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Summary of changes in the BREEAM 2018 update

This is an overview of some of the changes in the new BREEAM 2018 New Construction scheme compared to the BREEAM 2014 scheme.

New minimum requirements to consider (*and one to forget*):

Minimum requirement	Summary of changes
Very Good	<p>New: Man 04 'Commissioning – test schedule and responsibilities' credit required (one credit)</p> <p>Extended: Man 04 'Building User Guide' requirement now also mandatory for Very Good ratings (criterion 11)</p> <p>Not applicable: LE 03 'Minimising impact on existing site ecology' is no longer mandatory (section has significantly changed).</p>
Excellent	<p>As above, plus:</p> <p>New: One credit required for Man 03 'Responsible construction management'.</p> <p>Change: Four credits required for Ene 01 'Energy Performance'.</p>
Outstanding	<p>As above, plus:</p> <p>New: Two credits required for Man 03 'Responsible construction management'.</p> <p>Change: Six credits required for Ene 01 'Energy Performance'.</p> <p>New: Four credits required for Ene 01 'Energy modelling and reporting'.</p>

Management

This section mostly affects **main contractors**. All requirements have been updated to include **demolition contractors**, if different to the construction contractors. All contractors should be aware of the 'responsible construction management' criteria, which go beyond the CCS scheme – **credits are no longer awarded based on the CCS score alone**, but the scheme could still help demonstrate compliance with some of the responsible construction management criteria. These include: risk evaluation and implementation; training, awareness and feedback; and monitor and reporting. Targets are now required for energy and water consumption and the impacts from transport of materials and waste. The calculation of greenhouse gas emissions should use the DEFRA database.

A **small change for M&E**, seasonal commissioning should now include monthly reports of the sub-metered data.

Clients will have to provide **evidence** demonstrating the **appointment** of an independent party to carry out the Post Occupancy Evaluation (POE).

The Sustainability Champion role is now replaced by the BREEAM Advisory Professional (AP) role and requires

more involvement from the BREEAM AP.

Two building user guides are required (non-technical for users, and technical for facilities management).

Health and Wellbeing

A **glare control assessment** is now included, which means some areas can be excluded from having glare control measures (if justified). A glare control assessment is not required if glare control measures are provided for all relevant spaces.

The view out criteria now relate to 95% of the relevant spaces in the building, instead of 100%. This provides some flexibility and potentially allows the credit to be achieved even with the presence of small internal rooms.

An **additional exemplary credit** can be awarded where the **lighting** in each zone can be manually dimmed by occupants down to 20% of the maximum light output.

The **Indoor Air Quality Plan** should be produced by the end of **Concept Design** and is a **pre-requisite** for achieving any credits in Hea 02.

The **VOCs** emission limits have been **updated** and there are now two credits available, based on the number of compliant product types.

For the ventilation strategy, designers should consider if there are significant levels of external gaseous pollutants. A number of methods have been included for designing locations of ventilation intakes and airflow pathways, e.g. pollutant dispersion modelling.

A **new exemplary credit** can be achieved for **Hea 06** 'Security' where a **risk-based security rating scheme** is used. 'SABRE' (operated by BRE Global) is currently the only compliant scheme.

Hea 07 'Safe and Healthy Surroundings' is a **new issue** which restores the outdoor space requirements from BREEAM 2008 and includes the BREEAM 2014 Hea 06 Safe Access credit.

Energy

The energy section has been updated to focus on **reducing the performance gap**. Ene 01 'Energy Performance' has been reduced to 9 credits, with the **new methodology penalising buildings that perform worse than the notional**. 4 credits can be achieved for addressing the energy performance gap through **additional energy modelling**, target setting and a risk assessment.

The average initial luminous efficacy required for external lighting has increased to at least **70 luminaire lumens per circuit Watt**, rather than 60 as previously. Lifts must also have lighting with an average luminous efficacy of at least 70 luminaire lumens per circuit Watt.

Ene 08 'Energy Efficient Equipment' is now not applicable (and filtered out of the assessment) if there are no unregulated energy uses (previously the credits were just unachievable). The BREEAM 2014 Ene 09 credit for drying space (for multi-residential buildings) has now been incorporated into Ene 08.

Transport

The transport section has been **restructured** and now only includes **two issues**. Firstly, the current situation must be established through a transport assessment/statement and, secondly, sustainable transport measures have to be implemented to demonstrate this has been improved. The second issue has the most weight of the section, offering 10 credits out of 12. The sustainable transport measures include items such as: public transport information, sustainable private transport, active travel (cycling and walking) and electric vehicle charging points. **The more measures included, the more points and credits achieved.**

The previous BREEAM 2014 Tra 01 Accessibility Index and Tra 02 Proximity to Amenities criteria have now been incorporated as requirements to be covered by the transport assessment.

Water

The water section is **mostly unchanged**. The calculation methodology for Wat 01 includes **improved values for the water consumption baseline**, which means the same components used for a BREEAM 2014 assessment will now perform a bit worse. The Wat 04 credit for minimising unregulated water addresses all water demands not included in Wat 01, including swimming pools, project-specific industrial processes, water filtration and treatment processes, cooling towers and humidification systems.

Materials

There is a **big change to Mat 01**, including **rewarding action at RIBA Stage 2**. The Life Cycle Assessment methodology is now the only route to award the Mat 01 credits, using either a simplified BRE tool or a third-party IMPACT tool, both of which we can carry out in house. The superstructure for Office, Industrial and Retail buildings will be compared against the BREEAM benchmark and all building types are required to undertake an options appraisal with credits awarded according to the number of design options looked at. The LCA of the superstructure is phased and an LCA model can be undertaken at Concept Design and/or Technical Design. Exemplary credits are available where an LCA of the core building services is carried out, where the LCA and LCC are aligned or where a third party verifies the LCA model.

Hard Landscaping and Boundary Protection is no longer a separate issue, but is now incorporated into Mat 01.

A new issue (with one credit available) has been created to promote the use of construction materials with **EPDs** (Environmental Product Declarations).

The responsible sourcing issue now has a minimum scope. The superstructure is the minimum scope for one credit, the internal finishes, substructure and hard landscaping are also required for 2 or 3 credits, and the inclusion of the core building services can achieve an additional exemplary credit, depending on your points scored (look out for BES 6001 products where possible!).

Mat 05 now includes a requirement for the design to include convenient access to the roof and façade for cost-effective cleaning/maintenance.

Waste

The **pre-demolition audit** now has its own credit and **must be carried out at RIBA Stage 2**; apart from that, the construction waste requirements are similar. A new methodology has been created for recycled and sustainably sourced aggregates. This includes the identification of the region in which the aggregate is located and the calculation of distances. A **new Wst 02 calculator** is used to demonstrate compliance.

Wst 06 now includes **designing for disassembly** as well as functional adaptability. The ease of disassembly study should consider durability, exposed and reversible connections, layer independence, avoidance of unnecessary toxic treatments and finishes, and standardisation. In addition, a guide for building adaptability and disassembly must be produced to communicate the measures to prospective tenants.

Land use and ecology

A new **Strategic Ecological Framework (SEF)** is incorporated into the Land Use and Ecology section, which is now quite different to before. This strategic framework was updated after an extensive consultation process. The SEF starts with the determination of the ecological baseline and zone of influence and requires action at **RIBA Stage 2**. There are **two different routes available**: route 1 is based on a BREEAM Checklist and

route 2 requires the appointment of an Ecologist. **More credits are available for route 2 (ecologist)**. Achieving LE 02 is a pre-requisite for LE 03 and achieving LE 03 is a pre-requisite for LE 04.

Pollution

This section includes an **update to the NOx emissions** issue so that it now addresses the overall local air quality, including NOx, PM10 and VOC emissions levels. In addition, the maximum level of pollutant from combustion appliances varies if the building is within a low or high pollution location (such as an Air Quality Management Area). If using gas boilers, the NOx level requirement is significantly lower than before.

Under **Surface Water Run-off**, there should be a **reduction of 30%** for the peak rate of run-off for the developed site compared with the pre-developed site.

There is a new optional stage: Post-Occupancy Stage (POS)

Following the Design and Post-Construction Stages (DS & PCS), there is a new stage of assessment, the Post-Occupancy Stage (POS). This stage confirms the process of monitoring, reviewing and reporting on the performance of the building once occupied. It is intended to be carried out at least 12 months after occupation (and normally before two years after 'full' occupation). This assessment stage aims to help the Design Team, Facilities Manager and building owner understand the actual performance of the building and optimise this in line with design expectations. This is linked to the following issues:

Required (have to be awarded at PCS):

- Ene 01 Reduction of energy use and carbon emissions;
- Ene 02 Energy monitoring;
- Wat 02 Water monitoring.

Optional (if awarded at PCS):

- Man 05 Aftercare
- Health and Wellbeing
- Wat 01 Water consumption
- LE 05 Long term ecology management and maintenance

Disclaimer: This is not an exhaustive list of all of the changes to the BREEAM New Construction scheme. For full details please refer to the BREEAM 2018 manual.

Our Services

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