

BREEAM UK New Construction Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Introduction

This report summarises the feedback received from stakeholders on the draft version of BREEAM UK New Construction 2018. The draft consultation period was between 21st September 2017 and 3rd November and was publically available for comment. The consultation was part of a wider process of updating BREEAM New Construction from the 2014 to the 2018 version, which started in November 2016.

BRE responses to the comments raised by stakeholders on the draft scheme are presented along with a summary of any resulting amendments to the scheme. The final version of the BREEAM UK New Construction technical manual was published on 7th March 2018.

The consultation

BRE began work on revising and updating BREEAM UK New Construction 2014 in the spring of 2016. This was in response to a number of factors, such as changes to Industry best practice and from general feedback received on the scheme.

While BRE continually receives and responds to comments on BREEAM, formal scheme updates provide an opportunity to seek industry and user feedback using more targeted consultation methods. These regular update exercises also give stakeholders an opportunity to contribute in a meaningful way to the evolution of BREEAM schemes.

The first phase of consultation began in November 2016 and included:

- Public survey – December 2016 – February 2017, over 200 responses
- UK Green Building Council workshops, March and April 2017
- Customer Liaison Workshops for BREEAM Assessors (held every three months)
- Consultation with specific industry bodies / groups
- BRE Global Governing Body and Standing panel review.

The first phase of consultation informed the development of the draft BREEAM UK New Construction 2018 document. Once the draft BREEAM UK New Construction 2018 version was published a second phase of consultation followed. More than 124 individuals responded.

BRE would like to take this opportunity to thank all of the organisations and the many BREEAM Assessors who have contributed feedback, and the wide range of other stakeholders who participated in the consultation. These included contractors, engineers, architects, construction consultancies, building clients, developers, product manufacturers and many others. All comments received within the consultation window were reviewed.

The consultation outcomes

The majority of the feedback received from the second phase of consultation was concerned with the assessment criteria detailed in the draft BREEAM UK New Construction 2014 scheme document.

The main themes of this feedback are summarised in this report, in tables divided into the ten BREEAM sections – Management, Health and wellbeing, Energy, Transport, Water, Materials, Waste, Land use and ecology, Pollution and Innovation. Alongside each feedback point, BRE's response and any resulting amendments to the 2018 version are discussed.

Some feedback received was more general and not linked to a particular section. This is listed at the end of this document.

Feedback received on operational aspects of BREEAM, such as the quality assurance of assessment reports, is not presented here as these issues fall outside the scope of the technical scheme update. However these comments have been noted and will be considered as part of our ongoing process of enhancement activities.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

3

BREEAM UK New Construction 2018 and 2014 – transition arrangements

The final version of the 2018 New Construction technical manual was published on 7th March 2018 and includes the amendments highlighted in this report.

The 2014 version will close at midnight on 23rd March 2018 and so from this time onwards new registrations for the BREEAM UK New Construction scheme will be allocated to the 2018 version of the scheme, although transitional processes will be put in place to allow on-going registrations against the 2014 version for a limited period in certain circumstances. Details of these arrangements will be communicated to assessors separately.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Feedback and outcomes

The tables in this report summarise the feedback received on the consultation draft BREEAM UK New Construction 2018 scheme, along with BRE's responses and notes on the resulting outcomes. Due to the extent of the feedback, the wider themes are presented rather than individual comments.

Assessment criteria feedback

The feedback on the assessment criteria of the draft BREEAM UK New Construction 2018 has been grouped into the following sections: Management, Health and Wellbeing, Energy, Transport, Water, Materials, Waste, Land Use and Ecology and Pollution.

Management

Ref.	Issue	Feedback received	Outcome	BRE response
1	Man 01 Project brief and design – BREEAM AP	Suggestion that this prerequisite will be very difficult to comply with unless the wording of the appointment can refer to a "target" rating and best endeavours to achieve such.	Clarification of criteria	Added a KBCN clarifying that credits can be awarded even if targets are not met (criteria are clear, it's just that for 'historic' reasons people assume targets have to be met)
2	Man 01 Project brief and design	Include specific credits for inclusive design or the use of specific access expertise	No change from the 2018 draft criteria	This is something already addressed in legislation to some extent. For BREEAM to make a meaningful difference to best practice, we would need a whole new issue with a lot of research behind it, which is not possible within the scope of this update. Further clarification has been made to the content of the consultation requirements to provide further guidance on what should be considered as part of inclusive and accessible design.
3	Man 02 Life cycle cost and service life planning	Move from using the Gross External Area to internal floor area	Criteria amended	Agreed to use the 'gross INTERNAL floor area', as defined by RICS.
4	Man 03 Responsible construction practices	The majority of points are covered under the CCS scheme and it offers a comprehensive, robust method via third party assessment.	Criteria amended and clarified	A CCS monitor report is acceptable as evidence to support the awarding of some criteria. However, new criteria also included in the scope of this issue are not covered by CCS, but could be covered by other third party schemes such as FORS or CLOCS. Criteria structure has been amended as a result of the feedback and Guidance Note 33 clarifies the details in terms of where third party schemes can be used to demonstrate compliance with certain criteria.
5	Man 03 Responsible construction practices	The additional criteria is likely to be more challenging for smaller projects. What evidence would be expected to demonstrate compliance with the new criteria?	Criteria amended	The general evidence principles can be used when determining the type of evidence used to demonstrate compliance with criteria not covered by third party schemes. We will continue to monitor this, with a view to issuing additional guidance if required for such projects.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

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6	Man 03 Responsible construction practices	Pollution Prevention Guideline 6 (PPG6) has been withdrawn and is no longer valid	Clarification of criteria	We are aware that this document has been withdrawn and will look to update the manual when a replacement is published, but until such time, this is still the most current guidance that exists in this area. As the document has not been updated in time for the release of the manual, we will create a KBCN clarifying the approach to take.
7	Man 04 Commissioning and handover	Commissioning is crucial in ensuring performance in operation, including energy efficiency and comfort. It is all the more important in buildings with complex systems, including BMS and extensive sub-metering, as is the case in a large proportion of new buildings.	Criteria amended	Agreed to require the first commissioning credit as a minimum standard for all ratings of Very Good or higher. The minimum standard related to the Building User Guide will remain and will also be extended to Very Good ratings.
8	Man 05 Aftercare – Commissioning	The requirement for the seasonal commissioning manager to "Produce monthly reports comparing sub-metered energy performance to the predicted one and identify inefficiencies and areas in need of improvement". It would be better if this could be undertaken by a third party as it's likely that the same person doing the POE/aftercare would also carry out monthly energy monitoring and might be better suited to do this.	Criteria amended	Agreed that this requirement should be added to criterion 5.b.v which asks for 'energy and water consumption' to be monitored by an independent party. It has been highlighted in the Methodology that this should be done monthly.

Health and Wellbeing

Ref.	Issue	Feedback received	Outcome	BRE response
9	Hea 01 Visual comfort	Consider applying the alternative route for assessing Daylighting to other building types.	No change from the draft 2018 criteria	The alternative option for assessing Daylight is primarily for Healthcare building types. However, a KBCN will be created to explain circumstances where assessors may be able to justify its application to other building types.
10	Hea 01 Visual comfort	Provide further guidance on the alternative route for assessing daylight.	Criteria clarified	The methodology for the alternative route for Daylighting has been expanded upon and clarified within the Methodology section of the issue.
11	Hea 01 Visual comfort	Climate Based Daylight Modelling (CBDM) as a method of assessing Daylighting.	No change from the draft 2018 criteria	Climate Based Daylight Modelling has been noted for consideration for future schemes whilst we await the final version of PR EN 17037 'Daylight of buildings'.
12	Hea 01 Visual comfort	Provide further guidance on the glare control assessment.	Criteria clarified	The methodology and applicability of the glare control assessment has been expanded upon and clarified within the Methodology section of the issue.
13	Hea 01 Visual comfort	Glare control requirements should also apply to glare from electric light sources.	No change from the draft 2018 criteria	This has been noted for consideration for future schemes as this would be a significant additional requirement in addition to what we already require, and would therefore require further consultation.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

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14	Hea 02 Indoor air quality	The user control requirement does not make sense as a standalone credit without the rest of the potential for natural ventilation requirements	Criteria amended	The user control requirement has been removed as a standalone issue and instead included within the requirements for the 'Ventilation' credit.
15	Hea 02 Indoor air quality	Why has the Indoor air quality plan credit changed to a pre-requisite?	No change from the draft 2018 criteria	An indoor air quality plan (IAQP) is essential to ensuring action is taken to provide good indoor air quality. The IAQP is a necessary tool to ensure the remainder of the requirements of Hea 02 are implemented correctly and the aim of the issue is met. As such it is now a pre-requisite for the Hea 02 issue.
16	Hea 02 Indoor air quality	Requiring 'all products' to achieve the requirements of 'Emissions from building products' is too onerous & unrealistic	Criteria amended	The criteria have been amended to require three out of the five product types to comply with the requirements for one credit, or all of the product types to comply with the requirements for two credits.
17	Hea 03 Safe containment in laboratories	The previous criteria is now outdated in a number of areas, however the new proposed criteria raises some conflicts with other credit issues and does not consider future standards coming forward related to this issue.	Criteria amended	BREEAM can only refer to standards that are currently active, so standards coming forward that are currently in draft form cannot yet be included within criteria. As the previous BREEAM criteria around this issue is now outdated, and the future standards and guidance are not yet finalised, the issue has been removed as a separate issue from this scheme version. The aim of Hea 03 was to recognise and encourage a healthy internal environment through the safe containment and removal of pollutants in laboratories. The pre-requisite of Hea 02, Indoor air quality (IAQ) plan, will now address this aim.
18	Hea 04 Thermal comfort	Why are the latest CIBSE weather files (2016) not being used?	Criteria amended	The criteria has been updated to require the latest CIBSE weather files (2016) to be used for the Design for future thermal comfort credit.
19	Hea 05 Acoustic Performance	Why are the requirements for Compliant Testing Bodies more onerous than Building Regulations and why does all the testing in the criteria have to be carried out by a Compliant Testing Body?	No change from the draft 2018 criteria	UKAS/ANC accreditation means that the tester has demonstrated competency in testing to an external body thus giving weight to their ability to carry out the testing properly and accurately, giving confidence to the assessor that the testing has been done correctly and in line with the requirements. BREEAM is about going beyond the statutory minimum requirements.
20	Hea 06 Security	For fully fitted buildings where IT systems are installed, the requirements should also consider cyber threats as these are a growing threat to privacy, safety and security.	Criteria amended	The criteria has been updated to include a requirement to consider building security systems' ability to resist a cyber related attack, where applicable.
21	Hea 06 Security	Why do all buildings need a Security Needs Assessment?	No change from the draft 2018 criteria	A Security Needs Assessment (SNA) is required for all buildings to identify the level of security risk associated with the building and its function. Where this risk is low, the SNA will be simpler, therefore the work involved will adequately reflect the level of risk associated with the building.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Energy

Ref.	Issue	Feedback received	Outcome	BRE response
22	Ene 01 Reduction in energy use and carbon emissions	The energy modelling and reporting credits will create additional work, effort and cost. These credits will be targeted only if needed for example projects that are going for Excellent or Outstanding. For smaller buildings the cost of undertaking the study will out-way any benefit. This, if kept, should have at the very least a size threshold and applicable use types.	No change from 2018 draft criteria	Our aim is to encourage the industry to carry out more detailed energy modelling, quantify in-use performance and reduce the performance gap. The proposals have been developed with wide stakeholder engagement and are intended to make significant improvements in the ability of modelling to provide sustainable and adaptable solutions. This should be irrespective of what BREEAM rating is targeted or the size of the building assessed. The processes will have equal benefit for projects of all scales, albeit the costs/benefit balance may change.
23	Ene 01 Reduction in energy use and carbon emissions	The verification stage is likely to create some contractual problems with client/ developer/end user as many developer/ contractors sell and walk away from the unit. In many cases, particularly on shell and core, the end-user is not known when these commitments are made.	Criteria amended	The verification stage has been re-named the post-occupancy stage and will be optional. Criterion 11 has been amended to state that the client or building occupier commits funds to pay for the post-occupancy stage. An assessor should be appointed at the post construction stage and report on the actual energy consumption compared with the targets set in the Energy Modelling and reporting criteria.
24	Ene 01 Reduction in energy use and carbon emissions	Measurement through the building energy model is unlikely to be accurate - if the intention is to gather more accurate data then this may be worthwhile but should be reported only without dependency on the design/in use performance comparison for credits.	No change from 2018 draft criteria	The intent of the modelling process is to produce more realistic operational scenarios which will in turn help to identify operational discrepancies in performance and improve the adaptability of the building, so reducing the performance gap. The intention of the post occupancy stage is not to reward credits where performance is demonstrated, but to recognise that the building has gone through the process of monitoring and reviewing the performance of the building, and where necessary (or possible), carrying out remedial work.
26	Ene 01 Reduction in energy use and carbon emissions	Make operational energy use modelling (4 credits) set as mandatory so there is no option of skipping this step. It is imperative to close the performance gap by adopting real in-use energy prediction modelling and relaying this to clients	No change from 2018 draft criteria	We agree that it is imperative to close the performance gap and following the draft consultation feedback, we have made these credits a minimum standard for Outstanding ratings. However, we cannot make these credits mandatory at this stage, as this would penalise projects where this may not be currently viable. In addition, these are new credits and we want to review their uptake. Possibly the next version of UK New Construction will take this into account.
27	Ene 01 Reduction in energy use and carbon emissions	With regard to criterion 2, this is already part of Man 01. It does not make sense to duplicate it in Ene 01. If the team fails to hold a workshop at Stage 2, the energy modelling credits cannot be met. This disincentives the energy modelling credits even if there is a desire to undertake the energy modelling.	Criteria clarified	The link between Man 01 and Ene 01 criterion for the operational energy workshop has been clarified. In Man 01, operational energy use should be considered in the project delivery stakeholders meeting (a link to Ene 01 is provided for reference). In Ene 01 criterion 2 has been amended to clarify that prior to completion of the Concept Design stage, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance.

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28	Ene 01 Reduction in energy use and carbon emissions	With regard to the verification stage, there are concerns over the use of the data. It is not clear how the data will be used and how the client will be protected. This could potentially be a barrier to undertaking verification.	Criteria clarified	The energy model will be submitted to BRE to assist the quality assurance of the post-occupancy stage and the ongoing development of BREEAM. All data submitted will be treated as confidential and will only be used anonymously. This has been clarified in the additional information section in Ene 01 issue.
29	Ene 01 Reduction in energy use and carbon emissions	Will the emission factor associated with electricity be considered as part of the EPRnc calculation methodology, or will the methodology still refer to the emission factors references through Part L?	No change from 2018 draft criteria	BREEAM Ene 01 methodology is in line with Part L and we do not plan to change the emission factors associated with electricity. This feedback has been noted for consideration for future BREEAM schemes.
30	Ene 01 Reduction in energy use and carbon emissions	It is recommended that a weighting is assigned to reflect the different building types. For instance, warehouses will have much lower operational energy demand compared to an office building. It is also suggested to amend weightings for Ene 01.	No change from 2018 draft criteria	Assigning different weightings for different building types would be a significant change in the Ene 01 methodology and would require specific consultation and research. This is to a certain extent already catered for by the Building Regulations baseline TER which is building/function type specific. This feedback has been noted for consideration for future BREEAM schemes. It is not possible to directly change the weightings for a single category. The weightings across the whole scheme were developed as a separate exercise, using a methodology which takes into account the social, environmental and economic factors associated with all the categories, and their ability to influence the desired outcomes.
31	Ene 01 Reduction in energy use and carbon emissions	A building would be able to claim the renewable energy if there is solar farm next doors, but not when it contributes financially to a solar farm on the other side of the village. Is there more relevant criteria than vicinity?	No change from 2018 draft criteria	BREEAM is a building based assessment. BREEAM takes a similar approach in Land use and ecology and surface water run-off issues. With regard to Ene 01 issue, BREEAM is used to assess the energy performance of the building and only renewable energy that is directly benefiting the assessed building (via a direct feed) is taken into account.
32	Ene 01 Reduction in energy use and carbon emissions	The most significant cause of the performance gap is quality of build, thermal bridging and poor air tightness. To improve this the thermographic survey credit needs to be incentivised more by increasing its weighting. Could it be put in the Energy section?	No change from 2018 draft criteria	The 'Testing and inspecting building fabric' credit in Man 04 issue covers the post-construction testing and inspection, including requirements for thermographic survey, airtightness testing and thermal bridging assessments. Moving this issue into the energy category will not improve the weighting. We believe this still fit best in the management category due to the stage at which it is carried out and the need for the contractor to be involved to carry out remedial works. A BREEAM weighting is allocated to each category, and this weighting is distributed across the number of credits available within each category. Therefore simply adding more credits does not necessarily increase the weighting of an Issue, as it reduces the overall value of all other credits in that category.

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33	Ene 01 Reduction in energy use and carbon emissions	Predicting operational energy is a complex subject matter. Assessors will need additional technical training and guidance to be able to sense check the quality of the evidence. Otherwise, clients could be paying for a lot of substandard modelling that has little value to them. Perhaps consider third party verification, similar to Mat 01.	Criteria clarified	The new criteria require that a 'Suitably qualified energy modeller' must model several scenarios creating a range of predicted consumptions. The definition of a 'Suitably qualified energy modeller' has been added in Ene 01. 'Accredited energy assessor' definition has been also clarified.
34	Ene 04 Low carbon design	Some more flexibility in design stages would be good for passive design. We've had many projects where doing all this modelling at Stage 2 just isn't possible. Freeing it up to do at Stage 3 as well would be useful and more realistic in terms of the design development and the amount of abortive work likely.	No change from 2018 draft criteria	There is some flexibility in the application of the RIBA stage requirements. The criteria has been amended to describe the stage, as opposed to specifically listing the RIBA stage. The intent is to set out at what stage in the process we believe the requirements should be considered to enable the most influence in the design to take place. As with all of our schemes, there is some flexibility for the design team to justify, if actions have taken place later than the required timescale, that this has not reduced the influence on the final design.
35	Ene 07 Energy efficient laboratory systems	Undertaking this at RIBA Stage 1 will likely be difficult to evidence. Suggest RIBA Stage 2 would be more practical.	Criteria amended	Criterion 1 has been amended to allow flexibility when defining the laboratory performance criteria: requirements specific to air change rates, system performances and efficiencies and heating and cooling have been removed as it is acknowledged that this level of detail is unlikely to be defined this early in the design process.
36	Ene 08 Energy efficient equipment	Clarify why small plug-in removed. If this is considered in the new operational energy approach in Ene 01 then the boundary between these two issues should be clearly defined. (As with Ene 05 and Ene 08 for refrigeration).	No change from 2018 draft criteria	Small power is taken into account in the new Ene 01 criteria. It has been removed from Ene 08 as we received feedback that small plug-in equipment selection is frequently decided by tenants and therefore rarely assessed even in fully fitted assessments.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Transport

Ref.	Issue	Feedback received	Outcome	BRE response
37	New Tra 01 Public transport accessibility	Welcomed additions for remote sites. However Tra 01 does still seem to reward city centre locations.	Criteria amended	The allocation of credits is no longer based on the calculated AI, but on the reporting of it, of the accessible amenities and on the production of a travel plan. Therefore, the emphasis on the location is now removed. This is a conscious decision not to favour specific locations but to encourage actions taken to maximise transport related benefits regardless of location.
38	Old Tra 01 Public transport accessibility	The proposed structure gives all buildings the opportunity to be rewarded for implementing and promoting sustainable means of transport, regardless of their location. However, it seems all buildings would receive the first credit if the baseline was AI was calculated. Should a credit be awarded for only doing calculation? I would rather only see credits awarded where actions have been taken and implemented to improve and support sustainable means of transport.	Criteria amended	The allocation of credits has been amended so that two credits are awarded for the carrying out a travel plan, reporting the AI and noting accessible amenities. This is fundamental to inform the most appropriate sustainable transport solutions for the site and so it was felt that 2 credits was a suitable reward for this.
39	New and old Tra 01 Public transport accessibility – now Transport assessment and travel plan	Please note in central areas of cities the benefits of a travel plan are hard to sell as many believe talking to their future building occupants should inform what is needed (as public transport provision is already very available). Should consideration be given to location in this way, i.e. required content as a result?	Criteria amended	In such cases, the travel plan can be based on a transport statement rather than a transport assessment (see methodology for further information).
40	Old Tra 03 Alternatives modes of transport	It is positive to see options in addition to cycle racks being rewarded. This allows developments to be more focused on site opportunities and constraints and to respond to these with greater flexibility.	Criteria amended	From the Draft version, more options have been added in Tra 02 'Sustainable transport measures' to allow for greater flexibility.
41	Old Tra 03 Alternatives modes of transport (new Tra 02 Sustainable transport measures)	You should be less prescriptive in terms of timing, as this prevents certain options to be achieved.	No change from 2018 draft criteria	Timing requirements cannot be lessened, as certain transport options, such as consultation on the existing cycling and walking network with the Local Authority to seek improvement, can only be achievable when planned and agreed early in the design process.
42	New Tra 02 Sustainable transport measures	While more consideration for rural location is positive, this should not be to the detriment of city centre locations, where there is little or no room for improvement.	Criteria amended	The new point-credit allocation based on location allows for more consideration given to city centre locations, where there is less potential for improvement.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

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43	General to the category	Changes to the category are welcomed, but should not be overly onerous with the requirements for implementing sustainable transport measures, especially when these are in some instances outside of the developer's control.	Criteria amended	Tra 02 provides a selection of options available to improve accessibility and sustainable transport to a site. Those that are not possible can simply be skipped. Full credits are not awarded on the basis of achieving every item in the list. Where the developer has the potential to influence the implementation of solutions that are of wider benefit, they should be encouraged to do so.
44	New Tra 02 Sustainable transport measures	Tra 01 should not be a pre-requisite to achieving Tra 02: there should be some reward for implementing measures such as car reduction, without being penalised for not having full transport assessment and travel plan.	No change from 2018 draft criteria	We believe it is essential that transport solutions for the development are based on a travel assessment and plan, as it is through this exercise that site-specific measures are effectively identified. This also gives more relevance to travel plans as a key tool for informing the implementation of sustainable transport measures.
45	Old Tra 03 Alternatives modes of transport (new Tra 02 Sustainable transport measures)	While other measures such as public transport and charging points for electric vehicles are also useful and may be rewarded in themselves, walking and cycling offer a range of substantial benefits over vehicle transport (even electric), including noise, road safety, demand on the electricity grid, physical activity levels, use of available land and natural resources.	Criteria amended	The point allocation system has been reviewed to better reflect the value of solutions that have less impact on the environment. However, consideration must also be given to situations where cycling and walking may not be a feasible option, as could be the case for a rural location.
46	General to the category	It is a good suggestion to combine the Tra 05, Tra 02 and Tra 01 issues, however the number of credits should not be reduced as a result.	Criteria amended	This has been considered and a large number of credits is still available for the transport category.

Water

Ref.	Issue	Feedback received	Outcome	BRE response
47	Wat 01	We have noticed the baseline level has been reduced meaning these credits are harder to achieve.	No change from 2018 draft criteria	Small changes to some of the baseline levels have been made in accordance with regulations and changing industry standards. Some levels are tougher and others eased depending upon the availability of products to meet these levels.
48	Wat 03	It would be simpler to exclude taps as well as showers from the shut off so the risk of scalding is removed. Also, leaks in taps are visible whereas they are not in urinal and WC cisterns.	No change from 2018 draft criteria	The risk of scalding is much higher in showers than from taps. Moreover, taps often leak or are left on when not in use, so there is a considerable risk of water wastage from taps.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

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49	Wat 04	This unfairly penalises developments that do not have any unregulated water demand. Under 2014 the credit was awarded if you could demonstrate there is no demand for unregulated water.	No change from 2018 draft criteria	If there is no unregulated water demand, the credit is filtered out, so the project is not penalised. Where a credit is filtered out, the value of all other credits in that category will be higher as the weighting is being allocated over fewer credits. In the 2014 manual, the credit was awarded by default for shell and core projects but was effectively a 'free' credit for no effort by the design team.
50	Wat 04	Please have the list of measures (currently in the compliance notes in 2014) deemed to satisfy the criteria, in the manual.	No change from 2018 draft criteria	The list has been removed as the issue is not just about irrigation, it has been broadened to cover all unregulated water uses.
51	Wat 04	What is a 'demonstrable reduction'?	No change from 2018 draft criteria	This has been left open as we do not want to be prescriptive. It will vary dependant on the project and the type and amount of unregulated water use associated with it. We will monitor the implementation of this over the course of the scheme life and add additional guidance via a Knowledge Base Compliance note is deemed appropriate.
52	Wat 04	Recent concerns over water quality as part of wider health and wellbeing strategies are resulting in an increasing number of projects considering water filtration or treatment on site. This would have energy consumption and water consumption implications – for example, the use of reverse osmosis could in some cases double water consumption.	Criteria clarified	If treatment on site is required and done in an efficient way, this would be recognised under this issue. Water treatment has been added to the list in the definitions, to highlight it as an example.
53	Wat 04	The definition of non-domestic scale, non-sanitary water uses includes building services e.g. boilers, cooling towers and humidification systems. Whilst cooling tower systems and humidification systems could be selected to be more water efficient, boilers utilize water as part of their operation.	Criteria clarified	The definition has been amended to remove boiler from the listed items as this assertion is correct and in line with the intent of the issue.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Materials

Ref.	Issue	Feedback received	Outcome	BRE response
54	Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)	Requirement for action at RIBA stages 2 and 4 too onerous. BREEAM assessors typically not employed before stage 2 (even 4 and 5 in some instances). Credits need to be available at later stages if these milestones are missed.	No change from 2018 draft criteria	<p>Mat 01 requires the first building LCA submission to take place at the end of RIBA stage 2 and before planning permission is applied for. RIBA stage 2 includes "...outline proposals for structural design, building services systems, outline specifications and preliminary cost information..."</p> <p>In addition, this stage usually takes place prior to applying for planning permission (RIBA stage 3), after which several major design decisions become largely fixed. Therefore, it is important that the building LCA is carried out at RIBA stage 2. At later stages the aforementioned aspects of the design, budget allocation and planning permission would significantly reduce the ability for the design team to use building LCA to identify opportunities for reducing environmental impact.</p> <p>BREEAM are working hard to promote the early engagement of BREEAM assessors to help embed sustainability and BREEAM into projects as early as possible. However, we acknowledge that a significant number of projects engage with BREEAM at later stages. Therefore, Mat 01 still rewards a RIBA stage 4 submission (albeit with reduced credits having missed the influential earlier RIBA stages).</p>
55	Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)	The requirements are complicated, hard to understand and onerous.	Criteria clarified	<p>It is important for BREEAM to be progressive, for it to be beyond standard practice and a relevant, trusted sustainability scheme. The move to a robust whole building approach to LCA is in line with our published strategy and with a range of other industry and EU initiatives in this area. BREEAM is aware that progress and resulting changes made to issues in BREEAM means users have to spend time understanding what is newly required. This is particularly the case for complex and changing areas like life cycle assessment (LCA). To address this, BREEAM focuses on these areas more during training. In addition to the query process, Knowledge Base and Guidance Notes, BREEAM provides recorded webinars to continually help Assessors and design teams.</p> <p>The structure of the Mat 01 issue is designed to allow design teams to select from a substantial range of building LCA and associated credits as appropriate for their project. To enable this, cross referencing has been used to avoid repetition and the resulting increase in the length of the issue.</p> <p>The structure of the Mat 01 issue is designed to allow design teams to select from a substantial range of building LCA and associated credits as appropriate for their project. To enable this, cross referencing has been used to avoid repetition and the resulting increase in the length of the issue.</p> <p>The criteria has been tweaked to be made clearer. Also see comment below regarding the simplified approach.</p>

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56	Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)	We would like access to the BREEAM Simplified Building LCA.	No change from 2018 draft criteria	The BREEAM Simplified Building LCA Tool was under development at the time of the consultation. The finalisation of the tool (to a point where it is suitable for external review) is not possible until feedback on the manual is received, reviewed and acted on first. We will release the BREEAM Simplified Building LCA Tool when the manual is published. The BREEAM Simplified Building LCA tool will be free of charge for Assessors and project team members and will be no harder to complete than the previous Green Guide based Mat01 tool.
57	Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)	Benchmarks – please publish them so that assessors and design teams can review them.	No change from 2018 draft criteria	The benchmarks have been developed for use with IMPACT Compliant tools and the BREEAM Simplified Building LCA tool only (which are based on the same background LCA data). The benchmarks are based on a specific superstructure scope as defined in the Mat 01 issue. It is not possible to compare the benchmark values with building LCA results by other tools or where the building LCA is based on a different scope. Stakeholder feedback cannot, at this stage, be on this basis so it would not have been of benefit to publish the benchmark values during this consultation. However, once the benchmarks have been applied in multiple assessments, BREEAM will welcome stakeholder feedback.
58	Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)	What is the driver for the creation of EPDs, and why have BREEAM decided to encourage their use via a separate credit?	No change from 2018 draft criteria	The aim of this issue is to encourage the availability of credible and robust data to guide specification decisions. The creation of EPDs will make building LCA more accurate over time because they will be added to product libraries in building LCA tools allowing designers to compare the effect of different manufacturers' equivalent products.
59	Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)	The number of credits available for this category may need to be increased as an incentive for manufacturers to produce more EPDs.	No change from 2018 draft criteria	The environmental performance of the products in the building is not taken into account in Mat 02, this is the aim of Mat 01 and is considered to have the highest importance and relevance for the Materials category. Adding more credits to Mat 02 would reduce the weighting of the other issues in the materials category, including Mat 01.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Ref.	Issue	Feedback received	Outcome	BRE response
60	Mat 03 Responsible sourcing of construction products	The issues for the sustainable procurement plan states that it will need to be in place before RIBA stage 2, however, this would be problematic and impossible if the Main Contractor has not been appointed yet.	No change from 2018 draft criteria	The intention of requiring the sustainable procurement plan at RIBA stage 2 is to recognise that some form of plan is required early on to govern the early decisions and design thinking. However we acknowledge that this will not cover, in detail, the construction phase, therefore the plan may need to evolve or be supplemented by a construction related one further down the line. If the plan was not required until a later stage when the contractor is engaged, opportunities for improving the sustainability of products already specified will be missed.
61	Mat 03 Responsible sourcing of construction products	The scope of the assessment (Table 55) seems huge, and so will be very time consuming for assessors and design teams.	Criteria amended	The Methodology has been created to ensure that as many construction materials across all elements of the building are assessed for their environmental, economic and social impact. This will inevitably require a detailed auditing process. The contents of the table have been reorganised into separate tables and reference made to other sections of the manual, to reduce complexity and repetition.
62	Mat 03 Responsible sourcing of construction products	Why have the benchmarks been reduced compared with the 2014 scheme?	No change from 2018 draft criteria	Analysis from the 2014 scheme shows that the benchmarks were too high, making it unnecessarily difficult for some projects to achieve any credits. Hence, to help build the market for responsible sourcing certification, we have reduced the benchmarks to incentivise the process.
63	Mat 05 Designing for durability and resilience	No definitions for 'material degradation' and 'environmental factors'.	Criteria amended	Thank you for pointing this out. Definitions for both have been added to the manual
64	Mat 05 Designing for durability and resilience	Various comments suggesting standards that could be added to the 'Relevant industry durability or quality standards and design guides' table.	Criteria amended	Thank you for the suggestions. Appropriate documents were added to the manual. It is worth noting that the table is not exhaustive.
65	Mat 06 Material efficiency	The aim of the issue overlaps and double counts with other credit issues. Relax the requirement for setting targets and reporting on opportunities at each of the listed RIBA stages.	No change from 2018 draft criteria	This issue ensures that the specification and design addresses efficiency in a holistic way throughout the life of the building, and not just at one stage (e.g. specification or construction). This helps embed material efficiency throughout the process. Hence, while there is overlap with other sections, the aim is unique.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

Waste

Ref.	Issue	Feedback received	Outcome	BRE response
66	Wst 01 Construction waste management	Criteria 1a Pre-demolition audit at RIBA Stage 2 is impractical.	No change from the 2018 draft criteria	For the pre demolition audit to have value and inform decisions it is essential that it is carried out at RIBA stage 2, before outline design decisions are made and demolition occurs. This is to ensure that, where demolition is considered, refurbishment and reuse are prioritised. The intent is also to maximise the recovery of material for high value applications, in instances where demolition cannot be avoided. .
67	Wst 02 Use of recycled and sustainably sourced aggregates	Generally the changes to this issue are positive. However the issue still does not reward projects for using cement replacements which have a high embodied CO ₂ impact if used in the concrete mix.	No change from the 2018 draft criteria	This issue concerns the sourcing of aggregates. The use of low impact cement concrete would be covered under Mat01.
68	Wst 02 Use of recycled and sustainably sourced aggregates	It is difficult to assess whether this credit can be achieved without working through it from pre-assessment view point.	No change from the 2018 draft criteria	Changes are aimed at making this issue more accessible and flexible. Whilst this does introduce a more complex calculation, the tool makes it easier to work-out how the required data contributes to achieving points. There is now greater flexibility on where the aggregates are included in the project.
69	Wst 02 Use of recycled and sustainably sourced aggregates	This credit will only be achieved if considered very early on, which is normally before the assessor is appointed/on board. BRE should raise awareness of this issue as it is not normally achieved due to late consideration.	No change from the 2018 draft criteria	This applies to other issues in BREEAM. We always advise to consider certain issues early on in the process to be able to target them, and also raise awareness through the assessment timeline inserted into the manual.
70	Wst 02 Use of recycled and sustainably sourced aggregates	Sustainable sourcing of aggregates is included within this Issue as well as in the Material section. This seems like it could be double counting.	No change from the 2018 draft criteria	The primary aim of the Wst 02 issue is to reduce/avoid waste to landfill by encouraging the use of recycled aggregate, but only where this is the most sustainable option. The new methodology helps to determine if recycled aggregate is the most sustainable option for a given location. For example, if local virgin aggregates are more sustainable because of the distance the recycled aggregate would have to be transported, then we would not want to encourage the latter. Whilst a full LCA would take account of aggregate sourcing as well, that would be in terms of impacts from extraction and manufacture etc., rather than specifically waste avoidance, which this issue aims to encourage.
71	Wst 05 Adaptation to climate change	In our experience in 2014 this credit was never achieved. As there is a requirement to start the process at RIBA Stage 2 (when a BREEAM target would not yet be imposed) it is not carried out.	No change from the 2018 draft criteria	BREEAM seeks to encourage best practice processes to maximise the opportunities for sustainable solutions on a project. This credit issue is voluntary. Based on a sample of projects, 30% have achieved this issue. We do allow flexibility in the application of the RIBA stages, where it can be demonstrated that the outcome of the issue has not been adversely affected by its later implementation.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

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72	Wst 06 Design for disassembly and adaptability	Designing for disassembly may be beneficial for building types, with relatively short service life e.g. distribution centres and out-of-town retail outlet, however it should not be prioritised over designing for longevity and reusability of the whole building.	Criteria clarified	Designing for disassembly does not only address buildings with a short service life. It also addresses recycling of materials in the deconstruction process and the ability to separate one material from another. This issue requires a study to look at options relevant to the project, which allows the project team flexibility when determining solutions. The criteria has been clarified to make this clearer.

Land Use and Ecology

Ref.	Issue	Feedback received	Outcome	BRE response
73	LE 02 - Identifying and understanding the risks and opportunities for the project	A survey should be carried out by an ecologist on every site to determine the condition and appraise risks and opportunities.	Criteria clarified	The Project team member route has been clarified to make it clear, that even using this route, the expertise of an ecologist maybe required to confirm aspects of the checklist. The ability to gain credits without any ecologist involvement will be limited to sites where there is no significant risk of negative impact arising from the development.
74	LE 02 - Identifying and understanding the risks and opportunities for the project	Ref to other climate change considerations - These items require a lot more than an ecologist's input, making this credit quite complicated and potentially very expensive.	Criteria amended	We have retained this aspect of the criteria, but have changed the reward so that this aspect of the criteria is an exemplary level criteria and therefore has a greater reward, and no longer links to the awarding of the other credits.
75	LE 03 – Managing negative impacts on ecology	Does assessment issue 1 have to be 'assessed' or 'achieved' under this issue?	Criteria clarified	The criteria has been amended to state that LE 02 is a prerequisite in order to assess this issue.
76	LE 04 – Change and enhancement of ecological value	A project team member is unlikely to know where to find suitable guidance to cover enhancement and therefore an ecologist should still be engaged.	Criteria clarified	A Guidance Note will provide more guidance on this issue and when expert advice will be required.
77	LE 04– Change and enhancement of ecological value	Role and responsibilities criteria, seems like it should go at the beginning of the issue Requirement 1.	Criteria amended	This has been moved to the beginning of the criteria for both issues.

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme

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78	LE 04– Change and enhancement of ecological value	Can you elaborate on what you mean by off-site enhancement?	Criteria clarified	This has been clarified to confirm that off-site must still be within the zone of influence, which is defined in the manual. The Guidance Note will also provide further clarification on the application of this criteria.
79	LE05 – Long term ecology management and maintenance	Requirement for the client to confirm compliance with EU regulation - This isn't something a client or contractor would typically confirm. This resides in the expertise of an ecologist.	No change from 2018 draft criteria	Although it may not be the client directly responsible for determining what this looks like, they are ultimately responsible for ensuring this happens and so must seek confirmation from their experts.

Pollution

Ref.	Issue	Feedback received	Outcome	BRE response
80	Pol 02 Local air quality	Electricity heavily penalised.	No change from 2018 draft criteria	The aim of this issue is to improve the air quality local to the development. This means that the emissions from power stations are excluded from the assessment of this issue. Heating systems powered by electricity are not penalised at all, both mains and renewable powered electric systems gain maximum credits, as pollution is not created locally. .
81	Pol 02 Local air quality	Request to go back to the whole building methodology used in 2014. 2018 looks at individual plant, which penalises the whole development if any plant are poor performing.	No change from 2018 draft criteria	The decision to not include a whole building approach was made to incentivise the market to provide better performing systems. A whole building approach would allow a mix of plant with different emission levels to be specified, with the calculation being based on system size rather than use. The approach taken helps ensure that actual emissions are reduced.
82	Pol 02 Local air quality	Comments relating to how the benchmarks were set and questioning whether there is availability of products in the market that achieve them.	Criteria amended	The benchmarks are set based on improvements on the EU Ecolabelling Directive maximum emission levels. The levels have been set partially based on products in the market that can achieve them, and also to incentivise the marketplace to provide better performing systems. The benchmarks have been updated since the consultation, in light of additional research in conjunction with the HQM ONE (Home Quality Mark) version.

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83	Pol 03 Surface and flood water management	Where there is no change in the impermeable area on-site, the draft manual states that the volume and peak rate of run-off achieve the 30% improvement by default. I disagree that the rate of run-off should be achieved by default.	Criteria amended	Thank you for your comment. This was a typographical error. The default situation applies only to the volume of runoff, not the peak rate of runoff which as you correctly state, needs to be bettered by 30%.
84	Pol 05 Reduction of noise pollution	The requirement for plant noise to be at least -5dB compared to background noise levels. This goes beyond BS 4142 referenced in the draft manual and is more onerous than the 2014 requirements. Is this correct and can it be justified?	No change from the 2018 draft criteria	The -5dB requirement is correct. The aim of the issue is to ensure no impact on noise sensitive buildings/areas near to the building. The decision was made to go beyond the British Standard. Research shows that a noise of -10 dB would be required not to increase a background level at all. -10 dB or lower would be considered very unlikely to cause annoyance. Experts therefore recommended that a reduction of -5dB as a suitable threshold, which would not result in complaints, but still be an improvement on the previous criteria to not exceed background noise levels (which is only considered to have a low impact).
85	Pol 05 Reduction of noise pollution	The definition of noise-sensitive areas includes wildlife areas, historic landscapes, Areas of Outstanding Natural Beauty, etc. it is difficult finding sufficient evidence to establish how e.g. nesting birds will be affected by noise. BREEAM needs to provide some reference to backup why the proposed criteria is considered suitable in controlling noise impact on 'wildlife areas'.	No change from the 2018 draft criteria	BREEAM's aim is to reduce noise impact arising from a development especially in sensitive areas such as those listed. We have not been prescriptive in the standards to be achieved as these will depend on local context and the nature of the sensitive habitat.

Further information

Please see the following links for further information on:

- The consultation draft scheme document for the 2018 version to which this feedback refers: <https://www.breeam.com/engage/research-and-development/consultation-engagement/breeam-uk-new-construction-2018-consultation/>
- The final BREEAM UK New Construction 2018 scheme document: <https://www.breeam.com/discover/technical-standards/newconstruction/>
- The closure for new registrations for BREEAM UK New Construction 2014 is the 23 March 2018.

For any other queries please contact the BREEAM office: breeam@bre.co.uk

Summary of Feedback Received on the Draft BREEAM UK New Construction 2018 Scheme