



Dee Park Community Centre/
Sustainability Implementation
Strategy

15 December 2017



Report presented by HTA

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BREEAM Pre-assessment

HTA Design LLP has been appointed to carry out the BREEAM assessment for the Dee Park Community Centre. This report provides the results of the pre-assessment conducted for the community centre as it is designed at this stage of the project.

To carry out this pre-assessment, preliminary design information has been reviewed, including design drawings. Knowledge gained from previous similar projects has also been used to form the basis of the pre-assessment.

BREEAM 'Very Good' is a planning requirement for all new non-domestic buildings in Reading Borough Council. Therefore this pre-assessment shows the recommended route to achieving this target.

The scheme used is BREEAM New Construction 2014 Commercial - Other - Non residential institutions – community centre. The building has been assessed as a BREEAM 'Simple Building' as the building services are predominantly of limited capacity and local in their delivery, largely independent of other systems in the building fabric and avoid complex systems.

The overall score for the assessment is currently 57.90%.

It must be noted that this is a preliminary prediction of BREEAM performance and ongoing dialogue with the design team will be required to develop the BREEAM assessment.

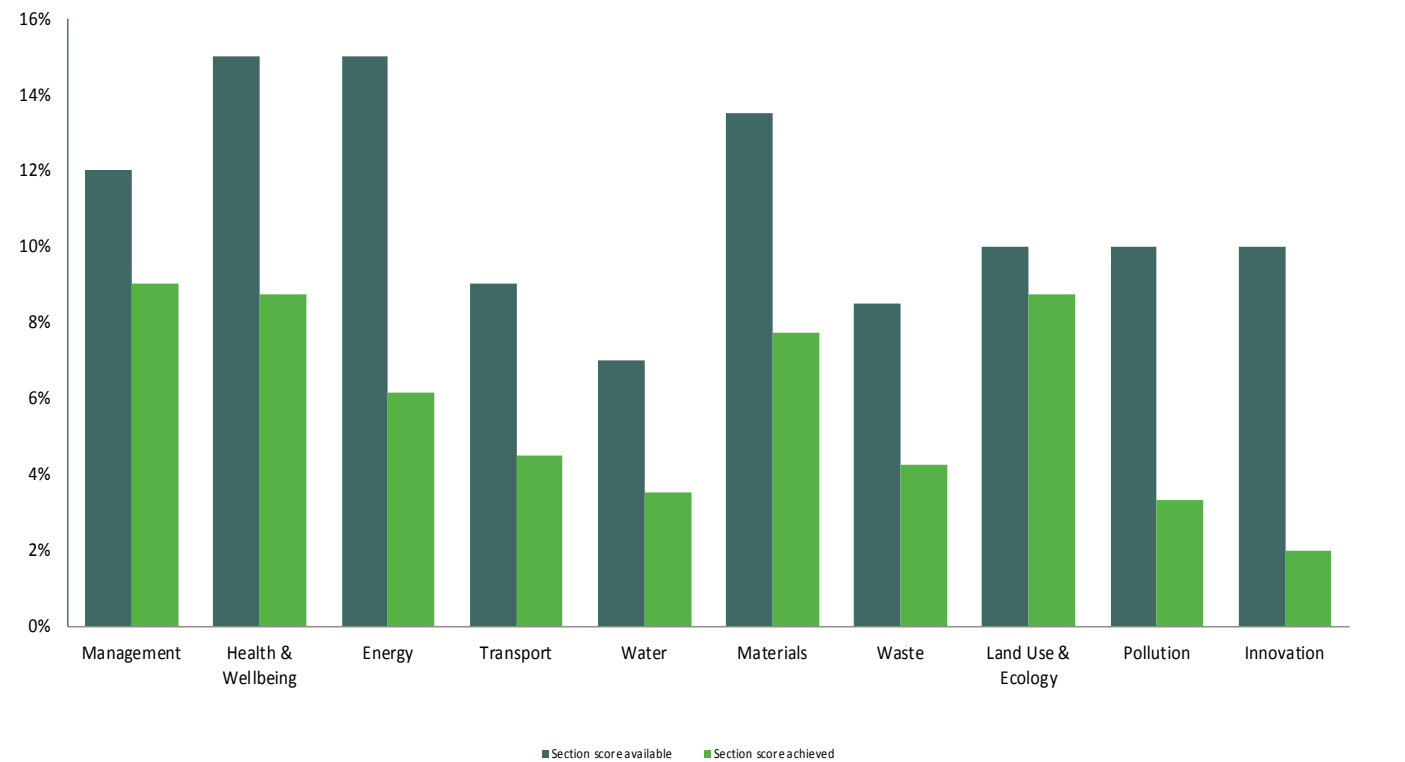


Figure 1: BREEAM Pre-assessment building performance by environment

Each section of the BREEAM assessment has been reviewed to give a realistic projection of the likely design stage performance. Key assumptions are listed below, identifying sustainable design and management solutions.

Management:

- Stakeholder as well as third party consultation will take place.
- Project Capital Cost will be reported.
- The contractor will sign up to the Considerate Constructors Scheme and seek best practice performance.
- Construction and transport activities will be monitored.
- The building will be commissioned following best practice guidance and a Building User Guide and Training Schedule will be provided upon completion.
- Aftercare support and seasonal commissioning will be in place for a minimum of the first 12 months.

Health and Well-being:

- The design will ensure Adequate View out for all rooms from a sitting position.
- Materials with low and zero volatile organic compounds (VOCs) will be specified.
- The building ventilation strategy will be designed to be flexible and adaptable to potential building occupant needs and climatic scenarios and a natural ventilation strategy can provide adequate ventilation rates.
- Thermal modelling will be carried out and a projected climate change scenario will be applied. The thermal modelling will inform the thermal zoning and control strategy.

Energy:

- Energy performance will be optimised to meet and exceed building regulations.
- Energy sub-meters will be installed to high energy load and tenancy areas as well as to all major energy consuming uses/areas.
- External lighting will be energy efficient.
- Low and zero carbon technologies will be investigated to select the most appropriate technology for the site.

Transport:

- Cycle parking will be provided to encourage users to use more sustainable methods of transport.

Water:

- Low flow fittings and flow control devices to each sanitary facility will be specified to reduce the cost of water and demand on the local water system.
- Water meters will be installed to monitor water consumption.

Materials:

- Materials and at least 80% of external hard landscaping and boundary protection specified will perform well according to the Green Guide to specification.
- All major building materials will be sourced from manufacturer's and supplier who hold BES 6001 certification or similar responsible sourcing certification.
- A documented sustainable procurement plan will be provided.
- 18% of available resourcing points will be achieved.
- Insulation with an Index of at least 2.5 will be used for fabric and services.
- The building will be designed to be durable and resilient.

Waste:

- A resource management plan will be in place during construction to monitor and reduce waste generation.
- Resources will be diverted from landfill.
- At least 25% of high-grade aggregate will be recycled or secondary aggregate.
- The building will be designed to be functionally adaptable in the future.

Land Use & Ecology:

- More than 75% of the land is on previously developed land.
- The land is of low ecological value.
- An ecological survey will be undertaken to assess the existing biodiversity.
- All ecological features on site will be protected.
- The ecology will be enhanced on site, most probably through the use of native plants, climbing plants and bird/bat boxes where appropriate.
- Biodiversity will be managed during construction.

Pollution:

- Air, water and light pollution will all be reviewed to ensure best practice and minimisation of damage to

BREEAM New Construction 2014**Dee Park Community Centre****Other buildings- Non residential institutions- Pre-assessment SIMPLE BUILDING**

14 December 2017

Community
Centre
57.9%
Very Good



Credit Code	Credit title	Achieved	Credits available	Responsibility	Assessor's comments
1. Management					
Man 01	Project brief and Design	2	2	Be	✓ 1: Stakeholder consultation ✓ 2: Stakeholder consultation x 3: Sustainability champion x 4: Sustainability champion (monitoring process)
Man 02	Life cycle cost and service life planning	1	1	Be	✓ 1: Capital cost reporting
Man 03	Responsible construction practices	2	4	Be	✓ Pre-requisite: timber x 1: Environment management x 2: BREEAM AP ✓ 3: CCS (1 credit) ✓ 4: (ENE + WAT) monitoring ✓ 5: (TRA) monitoring
Man 04	Commissioning and handover	2	2	Be	✓ 1: Commissioning and testing schedule and responsibilities ✓ 2: Handover
Man 05	Aftercare	2	3	Be	✓ 1: Aftercare support ✓ 2: Seasonal commissioning x 3: Post-occupancy evaluation
2. Health & Wellbeing					
Hea 01	Visual Comfort	2	4	BSDa	x 1: Glare control x 2: Daylighting ✓ 3: View out ✓ 4: Internal and external lighting levels, zoning and control
Hea 02	Indoor Air Quality	2	3	BSDa	x 1: Ventilation ✓ 2: VOC products ✓ 3: Natural ventilation
Hea 04	Thermal comfort	3	3	BSDa	✓ 1: Thermal modelling ✓ 2: Systems adapted for a projected climate change scenario ✓ 3: Development of a thermal and zoning control strategy
Hea 06	Safety and security	0	2	HTA-A	Not targeted
3. Energy					
Ene 01	Reduction of energy use and carbon emissions	5	12	BSDa	✓ 1: 5 credits
Ene 02	Energy monitoring	2	2	Be/ BSDa	✓ 1: sub-meters to monitor energy use ✓ 2: sub-meters to monitor energy use by tenant/ building function areas
Ene 03	External lighting	1	1	BSDa	✓ 1: External light fittings and controls in accordance with BREEAM criteria
Ene 04	Low carbon design	1	3	BSDa	x 1: Passive design analysis x 2: Free cooling ✓ 3: LZC feasibility study
Ene 06	Energy efficient transportation systems	0	3		Not targeted
Ene 08	Energy efficient equipment	0	2		Not targeted
4. Transport					
Tra 01	Public transport accessibility	1	5	HTA-S	✓ 1: Calculated on Tra01 calc tool
Tra 02	Proximity to amenities	1	1	HTA-S	✓ 1: Food outlet and access to cash within 500m
Tra 03	Cyclist facilities	2	2	HTA-A	✓ 1: Cycle storage ✓ 2: Showers and changing facilities
5. Water					

Credit Code	Credit title	Achieved	Credits available	Responsibility	Assessor's comments
Wat 01	Water consumption	2	5	BSDa	✓ 1: 25% improvement over baseline (WC 4.5l effective 6/4 dual, hand basin 7.5l/m, showers 8l/m, urinal 3l/bowl/hr, kitchen tap 7.5l/m, commercial dishwasher 6l/rack)
Wat 02	Water monitoring	1	1	BSDa	✓ 1: Water meter on mains supply. ✓ 2: Sub-meters on all water consuming plants.
Wat 03	Water leak detection	1	2	BSDa	x 1: Leak detection system ✓ 2: Flow control devices
6. Materials					
Mat 01	Life cycle impacts	3	6	HTA-A	✓ 1: 3/6 Green Guide Ratings of materials
Mat 02	Hard landscaping and boundary protection	1	1	HTA-L	✓ 1: 80% of all external hard landscaping to achieve A or A+
Mat 03	Responsible sourcing of materials	2	4	Be	✓ 1: sustainable procurement plan ✓ 2: RSM >18%
Mat 04	Insulation	1	1	HTA-A / BSDa	✓ 1: 2.5 Building's Insulating Index
Mat 05	Designing for durability and resilience	1	1	Be / HTA-L	✓ 1: protection to vulnerable areas of the building ✓ 2: protection to exposed parts of the building
Mat 6	Material efficiency	0	1	HTA-S / Be	Not targeted
7. Waste					
Wst 01	Construction waste management	2	4	Be	✓ 1: RMP x 2: Demolition audit ✓ 3: Diversion from landfill
Wst 02	Recycled aggregates	1	1		✓ 1: 25% Recycled or secondary aggregates
Wst 03	Operational waste	0	1		Not targeted
Wst 05	Adaptation to climate change	0	1		Not targeted
Wst 06	Functional adaptability	1	1		✓ 1: Adaptable
8. Land Use & Ecology					
LE 01	Site selection	1	2	HTA-S	✓ 1: Previously developed land x 2: Contaminated land
LE 02	Ecological value of site and protection of ecological features	2	2	Ecologist	✓ 1: Low ecological value ✓ 2: Features will be protected
LE 03	Mitigating ecological impact	2	2	Ecologist	✓ 1: No negative change
LE 04	Enhancing site ecology	2	2	Ecologist	✓ 1: >6 species /(positive change)
9. Pollution					
Pol 02	Nox emissions	2	3	BSDa	✓ 1: Nox < 70mg/kWh assumed.
Pol 03	Surface water run-off	0	5	Infrastruct CS	x 1: Flood risk x 2: Surface water run off x 3: Minimising water course pollution
Pol 04	Reduction of night time light pollution	1	1	BSDa	✓ 1: External lighting specified to reduce light pollution (ILP Guidance)
10. Innovation - Exemplary criteria					
Innov 1	Man 01 Project brief and design	0	1		
Innov 2	Man 02 Responsible construction practices	1	1	Be	✓ 1: Monitor transport movements for materials delivery and construction waste including intermediate storage and distribution ✓ 2: Provide separate reports on materials and waste , the total fuel consumption and total carbon emissions, plus total distance travelled via the BREEAM scoring tool
Innov 3	Man 05 Aftercare	0	1		
Innov 4	Hea 01 Visual comfort	0	1		
Innov 5	Hea 02 Indoor air quality	0	1		
Innov 6	Ene 01 Reduction of energy use and carbon emissions	0	1		

Credit Code	Credit title	Achieved	Credits available	Responsibility	Assessor's comments
Innov 7	Wat 01 Water consumption	0	1		
Innov 8	Mat 01 Life cycle impacts	0	1		
Innov 9	Mat 03 Responsible sourcing of materials	0	1		
Innov 10	Wst 01 Construction-site waste management	0	1		
Innov 11	Wst 02 Recycled aggregates	0	1		
Innov 12	Wst 05 Adaptation to climate change	0	1		
Innov 13	Pol 03 Surface water run-off	1	1		✓ 1: Peak run-off is no greater than before. ✓ 2: Agreements for maintenance of SuDs are in place ✓ 3: Calculations include an allowance for climate change

Table 1: BREEAM Pre-assessment assumptions table

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