Method Consulting

Intelligent engineering, sustainable buildings

McDonalds, Trowbridge (NG100)

BREEAM 2018 New Construction Issue 3.0

Retail (Fully Fitted)

Design Stage Pre-Assessment

Rev P01, January 2023

BRE Reference Number: TBC

BREEAM Assessments • BREEAM AP • SKA • WELL • Post Occupancy Evaluation • IMPACT LCA • Energy and Sustainability Statements • Home Quality Mark • SAP & SBEM, EPCs • DREAM • Passivhaus

McDonalds, Trowbridge BREEAM Pre-Assessment

Introduction

BREEAM, the UK's Building Research Establishment's Environmental Assessment Method, is used to rate the environmental performance of new or existing buildings, as designed and constructed and/or in operation. A BREEAM rating can be awarded where sufficient credits have been gained on the basis of meeting environmental performance criteria in each of the technical categories:

Rating levels
Pass
Good
Very Good
Excellent
Outstanding

BREEAM categories	
Management	Materials
Health and Wellbeing	Waste
Energy	Land Use and Ecology
Transport	Pollution
Water	Innovation

This pre-assessment has been carried out based on the BREEAM 2018 New Construction Design Stage Criteria for Retail buildings. This scheme is applicable to new build projects. In addition to a range of standard issues assessed for all building types, this also includes requirements specific to Retail buildings which have been included in the pre-assessment.

Please note that this pre-assessment includes a summary of the requirements for each credit but the BREEAM Technical Manual should be referred to for full details.

Scoring and mandatory requirements

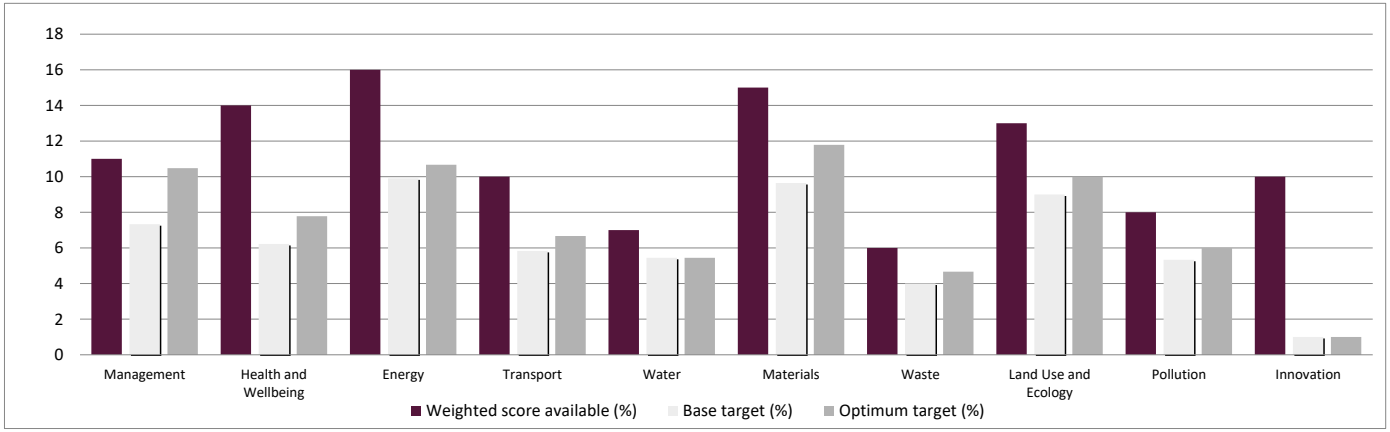
BREEAM requires the achievement of a minimum percentage score in order to achieve a particular rating. This is determined by a scoring system in which credits are assigned to issues under each of the sections above. These sections are each weighted differently so credits in different sections equate to a different percentage score to those in other sections. The percentage contribution of each credit to the final score is noted at the end of each section in the following pages.

In addition to the achievement of a minimum score, BREEAM also contains mandatory credits/requirements which MUST be achieved in order to obtain a particular rating. If these are not achieved, the required rating cannot be obtained regardless of the percentage score achieved. In BREEAM 2018, there are also 'pre-requisites' which do not carry a score, but must be achieved in order to award a credit and/or rating. Where a pre-requisite or mandatory credit is present, this is clearly highlighted in the main summary spreadsheet below. A list of the mandatory credits can be found on the next page.

Pre-assessment results

Base Target	The base target shows the minimum credits anticipated to be achieved for the development. This equals 63.71% which is a rating of Very Good.
Optimum Target	The optimum target shows which credits could potentially be gained, although the feasibility of achieving some of these will require further investigation. This equals 74.48% which is a rating of Excellent.

This graph below shows the number of credits available for each environmental issue and the number targeted for this project.



Stage of assessment: Interim design stage	**Project Assessor:** Natasha Fox, Rebecca Cook
BRE Reference Number: TBC	**Project AP:** Natasha Fox

Credit not targeted
Evidence outstanding/requires review
Credit awarded

RIBA Stage 1&2	Complete?
Man 01 Roles	
Man 01 Consultation	
Man 01 BREEAM AP	
Man 02 LCC	
Hea 06 Security	
Ene 04 Passive Design	
Ene 04 LZC study	
Tra 01 Travel Plan	
Mat 01 Materials	
Mat 03 Procurement	
Mat 06 Mat. Efficiency	
Wst 01 Pre-demo Audit	
Wst 05 Climate change	
Wst 06 Disassembly	
LE02/03 Ecology	

Building address:
Scope of BREEAM assessment:
Number of buildings:
GIA:
NIA:
Heating strategy:
Cooling strategy:
Ventilation strategy:
Lift type:
LZCs:
Meeting record:

Contents Amendment Record
P01: Initial pre-assessment issued for comment and for refining targets (18/01/23)

BREEAM Standards		Project Targets
Total required for 'Pass'	30	**MINIMUM BREEAM RATING REQUIRED: Very Good with as aspiration of Excellent** (This equates to a score of 55% and requires the achievement of certain mandatory credits.)
Total Required for 'Good'	45	It should be noted that until sufficient evidence is provided by the project team to the BREEAM Assessor to demonstrate that the full requirements have been met, none of these scores can be assumed to have been achieved,
Total required for 'Very Good'	55	but remain as targets until the assessor confirms otherwise. This pre-assessment is based on discussions at project team meetings and additional correspondence.
Total required for 'Excellent'	70	The base target shows the minimum credits anticipated to be achieved for the development. This equals 63.71% which is a rating of Very Good.
Total required for 'Outstanding'	85	The optimum target shows which credits could potentially be gained, although the feasibility of achieving some of these will require further investigation. This equals 74.48% which is a rating of Excellent.

Expected Scores (%)	
Minimum required	**55**
Base Target	**63.71**
Optimum Target	**74.48**

BREEAM Manual Link
http://www.breeam.com/NC2018/

Credit Title	Summary of mandatory requirements
Man 03 Responsible Construction Practices (Considerate Construction)	One credit for Excellent. Two credits for Outstanding.
Man 04 Commissioning and Handover	One credit and a Building User Guide for Very Good and above.
Man 05 Aftercare	Commissioning Implementation for Excellent and above.
Ene 01 Reduction of Energy Use and Carbon Emissions	At least four 'Energy Performance' credits for Excellent. At least six 'Energy Performance' and four 'Energy Modelling and Reporting' credits for Outstanding.
Ene 02 Energy Monitoring	Sub-metering of end-use categories for Very Good and above.
Wat 01 Water Consumption	At least one credit for Good and above. At least two credits for Outstanding.
Wat 02 Water Monitoring	A water meter on the mains supply to each building for Good and above.
Mat 03 Responsible Sourcing of Construction Products	All timber used on the project is 'legally harvested and traded timber'.
Wst 03 Operational Waste	At least one credit for Excellent and above.

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
MANAGEMENT									
Man 01 Project brief and design					**To optimise final building design through recognising and encouraging an integrated design process and robust stakeholder engagement.**				
Project delivery planning (1-3) **RIBA STAGE 2 ACTION**	1	0	1		Credit awarded where, prior to completion of the Concept Design, the client, building occupier, design team and contractor meet to identify and define for each key phase of project delivery: a) Roles, b) Responsibilities, c) Contributions. Demonstrate through documentation that consideration was given to all topics as listed in the guidance (requirements 2a-h) - e.g. user requirements, design aims, installation limitations, budget and expertise, maintainability, operational energy, documentation production etc. Demonstrate how the project delivery stakeholders' contributions and the consultation process outcomes influence: a. Initial Project Brief; b. Project Execution Plan; c. Communication Strategy; d. Concept Design.	0.52%	This has been achieved on previous projects, however it does tend to not be targeted. Included in the optimum for now.	McD	Pre-planning
Stakeholder Consultation (Interested parties) (4-6) **RIBA STAGE 2 ACTION**	1	0	0		Credit awarded where prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content (Refer to guidance for full details). The project team must demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design. Prior to completion of the detailed design (RIBA Stage 4 or equivalent), all interested parties give and receive consultation feedback.	0.52%	This has been achieved on previous projects, however it does tend to not be targeted.	-	-
Pre-requisite (BREEAM AP) (Concept and Developed Design) (8) **RIBA STAGE 2 ACTION**	0	Y	Y		Note: This must be achieved in order to achieve the following BREEAM AP credits. Pre-requisite awarded where the project team, including the client, formally agree strategic performance targets early in the design process (with the support of the BREEAM Advisory Professional where appointed). To demonstrate 'formally agreed', this should be contracts or letters of appointment with the architect and other relevant project team members).	0.00%	Usually this would be targeted. The BREEAM target is at least a Very Good and this will need to be contractually agreed by the end of Stage 2 (i.e. planning). *Query over whether Wiltshire policy will require excellent.*	McD	Pre-planning
BREEAM AP (Concept Design) (9) **BREEAM AP Developed Design) (10-11)** **RIBA STAGE 2 ACTION**	2	2	2		Up to two credits awarded where BREEAM AP is involved to: a) Work with the project team, including the client, to consider links between BREEAM issues and assist in maximising the overall performance against BREEAM, from their appointment and throughout Concept Design (one credit) and Developed Design (second credit). b) Monitor progress against performance targets agreed under the pre-requisite throughout all stages after appointment where decisions critically impact BREEAM performance. c) Proactively identify risks and opportunities related to the achievement of the targets agreed under the pre-requisite. d) Provide feedback to the project team, to support them in taking corrective actions and achieving agreed performance targets. e) Monitor and, where relevant, coordinate the generation of evidence by the project team. The BREEAM AP must attend key meetings (see Definitions) with the project team during the Concept Design, Developed Design and Technical Design stages.	1.05%	It has been assumed this would be targeted. Feedback from BRE has noted that lack of formal meeting minuets from the client can make this hard to evidence, but suggest it is still targeted.	Method / McD	Pre-planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Man 02 Life cycle cost and service life planning					**To promote the business case for sustainable buildings and to deliver whole life value by encouraging the use of life cycle costing to improve design, specification, through-life maintenance and operation.**				
Elemental Life Cycle Cost (LCC) (1-3) **RIBA STAGE 2 ACTION**	2	0	2		Two credits awarded where a competent person carries out an outline, entire asset LCC plan at RIBA Stage 2 together with any design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865: 20081. The elemental LCC plan must provide an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years) and includes service life, maintenance and operation cost estimates. Demonstrate how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.	1.05%	If excellent is required, we suggest this should be targeted and it must be achieved by the end of Stage 2 (i.e. planning).	McD	Pre-planning
Component Level LCC options appraisal (4-5)	1	0	1		Credit awarded where a competent person develops a component level LCC options appraisal by the end of RIBA Stage 4 in line with PD 156865: 2008. The component level LCC should cover and review the envelope, services, finishes, external spaces (selections that will offer valued comparisons). Demonstrate how the component level LCC options appraisal has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.	0.52%	This can be agreed post planning. Included in the optimum for now.	McD	Post planning
Capital Cost Reporting (6)	1	1	1		Credit awarded where the project team reports the capital cost for the building in (£k/ m²) of gross internal floor area. At the design stage, this can be awarded based on confirmation of the predicted cost, and a client commitment to provide the information on the final cost at the end of the project.	0.52%	This would usually be achieved. Credit targeted.	McD	Post planning
Man 03 Responsible construction practices					**To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.**		**Mandatory minimum requirement: One credit for Excellent and two credits for Outstanding for Responsible Construction Management.**		
Pre-requisite (1)	0	Y	Y		**MANDATORY FOR ALL RATINGS: All timber and timber based products used during the construction process of the project are legal and sustainable timber.**	0.00%	This needs to be achieved.	QS / Elliot	Post planning
Environmental Management (3-4)	1	0	1		Credit awarded where all parties who at any stage manage the construction site (e.g. the principal contractor, the demolition contractor) operate an EMS covering their main operations. This is typically ISO 14001 certification. AND The same parties demonstrate via evidence that they have implemented best practice pollution prevention policies and procedures on site in accordance with PPG 6.	0.52%	This has been targeted previously but then not achieved. If the main Contractor does not have ISO 14001 then usually this isn't achieved. Included in the optimum target for now.	QS	
Pre-requisite (BREEAM AP Site) (5)	0	Y	Y		Pre-requisite awarded where the client and the contractor formally agree performance targets, via a contract.	0.00%	This would usually be achieved. Credit targeted.	QS	Post planning
BREEAM AP (Site) (6)	1	1	1		Involve a BREEAM AP in the project at an appropriate time and level to cover requirements 6 a-e of the BREEAM requirements (refer to guidance for details). This is the same scope as required under Man 01 above, but for the Construction, Handover and Close Out stages.	0.52%	This would usually be achieved, and is part of Method's scope.	McD	Post planning
Responsible Construction Management (7-9)	2	2	2		**MANDATORY FOR EXCELLENT:** One credit awarded where the ticked items in Table 4.1 of the BREEAM guidance have been covered, or where a CCS score of at least 27 with 9 points in each section has been achieved. **MANDATORY FOR OUTSTANDING:** Two credits awarded where the above has been achieved and six additional items have been covered from the table, or where a CCS score of at least 35 with 11 points in each section has been achieved.	1.05%	This would usually be achieved. Credit targeted.	QS	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Monitoring of Construction Site Impacts **(Utility Consumption) (11-18)** **(Transport) (19-22)**	2	1	2		Up to two credits awarded where responsibility for monitoring all data on site has been assigned to an individual. AND First credit: Set targets, monitor and record data for the site energy consumption in kWh (where relevant, litres of fuel) and potable water consumption (m^3) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation. Report the total CO_2 emissions (total $kgCO_2$ / project value). Second credit: Set targets for transportation movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum this needs to cover requirements 20-21 (refer to guidance for details). Using the collated data, report separately for materials and waste, the total transport-related carbon dioxide emissions ($kgCO_2$-eq), total distance travelled (km).	1.05%	Usually one credit is achieved. One credit targeted. Two credits in the optimum if needed for Excellent, and depends on which Contractor is used.	QS/ McD	Post planning
Man 04 Commissioning and handover					**To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.**		**Mandatory minimum requirement: Achieve the 'Commissioning - testing schedule and responsibilities' credit and have a compliant Building User Guide for Very Good and above.**		
Commissioning - Testing Schedule and Responsibilities (1-5)	1	1	1		Credit awarded where a schedule of commissioning and testing is prepared and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. Please refer to the technical guidance for details of the appropriate standards (2 a-d) and BMS commissioning procedures (3 a-e). AND An appropriate project team member is appointed to monitor and programme pre-commissioning, commissioning and, where necessary, re-commissioning on behalf of the client. AND The principal contractor accounts for the commissioning programme, responsibilities and criteria within their budget and programme of works.	0.52%	This would usually be achieved. Credit targeted.	Elliot / SL / Verisys	Post planning
Commissioning - Design and Preparation (6-7)	1	1	1		Credit awarded where the first commissioning credit has been achieved and an appropriate project team member has been appointed during design stage with responsibility for: a) Undertaking design reviews and advising on suitability for ease of commissioning. b) Providing commissioning management input to construction programming and during installation stages. c) Management of commissioning, performance testing and handover / post-handover stages. Note: For buildings with complex building services and systems, this role needs to be carried out by a specialist commissioning manager.	0.52%	This would usually be achieved. Credit targeted.	SL / Verisys	Post planning
Testing and Inspecting Building Fabric (8-10)	1	1	1		Credit awarded where the first commissioning credit is achieved, and a post construction thermographic survey and airtightness testing and inspection is completed to assure the quality of the building fabric, including insulation continuity, avoidance of thermal bridging and air leakage paths. Defects identified must be rectified prior to building handover. All testing must be carried out by a Suitably Qualified Professional, in line with the appropriate standard and evidence of qualifications will be required.	0.52%	This would usually be achieved. Credit targeted.	Elliot	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Handover (11-12)	0	Y	Y		**MANDATORY FOR VERY GOOD AND ABOVE:** Two Building User Guides are developed prior to handover covering all functions and uses of the building. One for the non technical user (distributed to building occupiers) and one for the technical user (premise facilities managers). Where building occupants are known, a draft copy should be discussed and developed with these users. Note in order to achieve a Very Good rating or better, this requirement must be achieved.	0.00%	This would usually be achieved. Credit targeted.	McD / QS / Method	Post planning
	1	1	1		Credit awarded where, in addition to the above, two training schedules are developed for handover: One for the non technical user (distributed to building occupiers) and one for the technical user (premise facilities managers). Refer to guidance for details of what needs to be included in the BUGs and training schedules.	0.52%	This would usually be achieved. Credit targeted.	QS / McD / Elliot	Post planning
Man 05 Aftercare					**To ensure the building operates in accordance with the design intent and operational demands, through providing aftercare to the building owner and occupants during the first year of occupation.**		**Mandatory minimum requirement: One credit (Commissioning - implementation) for Excellent and Outstanding.**		
Aftercare Support (1-2)	1	1	1		Credit awarded where the principal contractor provides aftercare support to the building occupier, which includes a meeting, introducing available aftercare support, introduction to the building systems and walkabout of the building. They also need to provide two levels of aftercare support; including on-site attendance for a month after handover and longer term support for at least the first 12 months. AND The client/building occupier commits to collect and monitor energy and water consumption data for a minimum of 12 months, once the building is occupied, to analyse discrepancies between actual and predicted performance.	0.52%	This would usually be achieved. Credit targeted.	Elliot / McD	Post planning
Commissioning - Implementation (3)	1	1	1		**MANDATORY FOR EXCELLENT AND ABOVE:** Credit awarded where the following commissioning activities are undertaken over 12 months after building occupation: **Complex systems: The specialist commissioning manager:** a) Identifies occupier changes that might have impaired or improved performance. b) Test all building services under full load conditions (heating equipment in mid-winter, cooling and ventilation equipment in mid-summer and under part load conditions (spring and autumn). c) Where applicable, carry out testing during periods of extreme (high/low) occupancy. d) Interview building occupants to identify problems regarding the effectiveness of the systems e) Produce monthly reports comparing sub-metered energy performance to the predicted f) Identify inefficiencies and areas in need of improvement g) Recommissioning of systems (following any work needed to serve revised loads), and incorporate any revisions in operating procedures into the O&M manuals. **Simple systems (naturally ventilated): The external consultant, aftercare team or facilities manager:** a) Reviews thermal comfort, ventilation, and lighting, at three, six and nine month intervals after initial occupation. b) Identifies deficiencies and areas in need of improvement. c) Recommissions systems and incorporates any relevant revisions in operating procedures into the O&M manuals.	0.52%	This would usually be achieved. Credit targeted.	SL / Verisys	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Post Occupancy Evaluation (4-7)	1	1	1		Credit awarded where the client makes a commitment to carry out a Post Occupancy Evaluation (POE) one year after building occupation, to gain building performance feedback. The POE should be carried out by an independent third party. See technical guidance for full list of what should be included. The client or building occupier must commit funds to pay for the POE in advance (to avoid making an empty commitment). This requires an independent party to be appointed and a report with lessons learned should be produced.	0.52%	This would usually be achieved. Credit targeted.	McD	Post planning
Sub-Total	**21**	**14**	**20**						
Weighted Sub-Total	**11**	**7.33**	**10.48**		**One management credit equals 0.52%**				
HEALTH & WELLBEING									
Hea 01 Visual comfort					**To encourage best practice in visual performance and comfort by ensuring daylighting, artificial lighting and occupant controls are considered.**				
Control of glare from sunlight (1-3)	1	0	0		Credit awarded where areas at risk of glare have been identified using a glare control assessment, this also needs to justify any areas deemed not at risk of glare. The potential for glare needs to be designed out through building layout (e.g. low eaves) or building design (e.g. brise soleil, bioclimatic design or blinds) in all relevant building areas via a glare control strategy. Include rooflights in the assessment. The glare control strategy should avoid increasing lighting energy consumption by maximising daylight levels whilst avoiding disabling glare. System should not inhibit daylight entering the space under cloudy conditions, and the location of shading should not conflict with operating lighting controls. Occupant controlled devices such as blinds should have a transmittance value of <0.1 (10%).	0.78%	Agreed with McD in general that this is really unlikely to be achieved and changes won't be made to achieve it. Credit not targeted.	-	-
Daylighting (4)	2	1	1		One credit awarded where 35% of the sales area achieves a point daylight factor of 2% or more, and a second credit awarded where at least 80% of floor area in occupied spaces is adequately daylit.	1.56%	Usually one credit would be achieved. Single storey NG100 modelled for Dearne Valley and credit was achieved.	SL	Post planning
View Out (5-6)	1	0	0		Credit awarded where 95% of the floor area in 95% of spaces for each relevant building area (inc. workstations, close work areas or areas where a view out is deemed beneficial to occupants of the space) provides an adequate view out. E.g. if a project had 20 spaces in a relevant building area, 19 of these spaces would need to demonstrate that, independently, 95% of their floor area has an adequate view out. A window / opening area that is equal to, or greater than, 20% of the surrounding wall area would be considered an adequate view out for spaces with a room depth of less than 8m. Where the room depth is greater than 8m, compliance is only possible where the % of window/opening is ≥ the values in table 1.0 of BS 8206.	0.78%	This would usually not be achieved. Credit not targeted.	-	-
Internal and External Lighting Levels, Zoning and Control (7-13)	1	1	1		Credit awarded where all internal and external lighting is designed to provide illuminance levels appropriate to tasks undertaken, recommended by SLL Code for Lighting 2012, CIBSE LG 7 or other relevant industry standard for internal lighting, and BS 5489-1:2013 and BS EN 12464-2:2014 for external lighting. AND Lighting must be appropriately zoned and allow for occupant control. Areas used for teaching, seminar or lecture purposes must have controls specified in accordance with CIBSE LG5. Display and counter areas should be separately zoned and controlled.	0.78%	This would usually be achieved and appropriate lighting levels, zoning and controls would be included in the design. Credit targeted. Reminder that a manual switch is needed for the office and usually the staff room too.	SL / Synergy / LAUK	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Hea 02 Indoor air quality					**To encourage and support healthy internal environments with good indoor air quality.**				
Indoor Air Quality Plan (Pre-requisite) (1)	0	Y	Y		Pre-requisite awarded where a site-specific indoor air quality plan is undertaken in line with GN06. The plan must consider the following: a) Removal of contaminant sources b) Dilution and control of contaminant sources (where present, consider air quality requirements of specialist areas such as labs) c) Procedures for pre-occupancy flush out d) Third party testing and analysis e) Maintaining good indoor air quality in-use.	0.00%	Not required if other credits not targeted.	-	-
Ventilation (2)	1	0	0		Credit awarded where the building has been designed to minimise the concentration and recirculation of pollutants in the building by providing fresh air into the building in accordance with the relevant standards for ventilation. Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building using the Methodology outlined in the guidance (e.g. intake and exhaust location). Any HVAC systems must incorporate suitable filtration to minimise pollution, in line with BS EN 16798-3:2017. Filters should achieve supply air classification of at least SUP 2. Areas of the building subject to large and unpredictable/variable occupancy patterns need to have CO_2 or air quality sensors specified and meet the detailed requirements relating to natural, mechanical or mixed mode ventilated spaces (refer to guidance for details). CIBSE AM10 compliance required for natural and mixed mode buildings.	0.78%	This would usually not be achieved. Credit not targeted.	-	-
Emissions from Construction Products (3-4)	2	0	0		**One credit:** 3 out of 5 product types meet the emission limits, testing requirements and any additional requirements listed in Table 5.11 (refer to guidance for details). All wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum. **Two credits:** All of the product types listed meet the emission limits, testing requirements and any additional requirements listed in Table 5.11. Product types are: Interior paints and coatings; Wood-based products (including wood flooring); Flooring materials (including floor levelling compounds and resin flooring); Ceiling, wall, and acoustic and thermal insulation materials; Interior adhesives and sealants (including flooring adhesives).	1.56%	This would usually not be achieved. Credit not targeted.	-	-
Post-construction indoor air quality measurement (5-10)	1	0	0		Credit awarded where indoor formaldehyde concentration is measured post construction (but pre-occupancy) and does not exceed 100 µg/ m^3 averaged over 30 minutes (sampling and analysis to be performed in accordance with ISO 16000-2 & -3. AND The total volatile organic compound (TVOC) concentration does not exceed 500 µg/ m^3 over 8 hours (sampling and analysis performed in accordance with ISO 16000-5 and ISO 16000-6 or ISO 16017-1). Formaldehyde and TVOCs levels should be provided to the assessor. Where the limits above are exceeded, measures need to be undertaken in accordance with the IAQ plan to reduce the TVOC and formaldehyde levels to within the above limits.	0.78%	This would usually not be achieved. Credit not targeted.	-	-

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Hea 04 Thermal comfort					**To ensure the building is capable of providing an appropriate level of thermal comfort.**				
Thermal Modelling (1-4)	1	1	1		Credit awarded when thermal modelling has been carried out using software in accordance with CIBSE AM11, and provides full dynamic thermal analysis. The modelling should show the building design and services strategy can deliver thermal comfort levels in occupied spaces as follows: a) **In air-conditioned buildings:** Summer and Winter operative temperatures in accordance with the CIBSE Guide A Table 1.5 or meet the Category B requirements for PPD, PMV and local discomfort from Table A.1 of Annex A of ISO 7730:2005. b) **Naturally ventilated/free running buildings:** Winter operative temperature ranges in accordance with CIBSE Guide A AND the building is designed to limit the risk of overheating in accordance with CIBSE TM52 or TM59. For air-conditioned buildings, the PMV and PPD indices should be provided.	0.78%	This would usually be achieved. Credit targeted.	SL	Post planning
Design for future thermal comfort (5-8)	1	1	1		Credit awarded where the first Hea 04 credit has been achieved, and the thermal modelling demonstrates that the building design and services strategy can deliver the same thermal comfort levels in occupied spaces under a projected climate change environment. **Naturally ventilated buildings:** Time period: 2050s; Emissions scenario: Medium (A1B); 50th percentile DSY 2 and DSY 3. **Mechanically ventilated or mixed mode buildings:** Time period: 2020s; Emissions scenario: High (A1F1); 50th percentile DSY 2 and DSY 3. Where thermal comfort criteria are not met for the projected climate change environment, the project team should demonstrate how the building has been adapted, or is adaptable in future using passive design solutions to achieve above criteria. For air-conditioned buildings, provide the PMV and PPD indices.	0.78%	This would usually be achieved. Credit targeted.	SL	Post planning
Thermal Zoning and Controls (9-11)	1	1	1		Credit awarded where the first Hea 04 credit has been achieved, and the thermal modelling analysis has informed the temperature control strategy for the building and its users. Refer to Technology Guide CTG065 Heating Control for examples. The strategy for proposed heating/cooling system(s) demonstrates that it has addressed the following: a. Zones within the building and how to effectively heat or cool these areas. b. The level of user control required, based on discussions with the end user. c. How systems will interact and how this may affect the building users. d. Whether a manual override is required for any automatic systems.	0.78%	This would usually be achieved. Credit targeted.	SL	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Hea 05 Acoustic performance					**To ensure the building is capable of providing an appropriate acoustic environment to provide comfort for building users.**				
Acoustic Performance (1-2)	3	3	3		Credits awarded where the contractor programmes in pre-completion acoustic testing, by a compliant test body to ensure the building areas meet the appropriate acoustic performance standards and testing requirements and the relevant standards are achieved (refer to guidance for further details). One credit: Sound Insulation -Achieve performance standards set out in Section 7 of BS 8233:2014. Alternatively, propose performance standard based on best practice. One credit: Internal Ambient Noise Levels - Achieve the standards in Section 7 of BS 8233:2014. One credit - Room Acoustics -Achieve the requirements relating to sound absorption and reverberation times, where applicable, set out in Section 7 of BS 8233:2014. Alternatively, a suitably qualified acoustician (SQA) is appointed to define a bespoke set of performance requirements related to the three principles defined above for all function areas in the building.	2.33%	3 credits are usually achieved at design stage; however, the testing is often missed which loses the credit at post construction. Ideally pre-planning, the report would be obtained to understand if any changes are needed to meet the credits. *To be discussed.*	McD / Elliot	Pre-planning (ideally)
Hea 06 Security					**To encourage the planning and implementation of effective measures that provide an appropriate level of security to the building and site.**				
Security of Site and Building (1-3) **RIBA STAGE 2 ACTION**	1	0	1		Credit awarded where a Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to RIBA Stage 2. The SQSS needs to develop a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA. The controls and recommendations will be incorporated into proposals and implemented in the as-built development. Any deviation from these recommendations need to be justified and agreed with the SQSS.	0.78%	Usually this would be targeted, but it can be difficult depending on the Police force. Previously for Gatwick, Scurr provided an email confirming SNA was not obtained (sought quotes, some hadn't replied). Credit is included in the optimum for now.	McD / Elliot	Pre-planning
Hea 07 Safe and healthy surroundings					**To encourage the provision of safe access around the site and outdoor space that enhances the wellbeing of building users.**				
Safe Access (1-6)	1	0	0		Credit awarded where the site is designed to allow for safe access for pedestrians and cyclists. Level of detail is comprehensive - refer to guidance for details. Points to consider include: cycle paths and footpaths connecting to any off site paths, paths connecting the building to the outdoor space and drop off areas to be located off/adjoining access road with direct access to footpath. Where delivery access areas and drop off areas exist: delivery areas are not directly accessed through general parking areas and do not cross or share pedestrian and cyclist routes and other outside amenity areas, provide a separate parking/waiting area for goods vehicles, ensure parking/turning areas are designed for simple manoeuvring.	0.78%	Site plan suggests the delivery area would be accessed through the general parking area. Credit not targeted.	-	-
Outside space (7)	1	0	1		There is an outside space providing building users with an external amenity area. When determining the appropriate size of the outside space, the building type, function, shift patterns and occupancy numbers should be considered. The outside space must: a) be an outdoor landscaped area, for example a garden, balcony or terrace; the majority of the space should be open to the sky b) have appropriate seating areas and be non-smoking, c) be located to ensure it is accessible to all building users and avoids areas that will have disturbances from sources of noise (e.g. car parks, busy roads, delivery areas etc.).	0.78%	This would usually not be achieved. However, there is plenty of outside space for there to be a dedicated area. Included in the optimum target for now. *To be discussed.*	McD / Scurr	Pre-planning
Sub-Total	**18**	**8**	**10**						
Weighted Sub-Total	**14**	**6.22**	**7.78**		**One health & wellbeing credit equals 0.78%**				

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
ENERGY									
Ene 01 Reduction of energy use and carbon emissions					**To minimise operational energy demand, primary energy consumption and CO_2 emissions.**		**Mandatory minimum requirements: 4 credits from Energy Performance for Excellent. 6 credits from Energy Performance and 4 from Energy Modelling and Reporting for Outstanding.**		
Energy Performance (1)	9	3	4		Up to 9 credits can be awarded where there is an improvement in the building operational related CO_2 emissions. The number of credits is based on the Energy Performance Ratio for New Constructions (using the BREEAM calculator). Note that negative improvement on notional figures will result in lower scores - aim to show improvement on each of the three parameters in the BRUKL (energy demand, primary energy, total CO_2 emissions). **FOUR CREDITS MANDATORY FOR EXCELLENT, SIX CREDITS MANDATORY FOR OUTSTANDING.**	6.86%	Estimates have been included in the targets for now. 3 credits were achieved for Chorley without PV, so this should be reviewed pre-planning to understand number of credits available. PV likely to be required to meet planning (and to show goodwill if Excellent isn't achieved).	SL	Pre-planning
Prediction of operational energy consumption (2-5)	4	4	4		Credits awarded where relevant members of the design team are involved in an energy design workshop focusing on operational energy performance, and additional energy modelling is undertaken during the design and post-construction stage to generate predicted operational energy consumption figures (refer to guidance for details). Predicted energy consumption targets are reported by end use, design assumptions and input data (with justifications). A risk assessment needs to be carried out highlighting any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.	3.05%	This has been targeted as it has previously been necessary for planning.	McD / Elliot / SL	Post planning
Ene 02 Energy monitoring					**To encourage the installation of energy sub-metering to facilitate the monitoring of operational energy consumption. To enable managers and consultants post-handover to compare actual performance with targets in order to inform ongoing management and help in reducing the performance gap.**		**Mandatory minimum requirements: One credit (sub-metering of end-use categories) for Very Good, Excellent and Outstanding.**		
Sub-metering of end-use categories (1-3)	1	1	1		**MANDATORY FOR VERY GOOD AND ABOVE:** Credit awarded where energy metering systems are installed that enable 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. This includes the following: space heating; domestic hot water; humidification; cooling; ventilation; pumps; lighting; small power; renewable or low carbon systems (separately); controls; and other major energy-consuming systems/plant (e.g. lifts, cold storage, pools, kitchen plant, drama studio rigs etc.). The energy consuming systems in buildings with a total useful floor area >1000m^2 are metered using an appropriate energy monitoring and management system. For smaller buildings, separate accessible sub-meters with pulsed outputs are acceptable. The energy consuming end uses should be identifiable to the building user, for example through labelling or data outputs.	0.76%	This is mandatory to achieve the target rating. Credit targeted.	SL	Post planning
Sub-metering of High Energy Load and Tenancy Areas (5)	1	1	1		Credit awarded where an accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed outputs or other protocol communication outputs which enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to all relevant function areas or departments within the building/unit. In smaller retail units (less than 200m^2), a single meter per unit for electricity and another for heating is sufficient to achieve this credit. Individual areas within each unit do not need to be sub-metered. For a development consisting of one or more larger units (i.e. greater than 200m²), sub-metering to allow for monitoring of the relevant function areas or departments within the unit must be specified, in addition to metering of the unit as a whole.	0.76%	This would usually be achieved. Credit targeted.	SL	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Ene 03 External lighting					**To reduce energy consumption through the specification of energy efficient light fittings for external areas of the development.**				
External Lighting (1-2)	1	1	1		Credit awarded where the average luminaire efficacy of the external light fittings within the construction zone is not less than 70 luminaire lumens per circuit Watt. AND All external light fittings are automatically controlled to prevent daytime operation and have presence detection in areas of intermittent use. Intermittent pedestrian traffic is where a pedestrian is in or approaching the space less than two-thirds of the time during the period when the lighting, without presence detection, would be switched on.	0.76%	This would usually be achieved. Credit targeted.	Ext M&E Consultant / SL / Butterfields / LAUK	Post planning
Ene 04 Low carbon design					**To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.**				
Passive Design (Passive Design Analysis) (1-4) **RIBA STAGE 2 ACTION**	1	0	0		Credit awarded where the first Hea 04 credit has been achieved and a building services engineer who is a member of CIBSE or an energy assessor conducts an analysis of the proposed building design (during Concept Design) to identify opportunities to implement passive design solutions. AND Passive design measures are implemented to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings, and the reduced energy demand and CO_2 emissions are quantified.	0.76%	Usually this isn't possible to achieve. Credit not targeted.	-	-
Passive Design (Free Cooling) (5-8) **RIBA STAGE 2 ACTION**	1	0	0		Credit awarded where the first Ene 04 credit is achieved, and the passive design analysis includes an analysis of free cooling solutions and the feasibility of implementing them. AND The building is naturally ventilated or uses any combination of the free cooling strategies e.g.: night-time cooling, ground coupled air cooling, displacement ventilation (not linked to any active cooling), ground water cooling, surface water cooling, evaporative cooling, desiccant dehumidification and evaporative cooling using waste heat, and absorption cooling using waste heat.	0.76%	This would usually not be achieved. Credit not targeted.	-	-
Low and Zero Carbon Technologies (LZC Feasibility Study) (9-12) **RIBA STAGE 2 ACTION**	1	1	1		Credit awarded where an energy specialist completes a feasibility study by the end of RIBA Stage 2 to establish the most appropriate recognised local (on-site or near-site) LZC energy sources for the development based on the feasibility study. A local LZC energy technology/technologies must be specified for the building/development in line with the recommendations of this feasibility study and the resulting reduced regulated carbon dioxide (CO_2) emissions need to be quantified.	0.76%	This would usually be achieved. The LZC Feasibility Study needs completing by the end of Stage 2. Credit targeted.	SL	Pre-planning
Ene 05 Energy efficient cold storage					**To encourage the installation of energy efficient refrigeration systems, in order to reduce operational greenhouse gas emissions resulting from the system's energy use.**				
Refrigeration Energy Consumption (1-2)	0	0	0		Credit awarded where the refrigeration system has been designed, installed and commissioned in accordance with the "Code of conduct for carbon reduction in the refrigeration retail sector" and BS EN 378-2: 2016 "Refrigeration systems and heat pumps - safety and environmental requirements". The system should use robust and tested refrigeration systems/components, normally those included in the Enhanced Capital Allowance (ECA) Energy Technology Product List (ETPL) or equivalent list. The refrigeration plant should be commissioned to comply with the commissioning criteria in Man 04. The criteria do not apply to domestic-scale refrigeration or refrigeration for kitchen and catering facilities where these are self-contained units not connected to building cooling systems.	0.00%	It is assumed that there will only be self-contained refrigeration units that do not require commissioning of the cooling system, therefore this has been filtered out the assessment.	-	-

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Indirect Greenhouse Gas Emissions (3-4)	0	0	0		Credit awarded where criteria 1 and 2 above are achieved and the installed refrigeration system should demonstrate a saving in indirect greenhouse gas emissions (CO_2 eq.) over the course of its operational life. This can be demonstrated through specification of technologies described in the Carbon Trust Refrigeration Road Map CO_2 emissions savings, in comparison with the baseline building.	0.00%	This would usually be filtered out of the assessment.	-	-
Ene 08 Energy efficient equipment					**To encourage installation of energy efficient equipment to ensure optimum performance and energy savings in operation.**				
Energy Efficient Equipment (1-3)	2	2	2		Credit awarded where the building's unregulated energy consuming loads are identified and their contribution to the total annual unregulated energy consumption of the building is estimated, assuming a typical/standard specification. Identify which of the following systems/process that will be responsible for a significant proportion of total annual unregulated energy consumption of the building and demonstrate a meaningful reduction in energy consumption. Swimming pool; Laundry facilities with commercial-sized appliances; Data centres incl server rooms; IT-intensive operating areas; Domestic-scale appliances (individual and communal facilities); Healthcare; Kitchen and catering facilities. If there are no systems/processes from the above list then this is not applicable.	1.52%	This would usually be achieved, with the kitchen using the most energy. Credits targeted.	SL / Fosters / McD	Post planning
Sub-Total	**21**	**13**	**14**						
Weighted Sub-Total	**16**	**9.90**	**10.67**		**One energy credit equals 0.76%**				
TRANSPORT									
Tra 01 Transport assessment and travel plan					**To reward awareness of existing local transport and identify improvements to make it more sustainable.**				
Travel Plan (1-5) **RIBA STAGE 2 ACTION**	2	2	2		Credit awarded where a site-specific transport assessment/statement and draft travel plan are developed at the Concept stage. The assessment must cover: a) Travel patterns and attitudes of existing users towards cycling, walking and public transport; b) Predicted travel patterns and transport impact of future users; c) Current local environment for pedestrians and cyclists (accounting for any age-related requirements of occupants and visitors); d) Reporting of the number and type of existing amenities within 500m of the site; e) Disabled access (accounting for varying levels and types of disability and visual impairment); f) Calculation of the existing public transport Accessibility Index (AI) (refer to 'methodology' in BREEAM manual for further details); g) Current facilities for cyclists. A travel plan should be developed to include proposals to increase or improve sustainable modes of transport and movement of people and goods. If the occupier is known, they should be involved in the development of the travel plan and it should be confirmed that the plan will be implemented and supported by the building's management in operation.	1.67%	A Travel Plan would usually be produced. The Travel Plan needs to have been produced by the end of Pre-planning (i.e. planning). Credits targeted.	Transport consultant	Pre-planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Tra 02 Sustainable transport measures					**To maximise the potential for local public, private and active transport through provision of sustainable transport measures appropriate to the site.**				
Pre-requisite (1)	0	Y	Y		Achieve criteria 3-5 for the Tra 01 credits above (i.e. achieve the travel plan criteria).	0%	As above.	Transport consultant	
Transport options implementation (2-3)	10	5	6		Identify and implement sustainable public, private and active transport measures from Table 7.4 of the BREEAM guidance to earn points. Examples of some of these measures include: - Divert a bus route to the development or introduce a new or enhanced bus stop (3 points); - Provide electric recharging stations (1 point); - Set up a car sharing group/facility and provide priority parking spaces for car sharers (1 point); - Provide compliant cycle storage spaces (1 per 10 staff and 1 per 20 public car parking spaces for large retail, 4 for small retail) and cyclist facilities (refer to guidance for further details) (1-2 points); - Demonstrate at least three existing amenities are present (refer to guidance for further details) (1 point). Up to 10 credits can be awarded based on the number of points earnt - number of points required is affected by the existing Accessible Index (AI) of the project as follows: • AI < 25: 10 points are needed to gain 10 credits • 25 ≤ AI < 40: 8 points are needed to gain 10 credits • AI of ≥ 40: 6 points are needed to gain 10 credits	8.33%	Credits would usually be achieved. The credits include an estimate for now. Could be additional if local amenities are nearby. EVCS - 1 credit Site plan demonstrates there will be 46 spaces plus 3 disabled spaces. Therefore, there should be 5 EVCS. Additionally, there has been 4 spaces shaded out (included in total), one extra required. Cycle Storage - 1 credit Site plan also shows there to be cycle stands, there will need to be sufficient lighting and number of stands checked to meet staff and customer requirements. Cyclist Facilities - 1 credit This has been targeted previously - changing area with benches and hooks. Additional Amenities - 3 credits The building itself is a new amenity, plus the outside space.	McD / Scurr/ LAUK / Ext M&E Consultant / Elliot	Post planning
Sub-Total	**12**	**7**	**8**		**One transport credit equals 0.83%**				
Weighted Sub-Total	**10**	**5.83**	**6.67**						
WATER									
Wat 01 Water consumption					**To reduce the consumption of potable water for sanitary use in new buildings through the use of water efficient components and water recycling systems.**		**Mandatory minimum requirement: One credit for Good, Very Good and Excellent. Two credits for Outstanding.**		
Water consumption (1-5)	5	3	3		Up to five credits awarded depending on the efficiency of the specified water consuming components compared to a baseline. This includes the following components where specified, and the figures noted are standard level 3 options: WCs 3.75l, urinals 1.5l, taps (wash hand basins 5l/min, kitchen taps 6l/min, pre-rinse nozzles 7.3l, waste disposal 0 l/min), showers 6l/min, baths 140l, dishwashers and washing machines (domestic/commercial/industrial sized - various figures). Greywater and/or rainwater systems can help offset the potable water consumption where these are used to supply water consuming components - please refer to the technical guidance. **ONE CREDIT MANDATORY FOR GOOD AND ABOVE. TWO CREDITS MANDATORY FOR OUTSTANDING.**	3.89%	Usually 3 credits. Flow restrictor may be required on taps due to recent confirmation that dishwashers are included, and the number of fittings for an NG100.	Elliot / SL	Post planning
Wat 02 Water monitoring					**To reduce the consumption of potable water in new buildings through the effective management and monitoring of water consumption.**		**Mandatory minimum requirement: Criterion 1 (water meter on mains supply) for Good, Very Good, Excellent and Outstanding.**		
Pre-requisite (1)	0	Y	Y		**MANDATORY FOR GOOD AND ABOVE - A water meter is specified on the mains water supply to each building, including where water is supplied via a borehole or other private source.**	0.00%	This would usually be achieved. Credit targeted.	SL / Ext M&E Consultant	Post planning
Water Monitoring (1-6)	1	1	1		Credit awarded where water consuming plant or areas, consuming 10% or more of the buildings total water demand, should be fitted with easily accessible sub meters or have water monitoring equipment integral to the plant or area. Each main and sub meter should have a pulsed output or other open protocol communication output enabling connection to a Building Management System (BMS) for monitoring consumption. If present, swimming pools, changing rooms, aquariums, large water tanks and laboratories need to be sub-metered irrespective of their water consumption.	0.78%			

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Wat 03 Water leak detection					**To reduce the consumption of potable water in new buildings through minimising wastage due to water leaks.**				
Leak Detection System (1-2)	1	1	1		Credit awarded where a leak detection system, capable of detecting a major leak on the mains supply within the building and between the building and the utilities water meter, is installed. It must be a permanent automated water leak detection system capable of alerting occupants to a leak OR an in-built automated diagnostic procedure for detecting leaks. It must be programmable by the occupier, avoid false alarms and be capable of identifying different flow/leakage rates. Activation should occur when flow through the meter is at a rate above a pre-set maximum over a pre-set period of time.	0.78%	This would usually be achieved. Credit targeted.	SL / Ext M&E Consultant	Post planning
Flow Control Devices (3)	1	1	1		Credit awarded where flow control devices that regulate the supply of water to each WC area and sanitary facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fittings). This applies to the cold water supply to taps, WCs and urinals. An example of a flow control device is a presence detector and controller (i.e. PIR linked to a solenoid valve).	0.78%	This would usually be achieved. Credit targeted.	SL / Ext M&E Consultant	Post planning
Wat 04 Water efficient equipment					**To reduce water consumption for uses not assessed under Wat 01 by encouraging specification of water efficient equipment.**				
Water Efficient Equipment (1-2)	1	1	1		Credit awarded where the project team identify the building's unregulated water demands that could be realistically mitigated or reduced (e.g. for irrigation, vehicle wash plant/equipment, swimming pools, project specific industrial processes, water filtration and treatment, cooling towers and humidification). The project team should then identify the system(s) or processes to reduce the unregulated water demand of the development and its operation, and demonstrate through either good practice design or specification a meaningful reduction in the total water demand of the building.	0.78%	This would usually be targeted. The only unregulated water use is often irrigation for planting and ideally all planting will rely solely on precipitation. Credit targeted.	Landscape	Post planning
Sub-Total	**9**	**7**	**7**						
Weighted Sub-Total	**7**	**5.44**	**5.44**		**One water credit equals 0.78%**				

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
MATERIALS									
Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)					**To reduce the burden on the environment from construction products by recognising and encouraging measures to optimise construction product consumption efficiency and the selection of products with a low environmental impact (including embodied carbon), over the life cycle of the building.**				
Superstructure (Comparison with the BREEAM benchmark and Option appraisal during Concept / Technical Design) (1-5) **RIBA STAGE 2 ACTION**	6	5	5		Up to six credits are awarded where opportunities for reducing environmental impacts of materials have been identified via options appraisals of the proposed superstructure design at Concept Stage and Technical Design. At Concept Stage, carry out an LCA options appraisal of 2 to 4 significantly different superstructure design options, using an LCA tool recognised by BREEAM. Note: the design options should fulfil the function requirements specified by the client and all statutory requirements. Demonstrate how the appraisal has been used to inform the design and present the results in an options appraisal summary document. Results need to be submitted to BRE at the end of Concept Design. This will include comparison with the BREEAM benchmark. At Technical Design, carry out an LCA options appraisal of 2 to 3 significantly different superstructure design options, based on the selected Concept Design option. Update the summary document from Concept Design, if one is available. Record and submit results via the submission tool. This will include comparison with the BREEAM benchmark. Note: the Technical Design credits can be achieved independently of the Concept Design. Credits are awarded based on the number of options included in the appraisal and the performance against the benchmark.	6.43%	Full modelling is usually done. The Concept Stage modelling needs to be completed by the end of Stage 2 (i.e. planning). Assume Method will be appointed. *To be discussed.*	Method	Pre-planning
Substructure and hard landscaping options appraisal during Concept Design (6-7) **RIBA STAGE 2 ACTION**	1	1	1		One credit awarded where criterion 4 for the superstructure concept design (see above) has been achieved AND opportunities for reducing environmental impacts of materials have been identified via an options appraisal of the proposed substructure and hard landscaping design at Concept Stage. The LCA options appraisal must include a combined total of at least 6 significantly different substructure or hard landscaping design options (at least two shall be substructure and at least two shall be hard landscaping). Note: the design options should fulfil the function requirements specified by the client and all statutory requirements. Demonstrate how the appraisal has been used to inform the design and present the results in an options appraisal summary document. Results need to be submitted to BRE at the end of Concept Design.	1.07%	See above.	Method	Pre-planning
Mat 02 Environmental impacts from construction products – EPDs					**To encourage availability of robust and comparable data on the impacts of construction products through the provision of EPD.**				
Specification of products with a recognised Environmental Product Declaration (EPD) (1-2)	1	0	1		Credit awarded for an EPD points score of ≥20. Construction products to be specified with EPDs (please refer to guidance for Methodology). Details of each EPD are inputted into the Mat 01/02 Results Submission Tool, including the material category classification. The Mat 01/02 Results Submission Tool will verify the EPD points score and award credits accordingly.	1.07%	Now that more companies are producing EPDs, there is the potential for this to be achieved. Credit included in the optimum for now, although previous assessments have not achieved it. Some standard products might need to be replaced if the required number of EPDs is not hit, and if the credit is needed for Excellent.	Scurr	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Mat 03 Responsible sourcing of construction products					**To facilitate the selection of products that involve lower levels of negative environmental, economic and social impact across their supply chain including extraction, processing and manufacture.**		**Mandatory minimum requirement: All timber used on the project is 'Legally harvested and traded timber' for Pass, Good, Very Good, Excellent and Outstanding.**		
Pre-requisite (1)	0	Y	Y		**MANDATORY FOR ALL RATINGS: Pre-requisite - 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy (TPP) - records of materials and certificates required to prove this.**	0.00%	This is mandatory to achieve the target rating.	QS	Post planning
Enabling sustainable procurement (2) **RIBA STAGE 2 ACTION**	1	1	1		Credit awarded where a sustainable procurement plan is used by the design team to guide specification towards sustainable construction products. The plan must: a) Be in place before Concept Design. b) Include sustainability aims, objectives and strategic targets to guide procurement activities. c) Include a requirement for assessing the potential to procure construction products locally and there must be a policy to procure construction products locally where possible. d) Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. If the plan is applied to several sites or adopted at an organisational level it must identify the opportunities and risks of procurement against a broad range of social, environmental and economic issues following BS ISO 20400:2017.	1.07%	This would usually be achieved. The Sustainable Procurement Plan needs to be in place before the end of Stage 2 (i.e. planning). Credit targeted. Standard plan was created for other projects.	McD	Pre-planning
Measuring responsible sourcing (3)	3	1	1		Up to 3 credits can be awarded where construction products procured or specified are responsibly sourced. Responsible sourcing accreditations include PEFC, FSC, ISO 14001 and BES 6001 (Refer to GN18 for others). Applicable materials categories include: Timber/timber-based products; concrete/cementitious; metal; stone/aggregate; clay-based; gypsum; glass; plastic, polymer, resin, paint, chemicals and bituminous; animal fibre/skin, cellulose fibre; other. Each product is entered into the Mat 03 Calculator using either Route 1 or 2 (refer to methodology in guidance) and credits awarded accordingly. Credits are awarded in proportion to the scope of the assessment. 1 credit where ≥ 10% of available points are achieved (2 credits for ≥ 20%, and 3 credits for ≥ 30%).	3.21%	Only one credit is usually achieved. BES 6001 performs better than ISO 14001 so products should be procured from manufacturers with this certification where possible.	Elliot / Structures. / QS	
Mat 05 Designing for durability and resilience					**To reduce the need to repair and replace materials resulting from damage to exposed elements of the building and landscape.**				
Designing for Durability and Resilience (1-4)	1	1	1		Credit awarded where the following is demonstrated: Part One: Protection is given to vulnerable parts of the building and landscaping against accidental or malicious damage (both internal and external), including areas exposed to high pedestrian traffic, vehicular and trolley movements. Part Two: Protection is given to exposed parts of the building against material degradation due to environmental factors. Each element or product needs to achieve an appropriate quality or durability standard (e.g. BS 7543:2015 - see guidance for other appropriate standards) OR a detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors is required. The roof and façade also need to be designed for cost-effective cleaning, replacement and repair and to prevent water damage, ingress and detrimental ponding. Please refer to the technical guidance for further details of the methodology to follow.	1.07%	This would usually be achieved. Credit targeted.	Scurr / Structures / LA	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Mat 06 Material efficiency					**To avoid unnecessary materials use arising from over specification without compromising structural stability, durability or the service life of the building.**				
Material Efficiency (1-3) **RIBA STAGE 1 ACTION**	1	0	1		Credit awarded where at the Preparation and Brief and Concept Design stages, the team sets targets and reports on opportunities and methods to optimise the use of materials. These must be done for each of the following stages: Preparation and Brief, Concept Design, Developed Design, Technical Design and Construction. In addition, the implementation of material efficiency must be developed and recorded during: Developed Design, Technical Design and Construction stages. Targets and actual material efficiencies achieved also need to be reported.	1.07%	A previous scheme has achieved this but it did need some amending as BRE are strict on the requirements. The report and study would need to be produced before the end of Stage 2 (i.e. planning). Credit included in the optimum for now.	Scurr	Pre-planning
Sub-Total	**14**	**9**	**11**		**One materials credit equals 1.07%**				
Weighted Sub-Total	**15**	**9.64**	**11.79**						
WASTE									
Wst 01 Construction waste management					**To reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.**		**Mandatory minimum requirement: One credit for Outstanding.**		
Pre-demolition audit (1-3) **RIBA STAGE 2 ACTION**	0	0	0		Credit awarded where a pre-demolition audit is completed for any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment, reuse or recycling is feasible and to set targets for waste management and maximise the recovery of material. The audit must be carried out at RIBA Stage 2 by a competent person prior to strip-out or demolition works and be referenced in the resource management plan (RMP). It must compare actual waste arisings and waste management routes used with those forecast and investigate significant deviations from planned targets.	0.00%	From looking on Google Maps, it does not appear that there would need to be any demolition. Credit not applicable for now. *To be confirmed.*	-	Pre-planning
Construction Resource Efficiency (4-5)	3	1	1		Up to three credits awarded where a Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to onsite construction and dedicated offsite manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction. Where construction waste related to on-site construction and off-site manufacture/fabrication (excluding demolition and excavation waste) meets or is lower than the benchmarks as follows (per $100m^2$ GIFA): One credit = $13.3m^3$ / 11.1 tonnes, Two credits = $7.5m^3$ / 6.5 tonnes, Three credits = $3.4m^3$ / 3.2 tonnes. Accurate data records on waste arisings and waste management routes must also be provided. **ONE CREDIT MANDATORY FOR OUTSTANDING.**	2.00%	One credit targeted for now. This could be increased. Site Waste Management Plan required as well as producing low amounts of waste.	McD / QS	Post planning
Diversion of Resources from Landfill (6-7)	1	1	1		One credit awarded where 70% by volume /80% by tonnage of non-hazardous construction waste and 80% by volume/ 90% by tonnage of non-hazardous demolition waste generated by the development will be diverted from landfill and reused or recycled. Materials should be sorted into separate key waste groups, according to the waste streams generated by the scope of the works, either on or off-site.	0.67%	This would usually be achieved. Credit targeted.	QS	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Wst 02 Use of recycled and sustainably sourced aggregates					**To encourage the use of more sustainably sourced aggregates, encourage reuse where appropriate and avoid waste and pollution arising from disposal of demolition and other forms of waste.**				
Pre-requisite (1)	0	N	N		Where demolition occurs on site a pre-demolition audit needs to be completed for any existing buildings, structures or hard surfaces, in accordance with Wst 01.	0%	It does not appear that there will be any demolition (see above).	-	-
Project Sustainable Aggregate Points (2-6)	1	0	1		Credit awarded where all aggregate types and uses for the project are identified (refer to guidance for different types and uses). The quantity (in tonnes), source region and distance travelled also needs to be determined for each aggregate type/use. This is inputted into the Wst 02 calculator to generate points and number of credits earned. 3.5-6 points are needed to gain 1 credit.	0.67%	This is usually targeted in the optimum. The contractor tends to confirm.	QS / SE	Post planning
Wst 03 Operational waste					**To encourage the recycling of operational waste through the provision of dedicated storage facilities and space.**		**Mandatory minimum requirement: One credit for Excellent and Outstanding.**		
Operational Waste (1-2)	1	1	1		**MANDATORY FOR EXCELLENT AND ABOVE:** Credit awarded where there is dedicated space(s) to cater for the segregation and storage of operational recyclable waste generated by the assessed units. Note, flagship units must have their own dedicated facilities. The space must be clearly labelled, accessible and of a capacity appropriate to the building type, size, number of units and predicted volumes of waste. Where the building occupier is not known, a default size of $2m^2$ per $1000m^2$ GIFA, with an additional $2m^2$ per $1000m^2$ where there is catering (subject to a maximum size of $20m^2$) can be used to size the recycling storage area. General waste provision is in addition. Where appropriate, the following facilities are provided as part of its waste management strategy: a) Static waste compactor(s) or baler(s); b) Vessel(s) for composting suitable organic waste OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility; c) A water outlet where compostable food waste and organic material will be stored.	0.67%	This would usually be achieved. Credit targeted.	Scurr / SL / McD	Post planning
Wst 05 Adaptation to climate change					**To minimise the future need of carrying out works to adapt the building to take account of more extreme weather changes resulting from climate change and changing weather patterns.**				
Resilience of structure, fabric, building services and renewables installation (1-3) **RIBA STAGE 2 ACTION**	1	1	1		Credit awarded where a climate change adaptation strategy appraisal is conducted using a systematic risk assessment which identifies the impact of extreme weather conditions arising from climate change on the building over its projected life cycle. This needs to cover installation of building services and renewable systems, as well as structural and fabric resilience aspects and include: • Hazard identification and assessment • Risk estimation, evaluation and management. Recommendations or solutions based on strategy appraisal also needs to be developed before or during Concept Design, that aim to mitigate the identified impact and an update during Technical Design needs to be provided demonstrating how the recommendations or solutions have been implemented.	0.67%	This would usually be achieved. The appraisal needs to be done by the end of Stage 2 (i.e. planning). Credit targeted.	Scurr / Elliot / SL /Structures / Civils	Pre-planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Wst 06 Design for disassembly and adaptability					**To avoid unnecessary materials use, cost and disruption arising from the need for future adaptation works as a result of changing functional demands and to maximise the ability to reclaim and reuse materials at final demolition in line with the principles of a circular economy.**				
Design for disassembly and functional adaptability - recommendations (1-2) **RIBA STAGE 2 ACTION**	1	1	1		Credit awarded where a study is conducted exploring the ease of disassembly and the functional adaptation potential of different design scenarios by the end of Concept Design (refer to Methodology in guidance). Recommendations or solutions also need to be developed based on the study during or prior to Concept Design.	0.67%	This would usually be achieved. The study needs to be conducted by the end of Stage 2 (i.e. planning). Credit targeted.	Scurr / Elliot / SL	Pre-planning
Disassembly and functional adaptability – implementation (3-5)	1	1	1		Credit awarded where the first Wst 06 credit has been achieved and updates and changes are provided during Technical Design, on how the recommendations or solutions have been implemented where practical and cost effective. A building adaptability and disassembly guide also needs to be provided to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	0.67%	This would usually be achieved. The adaptability study will need to be updated at Technical Design stage to explain how the recommendations have been implemented. Credit targeted.	Scurr / Elliot / SL	Post planning
Sub-Total	**9**	**6**	**7**		**One waste credit equals 0.67%**				
Weighted Sub-Total	**6**	**4.00**	**4.67**						
LAND USE & ECOLOGY									
LE 01 Site selection					**To encourage the use of previously occupied or contaminated land and avoid land which has not been previously disturbed.**				
Previously Occupied Land (1)	1	0	0		Credit awarded where at least 75% of the footprint of the proposed development (including temporary site works) has been previously occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.	1.00%	The current site looks to be a field. Credit not targeted.	-	-
Contaminated Land (2-3)	1	0	0		Credit awarded where the land within the site is deemed to be significantly contaminated by a contaminated land professional, who identifies the degree of contamination, sources/types of contamination and remediation options. AND The client/principal contractor commits to undertaking all remediation in line with the remediation strategy recommended by the specialist and this is carried out prior to development.	1.00%	TBC. Currently not included in the targets.	McD	Pre-planning
LE 02 Ecological risks and opportunities					**To determine the ecological baseline and zone of influence of the site and identify risks and opportunities for achieving optimum outcomes.**				
Pre-requisite (Statutory obligations) (1)	0	Y	Y		**Pre-requisite achieved where the client or contractor confirms compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.**	0%	Assumed this will be achieved.	Client/ Contractor	

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Survey and evaluation (2-6) **RIBA STAGE 1 ACTION**	1	1	1		**Route 1 (Project team member) -** the site has been evaluated using the Ecological Risk Evaluation Checklist (GN34) to confirm that the Foundation route can be used (refer to guidance for methodology). **Route 2 (Ecologist)** - A Suitably Qualified Ecologist (SQE) carries out a survey and evaluation (see Methodology) for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions (typically Preparation and Brief Stage). The survey determines the ecological baseline of the site including: a) Current and potential ecological value and condition of the site, and related areas within the zone of influence; b) Direct and indirect risks to current ecological value; c) Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the zone of influence. Recommendations and data collected from the survey are shared with appropriate project team members to influence decisions made for activities during site preparation, design and construction works.	1.00%	The current site looks to be a field with some trees and hedgerows around the perimeter. Credit targeted. McD to liaise with ecologist to review all credits and run ecology workshop.	McD / Eco	Pre-planning
Determining ecological outcomes (6-7) **RIBA STAGE 2 ACTION**	1	1	1		**For both Route 1 and 2:** Pre-requisite and first credit achieved AND The project team liaise and collaborate with stakeholders early enough to influence key planning decisions (typically Concept Design stage), to: a: Identify the optimal ecological outcomes for the site. b: Identify, appraise and select measures to meet the optimal ecological outcomes for the site, in line with the mitigation hierarchy of action: 1) avoidance; 2) protection; 3) reduction or limitation of negative impacts; 4) on site compensation; and 5) enhancement, considering the capacity and feasibility within the site, or where viable, off-site.	1.00%	This would usually be achieved. Credit targeted. As above.	McD / Eco	Pre-planning
LE 03 Managing impacts on ecology					**To avoid, or limit as far as possible, negative impacts on the ecology of the site and its zone of influence arising as a result of the project.**				
Pre-requisite (Ecological risks and opportunities) (1)	0	Y	Y		**Pre-requisite awarded where LE 02's 'Survey and evaluation and Determining ecological outcomes' criteria have been achieved using the Foundation route (Route 1) or the Comprehensive route (Route 2).**	0.00%	This would usually be achieved. As above for LE 02.	Client/ Contractor	
Planning and measures on-site (2-4) **RIBA STAGE 2 ACTION**	1	1	1		**All routes:** Credit awarded where further planning to avoid and manage negative ecological impacts on-site is carried out early enough to influence the concept design and design brief as well as site preparation planning (typically Concept Design stage). Please refer to the BREEAM Methodology for further details. On-site measures for managing negative ecological impacts during site preparation and construction are implemented based on input from the project team in collaboration with representative stakeholders and data collated as part of LE 02.	1.00%	This would usually be achieved. Credit targeted. As above.	McD / Eco	Pre-planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Managing negative impacts (5-8)	2	1	2		**Route 1 (Project team member) (one credit)** - Credit awarded where criteria 2 and 3 have been achieved and where negative impacts from site preparation and construction works have been managed in accordance with the mitigation hierarchy (please refer to guidance for Methodology) and no overall loss of ecological value has occurred. **Route 2 (Ecologist) (up to two credits)** - Criteria 2-4 have been achieved. Negative impacts from site preparation and construction works have been managed according to the hierarchy, in line with the SQE's recommendations AND either: a) No overall loss of ecological value has occurred (2 credits) b) The loss of ecological value has been minimised (1 credit).	2.00%	Comparing the current site to the proposed site layout suggests there could be a loss of vegetation and trees. However, the site plan does include some large areas for enhanced planting and biodiversity. One credit targeted and two credits in the optimum for now. Eco to review...	McD / Eco / LA	Pre-planning
LE 04 Ecological change and enhancement					**To enhance the ecological value of the site and areas within its zone of influence in support of local, regional and national priorities.**				
Pre-requisite (Managing negative impacts on ecology) (1-2)	0	Y	Y		**Pre-requisite awarded where criterion 6 for Route 1 or 8 for Route 2 in LE 03 have been achieved AND the client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.**	0.00%	This would usually be achieved. As above for LE 03.	McD	
Ecological enhancement (4-5)	1	1	1		**Route 1 (Project team member)** - N/A, credit for route 2 only. **Route 2 (Ecologist)** - Credit awarded where measures have been implemented that enhance ecological value based on input from the project team and SQE (in liaison and collaboration with representative stakeholders and with consideration of data shared and collated). Measures are implemented in the following order: a) On site; and where this is not feasible, b) Off site within the zone of influence. Collated data is analysed and where potentially valuable, is provided to local environmental records centres nearest to, or relevant for, the site.	1.00%	The site plan shows large areas for planting and biodiversity. Credit targeted.	McD / Eco / LA	Pre-planning
Change and enhancement of ecology (3 & 6)	3	2	2		**Route 1 (Project team member)** - One credit awarded where locally relevant ecological measures have been implemented that enhance the site's ecological value. The measures adopted are based on recommendations from recognised 'local' ecological expertise and specialist input and guidance and input from the project team in collaboration with representative stakeholders and data collated as part of LE 02. **Route 2 (Ecologist)** - Up to 3 credits awarded based on the change in ecological value calculation occurring as a result of the project. This must be calculated in accordance with Guidance Note 36. Credits are awarded as follows: - Minimising loss of ecological value (one credit - percentage score of 75-94) - No net loss of ecological value (two credits - percentage score of 95-104) - Net gain of ecological value (three credits - percentage score of 105-109).	3.00%	Two credits targeted for now. TBC.	McD / Eco / LA	Pre-planning
LE05 Long term ecology management and maintenance					**To secure ongoing monitoring, management and maintenance of the site and, its habitats ecological features to ensure intended outcomes are realised for the long term.**				
Pre-requisite (Statutory obligations, planning and site implementation) (1-2)	0	Y	Y		**Pre-requisite achieved where the client or contractor has confirmed that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site, AND the following:** **Route 1 (Project team member): Criteria 6 in LE 03 have been achieved;** **Route 2 (Ecologist): Criteria 8 in LE 03 have been achieved, and at least one LE 04 'enhancement of ecology' credit has been achieved.**	0.00%	This would usually be achieved. As above for LE 03 and LE 04.	McD /Eco	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Management and maintenance throughout the project (3-6)	1	1	1		Credit awarded where measures have been implemented based on input from the project team in collaboration with representative stakeholders and data collated as part of LE 02 to manage and maintain ecology throughout the project. To ensure the optimal ecological outcomes agreed in LE 02 are met in-practice, these measures must monitor and review the effectiveness of the mitigation and enhancement measures in place for LE 03 & LE 04 to ensure they are implemented. A section on Ecology and Biodiversity needs to be included in tenant/building owner information to inform the owner/occupant of local ecological features, value and biodiversity on or near the site.	1.00%	This would usually be achieved. Credit targeted. Eco to confirm..	Eco / McD	Post planning
Landscape and ecology management plan (7)	1	1	1		Credit awarded where a landscape and ecology management plan is developed (in accordance with BS 42020:2013 Section 11.1), covering the first five years after project completion and including: a) Actions and responsibilities of relevant individuals prior to handover; b) The ecological value and condition of the site at handover and how this is expected to change; c) Identification of opportunities for ongoing alignment with activities beyond the development project which support the aims of BREEAM; d) Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts. e) Clearly defined and allocated roles and responsibilities for delivering the plan. The landscape and management plan is updated to support maintenance of the ecological value of the site.	1.00%	This would usually be achieved. Credit targeted. Eco to confirm..	LA / Eco	Post planning
Sub-Total	**13**	**9**	**10**		**One land use and ecology credit equals 1%**				
Weighted Sub-Total	**13**	**9.00**	**10.00**						
POLLUTION									
Pol 01 Impact of refrigerants					**To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.**				
Pre-requisite (2)	0	Y	Y		Where there are refrigerants specified within the installed plant/systems: All systems with electric compressors must comply with the requirements of BS EN 378:2016 (Parts 2 and 3) and, if they contain ammonia, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice. This is not applicable where there are no refrigerants.	0.00%	This would usually be achieved. One credit targeted.	SL / Foster	Post planning
Impact of Refrigerants (1-7)	3	1	1		One credit is awarded where the systems using refrigerants have Direct Effect Life Cycle CO_2 equivalent emissions of ≤ 1000kgCO_2e/kW cooling/heating capacity; two credits if ≤ 100kgCO_2e/kW cooling/heating capacity OR all refrigerants have a GWP of <10. An additional credit is awarded where all systems are hermetically sealed or only use environmentally benign refrigerants, OR, if not sealed, systems have an automated refrigerant leak detection system capable of continuously monitoring for leaks and automatically respond and manage the remaining refrigerant in the event of a leak. All three credits awarded where there are no refrigerants within the installed plant/systems.	2.00%			
Pol 02 Local air quality					**To contribute to a reduction in local air pollution through the use of low emission combustion appliances in the building.**				
Local air quality (1-3)	2	2	2		Credits awarded where EITHER all heating and hot water is supplied by non-combustion systems (e.g. powered by electricity) OR Emissions from all installed combustion plant providing space heating and hot water do not exceed the levels set in Table 12.4 and 12.5 (please refer to guidance for these set levels and method for determining pollution location). Manufacturer's labelling needs to be provided in compliance with European directive 2009/125/EC.	1.33%	Two credits would usually be targeted, based on the specification of electric ASHP for space heating and hot water. This is standard on all schemes.	SL	Post planning

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Pol 03 Flood and surface water management					**To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on-site and off-site, watercourse pollution and other environmental damage.**				
Pre-requisite (1)	0	Y	Y		**An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.**	0.00%	This would usually be achieved.	PM	
Flood Resilience (2-4)	2	2	2		One credit is awarded where the assessed development is located in a zone defined as having a medium or high annual probability of flooding and is not in a functional floodplain; AND the ground level of the building and access to the building and site are 600mm above the design flood level for the site's location, OR, where final building and site design reflects recommendations made by appropriate consultant, in accordance with BS 8533: 2017. Two credits are awarded where the assessed development is located in a zone defined as having a low annual probability of flooding and there is a low risk of flooding from all sources: fluvial, tidal, surface water, groundwater, sewers, reservoirs, canals and other artificial sources. All current and future sources of flooding must be taken into account.	1.33%	Flood map for planning suggests the site is in a low flood risk area. Two credits targeted for now, but TBC. FRA required.	Civils	Post planning
Pre-requisite (Surface Water Run-Off) (5)	0	Y	Y		**Pre-requisite met where the design for surface water run-off is bespoke, i.e. specific to site and the environment surrounding the site (natural and man-made). Priority levels detailed in the guidance need to be followed.**	0.00%	This would usually be achieved.	Civils	
Surface Water Run-Off (6-16)	2	2	2		One credit is awarded where surface water drainage measures are specified to ensure the peak run-off rate shows a 30% improvement (for brownfield sites) or is no greater (for greenfield sites) for the developed site compared to pre-development, in line with 1 year and 100 year return period events. A second credit is awarded where flooding of property will not occur in the event of local drainage system failure. In addition, the drainage strategy must meet certain other requirements from one of two options detailed in the BREEAM guidance. Maintenance agreements should be in place for the ownership, operation and maintenance of all specified SuDs. All calculations must include an allowance for climate change, in accordance with current best practice guidelines.	1.33%	This would usually be achieved, but is site dependent. Credits targeted. CE to review and confirm.	Civils	Post planning
Minimising Watercourse Pollution (16-23)	1	0	0		Credit awarded where there is no discharge from the developed site for rainfall up to 5mm AND Effective on site treatment has been specified in areas that could be a source of watercourse pollution, including low and high risk (oil/petrol interceptors required) areas. All systems must be designed and installed in line with PPG3 and the SUDS manual and with PPG13 for vehicle wash areas. A comprehensive up-to-date drainage plan should be handed over to building/site occupiers at the end of the project.	0.67%	Not targeted for now. TBC.	Civils	-

Credit Title	CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
	Credits Available	Base Target	Optimum Target						
Pol 04 Reduction of night time light pollution					**To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, thereby reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.**				
Reduction of Night Time Light Pollution (1-5)	1	0	1		Credit awarded where the external lighting design is in compliance with the Institution of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light (2011) and all external lighting (except security lighting) is automatically switched off between 2300-0700. If safety or security lighting is provided, these dim down to the lower levels in Table 2 of the ILP's guidance notes. Illuminated advertisements must comply with ILP PLG05. 'External lighting' includes both lighting mounted externally, and lighting mounted inside a building that is primarily intended to enhance its external appearance, or light external spaces, after dark.	0.67%	The aim of the credit is to reduce light pollution when the building is not in use (KBCN0697) so operational lighting between 2300 - 0700 does not need to be modified for compliance. Included in the optimum for now.	SL / Butterfields / LA UK	Post planning
Pol 05 Reduction of noise pollution					**To reduce the likelihood of noise arising from fixed installations on the new development affecting nearby noise-sensitive buildings.**				
Reduction of Noise Pollution (1-5)	1	1	1		A noise impact assessment is carried out by a suitably qualified acoustic consultant in compliance with BS 4142:2014 and measures: a) Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed building; b) The rating noise level resulting from the new noise source. The noise levels from the proposed development, when measured at the nearest/most exposed noise sensitive development, should be at least 5dB lower than the background noise throughout the day and night. Where changes in noise level exceed this, measures should be installed to attenuate noise at its source in order to comply with these levels. OR Credit awarded where there are, or will be, no noise-sensitive areas/buildings within 800m of the or in the development.	0.67%	This would usually be achieved. Credit targeted.	Acoustics / McD	Post planning
Sub-Total	**12**	**8**	**9**		**One pollution credit equals 0.67%**				
Weighted Sub-Total	**8**	**5.33**	**6.00**						
INNOVATION CREDITS / EXEMPLARY LEVEL CREDITS - A maximum of 10 credits are available in aggregate from any combination of the following:									
Man 03 **Responsible Construction Practices (23)**	1	0	0		Achieve all items in Table 4.1 or a CCS score of 39 overall, and a minimum of 13 points per section.	1.00%	Currently not targeted.	-	-
Hea 01 **Visual Comfort (14-15)**	2	0	0		Up to two credits awarded independently as follows: One credit awarded where a higher level of daylighting is achieved. Please refer to the technical guidance for details. One credit awarded where lighting in each zone can be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. Dimming and control gear should avoid flicker and noise.	1.00%	This would usually not be achieved.	-	-
Hea 02 **Indoor Air Quality (11)**	1	0	0		Credit awarded where three of the products are specified to comply with lower levels of formaldehyde and VOCs, as per the relevant table. Please refer to the technical guidance for details.	1.00%	This would usually not be achieved.	-	-
Hea 06 **Security (4)**	1	0	0		Credit awarded where a compliant risk based security rating scheme (e.g. SABRE) has been used and the performance against the scheme has been confirmed by independent assessment and verification.	1.00%	This would usually not be achieved.	-	-

Credit Title		CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
		Credits Available	Base Target	Optimum Target						
Ene 01	**Reduction of Energy Use and Carbon Emissions (6-12)**	5	0	0		Up to three credits can be achieved where the building achieves an EPR NC ≥ 0.9 and zero net regulated CO2 emissions. Energy generation from on-site and near-site LZC sources must be sufficient to offset all carbon emissions from regulated energy use plus a percentage of emissions from unregulated energy use (one credit achieved for offsetting 10% of CO2 emissions from unregulated energy use; two credits for offsetting 50%). Three credits where the building is deemed to be carbon negative (where > 100% of carbon emissions from unregulated (and regulated) energy use are offset by energy generated from on-site and near-site LZC sources. Up to two credits can be achieved where all Ene 02 Energy monitoring credits have been awarded, and the client/building occupier commits funds to pay for the post occupancy stage, which requires an energy assessor to report on actual energy consumption compared to the targets. The energy model must be submitted to the BRE and retained by the building owner.	1.00%	To be reviewed at a later date. Not targeted for now.	-	-
Wat 01	**Water Consumption (7-8)**	1	0	0		Credit awarded where the water consumption (litres/person/day) for the assessed building achieves a 65% improvement when assessed via the standard approach. Where the standard approach cannot be used, credit awarded where level 5 is achieved and > 95% of WC or urinal flushing demand is met using recycled non-potable water. Refer to 'Methodology' in guidance.	1.00%	This would usually not be achieved.	-	-
Mat 01	**Environmental Impacts - Building LCA (8-18)** **RIBA STAGE 2 ACTION**	3	1	1		Up to three credits awarded independently as follows: One credit where an LCA options appraisal of at least 3 significantly different core building services design options is undertaken at Concept Design. See BREEAM manual and Mat 01 above for further details. One credit where the Life Cycle Cost analysis credits under Man 02 are achieved and the LCC and LCA analyses are aligned. Please see BREEAM manual for further details. One credit where a suitably qualified third party carries out the building LCAs or produces a report verifying the building LCAs accurately represent the designs under consideration during Concept Design and Technical Design. Itemise the findings of the verification checks including, as a minimum, the quality requirements as per the BREEAM manual.	1.00%	One credit would usually be achieved for verification of the LCA.	Method	Pre-planning
Mat 03	**Responsible sourcing of construction products (4)**	1	0	0		Credit awarded where at least 50% of the available responsible sourcing points have been achieved, and the calculation includes building services.	1.00%	This would usually not be achieved.	-	-
Wst 01	**Construction Waste Management (8-11)**	1	0	0		Credit awarded where the total non-hazardous construction waste and final diversion of resources from landfill figures exceed the benchmarks: ≤ 1.6m^3 / 1.9 tonnes non-hazardous construction waste generated by the development per 100sqm GIFA; and at least 85% by volume / 90% by tonnage of non-hazardous construction waste, 85% by volume / 95% by tonnage of non-hazardous demolition waste, and 95% by volume / 95% by tonnage of excavation waste is diverted from landfill.	1.00%	This would usually not be achieved.	-	-
Wst 02	**Use of recycled and sustainably sourced aggregates (7)**	1	0	0		Credit awarded where the Project Sustainable Aggregate Points score is more than 6.	1.00%	This would usually not be achieved.	-	-

Credit Title		CREDITS			Status	Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions	Actionee	Action deadline
		Credits Available	Base Target	Optimum Target						
Wst 05	**Adaptation to climate change (4-5)**	1	0	0		Credit awarded where the criteria for Wst 05 have been achieved plus certain criteria from Hea 04, Ene 01, Ene 04, Wat 01, Mat 05 and Pol 03.	1.00%	This would usually not be achieved.	-	-
LE 02	**Wider site sustainability (8-10)**	1	0	0		Credit awarded where the team considers wider site sustainability-related activities and the potential for ecosystem service related benefits when determining the optimal ecological outcome (refer to guidance methodology) AND Hea 07 (both credits), Pol 03 (Surface water run off & Minimising watercourse pollution) and Pol 05 credits have been achieved.	1.00%	This would usually not be achieved.	-	-
LE 04	**Change and enhancement of ecological value (7)**	1	0	0		Credit awarded where a significant net gain of ecological value (percentage score of 110 or above) has been achieved.	1.00%	This would usually not be achieved.	-	-
Inn 01	**Special Innovative Feature (2)**	10	0	0		Up to ten credits can be awarded if a successful application is made to the BRE to have any particular building feature, technology, system or process associated with the project recognised as 'innovative'. One credit available per successful application.	10.00%	This would usually not be achieved.	-	-
Sub-Total		**10**	**1**	**1**		**One Innovation credit = 1%. A maximum of 10% can be awarded in this section.**				
Weighted Sub-Total		**10**	**1.00**	**1.00**						

TOTALS

Base Target	**63.71**
Optimum Target	**74.48**
Total required for 'Pass'	**30**
Total Required for 'Good'	**45**
Total required for 'Very Good'	**55**
Total required for 'Excellent'	**70**
Total required for 'Outstanding'	**85**

PROJECT TEAM KEY:	
McDonalds = Project Client	Contractor = Contractor
PM = Project Manager	CE = Civil Engineer
Scurr = Architect	TP = Transport Planner
QS = Quantity Surveyor	Eco = Ecologist
SL = Mechanical and Electrical Engineer	Aco = Acoustician
LA = Landscape Architect	AP = BREEAM Accredited Professional
SE = Structural Engineer	**BREEAM ASSESSOR/AP (Method):** Method Consulting LLP

Completed by: AMG/RC Date: 18/01/23

Checked by: NCF Date: 18/01/23

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