            | Concept Design        | 1      | 1    |
|        |  |  | Section Total         | 9      | 8    |
|        |  |  | Section Score %       | 7.00   | 6.22 |
|        |  |  | Single Credit Value % | 0.78   |      |



| LAND USE AND ECOLOGY  |   |   |                     | AVAILABLE | TARGET |
|-----------------------|---|---|---------------------|-----------|--------|
| Le 01                 | Site Selection  | Previously Occupied Land  | Developed Design    | 1         | 0      |
|                       |   | Contaminated Land   | Developed Design    | 1         | 0      |
| Le 02                 | Identifying & Understanding the Risks & Opportunities for the Project | Assessment Route Selection  | Preparation & Brief | P         | P      |
|                       |   | Survey & Evaluation   | Preparation & Brief | 1         | 1      |
|                       |   | Determining the Ecological Outcomes for the Site                      | Concept Design      | 1         | 1      |
| Le 03                 | Managing Negative Impacts on Ecology                                  | Identification & Understanding the Risks & Opportunities of the Site  | Concept Design      | P         | P      |
|                       |   | Planning, Liaison, Implementation & Data                              | Concept Design      | 1         | 1      |
|                       |   | Managing Negative Impacts of the Project                              | Concept Design      | 2         | 1      |
| Le 04                 | Change & Enhancement of Ecological Value                              | Identification & Understanding the Risks & Opportunities of the Site  | Concept Design      | P         | P      |
|                       |   | Liaison, Implementation & Data Collection                             | Concept Design      | 1         | 1      |
|                       |   | Enhancement of Ecology  | Concept Design      | 3         | 1      |
| Le 05                 | Long Term Ecology Management & Maintenance                            | Roles & Responsibilities, Implementation, Statutory Obligations       | Concept Design      | P         | P      |
|                       |   | Planning, Liaison, Data, Monitoring & Review Management & Maintenance | Concept Design      | 1         | 1      |
|                       |   | Landscape & Ecology Management Plan Development                       | Concept Design      | 1         | 1      |
| Section Total         |   |   |                     | 13        | 8      |
| Section Score %       |   |   |                     | 15.00     | 9.23   |
| Single Credit Value % |   |   |                     | 1.15      |        |

| POLLUTION             |   |  | AVAILABLE        | TARGET |      |
|-----------------------|---|--|------------------|--------|------|
| Pol 01                | Impact of Refrigerants                  | Pre-Requisite - BS EN 378:2018                 | Technical Design | P      | P    |
|                       |   | Impact of Refrigerants                         | Technical Design | 2      | 1    |
|                       |   | Leak Detection                                 | Technical Design | 1      | 0    |
| Pol 02                | Local Air Quality                       | NOx, PPM, VOC Emissions                        | Technical Design | 2      | 2    |
| Pol 03                | Flood & Surface Water Management        | Appropriate Consultant                         | Developed Design | P      | P    |
|                       |   | Flood Resilience                               | Developed Design | 2      | 1    |
|                       |   | Bespoke Surface Water Run-Off Design Solutions | Technical Design | P      | P    |
|                       |   | Surface Water Run-Off - Rate                   | Technical Design | 1      | 1    |
|                       |   | Surface Water Run-Off - Volume                 | Technical Design | 1      | 0    |
|                       |   | Minimise Watercourse Pollution                 | Technical Design | 1      | 1    |
| Pol 04                | Reduction of Night Time Light Pollution | Reduction of Night Time Light Pollution        | Technical Design | 1      | 1    |
| Pol 05                | Reduction of Noise Pollution            | Reduction of Noise Pollution                   | Developed Design | 1      | 1    |
| Section Total         |   |  |                  | 12     | 8    |
| Section Score %       |   |  |                  | 9.00   | 6.00 |
| Single Credit Value % |   |  |                  | 0.75   |      |

| INNOVATION            |               |   |                  | AVAILABLE | TARGET |
|-----------------------|---------------|---|------------------|-----------|--------|
| Exemplary Performance | Man 03        | Responsible Construction Practices - All Criteria                     | Construction     | 1         | 1      |
|                       | Hea 01        | Visual Comfort - Daylighting  | Developed Design | 1         | 0      |
|                       | Hea 06        | Security - SABRE  | Concept Design   | 1         | 0      |
|                       | Ene 01        | Reduction of Energy Use & Carbon Emissions                            | Concept Design   | 5         | 0      |
|                       | Wat 01        | Water Consumption   | Technical Design | 1         | 0      |
|                       | Mat 01        | Building Life Cycle Assessment  | Concept Design   | 3         | 0      |
|                       | Mat 03        | Responsible Sourcing of Construction Products                         | Construction     | 1         | 0      |
|                       | Wst 01        | Construction Waste Management   | Construction     | 1         | 0      |
|                       | Wst 02        | Use of Recycled & Sustainably Sourced Aggregate                       | Construction     | 1         | 0      |
|                       | Wst 05        | Adaptation to Climate Change  | Concept Design   | 1         | 0      |
|                       | Le 02         | Identifying & Understanding the Risks & Opportunities for the Project | Concept Design   | 1         | 0      |
|                       | Le 04         | Change & Enhancement of Ecological Value                              | Concept Design   | 1         | 0      |
|                       | Inn           | BRE Approved Innovations  | Developed Stage  | 1         | 0      |
|                       | Section Total |   |                  |           | 10     |
| Section Score %       |               |   |                  | 10.00     | 1.00   |
| Single Credit Value % |               |   |                  | 1.00      |        |

| SCORE          |                  |
|----------------|------------------|
| Target Score % | 58.19            |
| Target Rating  | <b>Very Good</b> |