

Preliminary BREEAM Assessment

Room2 Homotel Piccadilly Manchester



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Executive summary

Introduction

Eight Versa has been appointed, as registered BREEAM assessors, to carry out an assessment of the proposed refurbishment at Room2 Homotel Piccadilly Manchester. This project will be assessed under the BREEAM 2014 Refurbishment and Fit Out (Non-Domestic Buildings) methodology.

This summary is a pre-assessment of the development and details the anticipated score following the information provided by the design team at a meeting held on 25th April 2023 with a BREEAM Accredited Professional and subsequent discussions.

This report has been prepared by Eight Versa on behalf of Northside (Manchester) Ltd (trading name - Lamington Group) to support a full planning application and Listed Building Consent for an aparthotel development (hereafter referred to as the 'Proposed Development') at 12-16 Manchester Piccadilly, Manchester M1 3AN (hereafter referred to as 'the Site').

Lamington Group are the developer behind the Room2 Homotel provider. Room2 Homotel strive to create places to live, not just to stay. They are committed to delivering a landmark building, which will achieve a whole of life, net-zero carbon development, and to deliver the UK's first net zero tower. Room2 Homotel, are a hotel provider who have hotels in London (Chiswick, Hammersmith), Southampton and Belfast and are looking to expand into the north of England with their first northern hotel to be located in Manchester.

Project Summary

The BREEAM requirements for the refurbishment and fit out of Room2 Homotel Piccadilly Manchester is as follows:

- 'Excellent' BREEAM rating

The project was registered with BRE with reference number BREEAM-0098-7867.

Score Summary

The site reviewed currently targets a score of 73.61%, which equates to an 'Excellent' rating.

The action plan on the following pages details the measures required to increase the score to 86.90%, which equates to an 'Outstanding' rating.

Eight Versa recommends a safety margin of at least 3-5% to safeguard any rating at formal assessment.

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Description of site

The site is located within the Manchester City Centre on the west side of Piccadilly, to the south of Piccadilly Gardens and north of Piccadilly train station. The site is located at 12 - 16 Piccadilly, Manchester M1 3AN.

The site encompasses the vacant Grade II Listed former Union Bank building and adjacent vacant land; the Waldorf Public House and Indemnity House (no, 7 Chatham St) immediately adjoin the site but do not form part of the proposal. The site itself is bound by Piccadilly, Gore Street and Chatham Street.

The land adjacent to the Listed Building is currently a vacant and derelict site, offering adverse visual impacts to the urban block and has an adverse impact on the streetscape given the lack of enclosure. The site is in a key, prominent, city centre location. In addition, the setting of the Listed Building is adversely affected by the presence of a gap site immediately adjacent to it.

The site is within close proximity to Piccadilly Railway Station and has a frontage onto Piccadilly, which is an important city centre street and key gateway pedestrian pathway for those entering or exiting the railway station and wishing to connect to Manchester primary retailing and central commercial areas in particular. Market Street, which is at the heart of Manchester's Primary Retail Area, merges with Piccadilly at its western end. Just to the south of Market Street is Manchester's established commercial core. Stevenson Square Conservation Area runs parallel to the Site along the east side of Piccadilly.

The site has high levels of accessibility in terms of its location, boasting immediate access to a variety of public and private transport modes. In location terms, the site is situated within easy walking and cycling distance to a number of key services and facilities within Manchester City Centre. The site is located in the heart of the city and is well connected to surrounding areas by a comprehensive network of illuminated pedestrian routes.

There is a major bus interchange hub located at Piccadilly Gardens, approximately 330m from the Site, which is served by more than 85 bus services connecting the majority of the Greater Manchester area. The nearest bus stops are located adjacent to the proposed development along A6 Piccadilly, approximately 40 meters from the Site.

Description of development

"Full planning permission for the of a 34 storey building (land at no. 14-16 Piccadilly) and conversion of adjacent building (no.12 Piccadilly) (basement to fourth floor) to create an aparthotel, including a ground floor cafe (Use Class E (b)), first floor exhibition hall (Use Class F1) and a rooftop bar and restaurant (Use Class E (b)), and associated works."

Description of the proposal

The proposal comprises the conversion of the Grade II Listed Building Union Bank, including internal alterations, and the construction of a new 34 storey building on the 'gap site' which adjoins the Listed Building to form a 251- bedroom aparthotel and associated ancillary spaces including ground floor café, first floor exhibition space, restaurant and rooftop amenities.

Room2 Homotel will be a landmark building, achieving Whole Life Net Zero Carbon. The scheme will integrate a range of sustainable design features and demonstrate leadership and inspiring action to create a sustainable future.

New public amenities will be included as part of the scheme, including a Net Zero Exhibition, Events Spaces, Fair Cost Café, Rooftop Bar, Restaurant and terraces; creating a new destination and offering something back to the city and the local community.

The proposal will bring the former Grade II listed Union Bank building back into active use. A heritage led design strategy has been incorporated into the scheme including a balanced approach to refurbishment, restoration and strategic removal of low significance existing fabric. The unique new development will showcase the original listed building, with sensitive connection to the new tower.

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Introduction

The BREEAM Standard

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's first sustainability rating scheme for the built environment. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

To date BREEAM has been used to certify over 560,000 building assessments across the building life cycle and is being applied in over 80 countries.

BREEAM is developed, operated and maintained by BRE Global Ltd and the operation and direction of the method is overseen by an independent Sustainability Board, representing a wide cross-section of construction industry stakeholders. Further information about BREEAM, including copies of the BREEAM standards, can be found at www.breeam.org.

Aims of BREEAM

- To mitigate the impacts of buildings on the environment
- To enable buildings to be recognised according to their environmental benefits.
- To provide a credible, environmental label for buildings.
- To stimulate demand for sustainable buildings.

BREEAM Refurbishment & Fit Out

BREEAM Refurbishment & Fit Out is a performance-based assessment method and certification scheme for existing buildings. The primary aim of BREEAM UK Refurbishment and Fit Out is to promote the delivery of sustainable refurbishment and fit-out, in order to mitigate the life cycle impacts of existing buildings on the environment in a robust and cost-effective manner. This is achieved through integration and use of the scheme by clients and their project teams at key stages in the design and refurbishment/fit-out works process.

Projects are assessed at design and post-construction stages using a system of environmental issues grouped within the following sections:

- Management
- Health and Wellbeing
- Energy
- Transport
- Water
- Materials
- Waste
- Land Use & Ecology
- Pollution
- Innovation

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Process of the Assessment

BREEAM Refurbishment and Fit Out 2014 is a performance-based assessment method and certification scheme for existing building refurbishment and fit-out. The primary aim of BREEAM Refurbishment and Fit Out 2014 is to promote the delivery of sustainable refurbishment and fit-out, in order to mitigate the life cycle impacts of existing buildings on the environment in a robust and cost-effective manner.

The scheme intends to measure, evaluate, and reflect the performance of refurbishment or fit-out projects against best practice in an independent and robust manner.

Assessments take place over two phases:

- Design Stage (DS): This is based on the final design for the development and the intentions of the design team. Submission before the completion of RIBA Stage 4.
- Post Construction Review (PCR): This is based on the built development and requires the BREEAM assessor to carry out a site visit. Submission at RIBA Stage 6.

An interim certificate will be provided following submission of the design stage assessment, with final certification being awarded following the completion of the post construction review.

Refurbishment and Fit Out

BREEAM Refurbishment and Fit-Out provides modular framework for projects. The Scheme is split into the following parts, which are selected according to the scope of works. Each part defines a set of individual measures and associated criteria against which a project is assessed.

Part 1: Fabric and Structure.

Part 2: Core Services.

Part 3: Local Services.

Part 4: Interior Design.

This approach provides the scheme's users with a flexible means of measuring the environmental performance of their building and comparing it with other buildings across the property market, backed with the assurance that independent third-party certification of the assessment process provides.

A project can choose which parts they wish to gain certification against, and the certificate will clearly highlight the parts that the projects have been assessed under.

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Ratings

The assessment process results in a rating on a scale of PASS, GOOD, VERY GOOD, EXCELLENT and OUTSTANDING. The rating bands for each are as follows:

Rating	Minimum Score Required	Performance equivalent to (% of UK new non-domestic buildings)
Pass (P)	30%	<75% (standard good practice)
Good (G)	45%	<50% (intermediate good practice)
Very Good (VG)	55%	<25% (advanced good practice)
Excellent (E)	70%	<10% (best practice)
Outstanding (O)	85%	<1% (innovator)

Mandatory Credits

Some credits, or criteria within credits, are mandatory to achieve certain ratings:

BREEAM Issue	P	G	VG	E	O
Man 03: Responsible construction practices	-	-	-	1 credit	2 credits
Man 04: Commissioning & handover	-	-	-	Criterion 9 ¹	Criterion 9
Man 05: Aftercare	-	-	-	1 credit ²	1 credit
Ene 01: Reduction of CO ₂ emissions	-	-	-	6 credits	10 credits
Ene 02: Energy monitoring	-	-	1 credit ³	1 credit	1 credit
Wat 01: Water consumption	-	1 credit ⁴	1 credit	1 credit	2 credits
Wat 02: Water monitoring	-	Criterion 1 ⁵	Criterion 1	Criterion 1	Criterion 1
Mat 03: Responsible sourcing	Criterion 1 ⁶	Criterion 1	Criterion 1	Criterion 1	Criterion 1
Wst 01: Construction waste	-	-	-	-	1 credit
Wst 03: Operational waste	-	-	-	1 credit	1 credit

¹ A Building User Guide must be developed prior to handover, for distribution to the building occupiers and premises managers.

² Seasonal commissioning (only applicable to assessment parts 2 and 3)

³ First sub-metering credit (parts 2, 3 and 4)

⁴ A 12.5% improvement on the BREEAM baseline

⁵ A water meter must be specified on the mains water supply to each building (part 2)

⁶ All timber and timer-based products used on the project must be legally harvested and traded. Full details for each credit follow later in this document.

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Score Breakdown

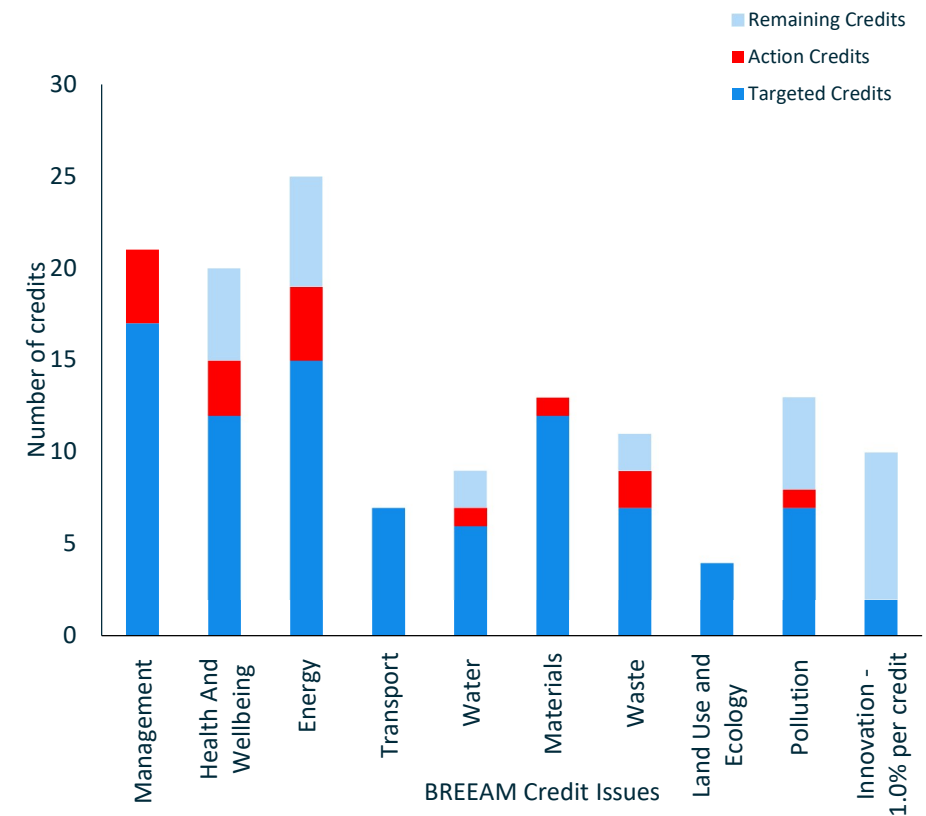
Rating Summary (Parts 1-4)

The following summary represents the scheme's preliminary score based on the assumptions in the following pages. This includes Parts 1-4.

Credit Categories	% Targeted	Weighting	Score
Management	80.95%	13.72%	11.10%
Health and Wellbeing	55.00%	15.59%	8.57%
Energy	60.00%	16.46%	9.87%
Transport	100.00%	5.34%	5.34%
Water	66.67%	6.86%	4.57%
Materials	92.31%	14.29%	13.19%
Waste	63.64%	7.15%	4.55%
Land Use and Ecology	100.00%	9.14%	9.14%
Pollution	46.15%	11.44%	5.28%
Innovation	20.00%	10.00%	2.00%
Total Score			73.61%
Rating			Excellent

Graphics Breakdown

The graph below shows the credits currently targeted (dark blue), action credits (red) and remaining credits in each BREEAM section (light blue).



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Parts Assessed

Parts Summary

- Part 1: Fabric and Structure ✓
- Part 2: Core Services ✓
- Part 3: Local Services ✓
- Part 4: Interior Design ✓

Part 1: Fabric and Structure (included in assessment)

A Part 1 assessment may be appropriate where there are one or more of the following alterations to the building fabric, and where the area to be renovated is greater than 50% of the surface of the individual element (or 25% of the total building envelope):

- ✓ Building facade
- ✓ Roof
- ✓ Windows

Part 2: Core Services (included in assessment)

A Part 2 assessment may be appropriate where at least two of the following are being installed or upgraded to a level that requires compliance with the Building Regulations Compliance Guide:

- ✓ Central air handling unit
- ✓ Heating boiler
- ✓ More than 50% of heat distribution chiller plant
- ✓ More than 50% of chiller distribution
- ✓ Water services (sanitary fittings in core)
- ✓ Building management system
- X Community heating system (e.g. CCHP)
- ✓ Low and zero carbon technologies.

Part 3: Local Services (included in assessment)

A Part 3 assessment may be appropriate where at least two of the following fixed local building services are being installed or upgraded (e.g. a replacement or new installation of local heating/cooling units):

- ✓ Replacement of more than 50% of light fittings, system and controls
- ✓ Upgrade of zone controls
- ✓ Local ventilation
- ✓ Local heating units (including sources not connected to core services)
- ✓ Local cooling units (including sources not connected to core services)
- ✓ Point of use water heaters.

Part 4: Interior Design (included in assessment)

A Part 4 assessment may be appropriate where the refurbishment or fit-out works involve changes to the layout and/or redecoration of the refurbishment or fit-out area. Including two or more of the following:

- ✓ Wall coverings
 - ✓ Floor coverings
 - ✓ Ceiling covering or systems
 - ✓ Partitions
 - ✓ Raised floor system
 - ✓ Furniture and fittings
- AND at least one of the following:

- ✓ Sanitary fittings
- ✓ Equipment (e.g. office equipment, display lighting, freezers)
- ✓ Local electrical installations (e.g. sub-metering)

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Project Specific Details

Technical manual number:	SD216 Issue 2.0
Project type:	Major, whole building refurbishment
Building type:	Other - Residential institution (hotel)
Historic building?	Yes, grade 2 listed
Commercial and/or industrial scale refrigeration or storage specified?	No
New building user transportation systems?	Yes
Laboratories present?	No
Systems that significantly contribute towards unregulated energy demands?	Yes
Sanitary fittings within scope?	Yes
Office areas included?	Yes
Unregulated water demand?	Yes
Landscaping included?	Yes
Local cooling included?	No
Local heating or hot water included?	No
Externally mounted plant specified?	Yes
Speculative refurbishment?	No
External lighting included?	Yes
Simple building?	No
Is new insulation specified?	Yes
Are high grade aggregates to be used in the scope of the refurbishment scheme?	No

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Management

Man 01: Project Brief and Design

4 of 4

Stakeholder Consultation - Project Delivery (one credit)

Prior to completion of RIBA Stage 2 (Concept Design) the design team will meet to identify and define their roles and responsibilities, as well as contributions for each key phase of the project. During this stage the team will produce a clear sustainability brief outlining the sustainability objectives for the project, the timescales and budget, specific client requirements, potential constraints, and any professional appointments that may be required.
One of one credit targeted.

Stakeholder Consultation - Third Party (one credit)

Prior to completion of RIBA Stage 2 (Concept Design), all relevant third-party stakeholders (e.g. local residents, businesses, existing partnerships and networks) will be consulted by the design team and it will be demonstrated that the outcomes of the consultation exercise have influenced the initial project brief and concept design.
One of one credit targeted.

Sustainability Champion - Initial Design (one credit)

The project team has confirmed that a BREEAM Accredited Professional (AP) has been appointed (at RIBA Stage 1) to facilitate the setting and achievement of BREEAM performance targets for the project. The defined performance targets have been formally agreed by the client and the project team.
One of one credit targeted.

Sustainability Champion - Monitoring Progress (one credit)

The project team has confirmed that a BREEAM Accredited Professional (AP) has been appointed to monitor and report progress against the established BREEAM targets by attending key project team meetings during all stages of the design.
One of one credit targeted.

In total, four out of four credits are currently targeted for this issue.

Man 02: Life Cycle Cost and Service Life Planning

1 of 4

Elemental life cycle costing (two credits)

An elemental life cycle cost analysis is considered to be carried out will be carried out at RIBA stage 2 in accordance with PD 156865-2008.
Zero out of two credits targeted.

Component level life cycle options appraisal (one credit)

A component level LCC options appraisal is being considered and may be carried out by RIBA stage 4 to minimise life cycle costs and maximise value.
Zero out of one credit targeted.

Capital Cost Reporting (one credit)

The design team has committed to report the capital cost for the building in pounds per square metre (£k/m²), via the BREEAM Assessment Scoring and Reporting tool in line with BREEAM requirements.

In total, one out of four credits are currently targeted for this issue.

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Man 03: Responsible Construction Practices

6 of 6

Mandatory Requirements:

One credit must be awarded under Considerate Construction in order to achieve an 'Excellent' rating.

Timber (prerequisite)

All timber is to be legally harvested and traded.

This is a prerequisite for this issue; no credits can be awarded unless this requirement is met.

Environmental Management (one credit)

The design team will appoint a principal contractor who operates an Environmental Management System, certified under ISO14001/ EMAS or an equivalent standard, covering their main operations. One of one credit targeted.

Sustainability Champion (construction) (one credit)

A sustainability champion will be appointed to monitor the project on site to ensure on-going compliance with the relevant sustainability performance criteria and BREEAM targets during the construction and handover stages. One of one credit targeted.

Considerate Construction (two credits + Exemplary credit)

The contractor will be required to register the scheme under the Considerate Constructors Scheme (CCS) and will be committed to achieve at least 39 points, with a minimum of 13 points in each section.

Two of two credits and one exemplary credit targeted.

Monitoring of Construction-Site Impacts (two credits)

The design team has confirmed that an individual is responsible for monitoring, recording and reporting the following:

- Monitor and record data on energy consumption from the use of construction plant, equipment and site accommodation.
- Monitor and record data on water consumption from the use of construction plant, equipment and site accommodation.
- Monitor and record transport data resulting from delivery of the majority of construction materials to site and construction waste from site.

Two of two credits targeted.

In total, six of six credits and one exemplary credit are currently targeted for this issue.

Man 04: Commissioning and Handover

3 of 4

Mandatory Requirements:

A Building User Guide must be produced in order to achieve an Excellent rating (even if this issue is not targeted).

Commissioning (two credits)

A member of the design team will be appointed to monitor commissioning in line with best practice (CIBSE, BSRIA and Current Building Regulations), with a specialist commissioning agent appointed for any complex systems.

Two of two credits targeted.

Testing and inspecting building fabric (one credit)

The design team has confirmed that air tightness testing is carried out as standard. A thermography survey is not currently planned for but could be included if required.

Zero out of one credit targeted.

Handover (one credit)

The production of a technical manual and a non-technical building user guide in line with the BREEAM requirements is planned. This must contain the information listed within Appendix A. In addition, a training schedule will be prepared for building occupiers / facilities managers to aid handover.

One of one credit targeted.

In total, three of four credits are currently for this issue.

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Man 05: Aftercare

3 of 3

Mandatory Requirements:

Parts 2 & 3 – Seasonal Commissioning must be carried out to achieve an Excellent rating.

Aftercare Support (one credit)

There will be operational infrastructure and resources in place to provide aftercare support to the building occupier and to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months once the building is occupied.

One of one credit targeted.

Seasonal Commissioning (one credit)

Seasonal commissioning activities will be completed over a minimum 12-month period once the building becomes substantially occupied.

One of one credit targeted.

Post Occupancy Evaluation (one credit)

The client or building occupier will make a commitment to carry out a post occupancy evaluation (POE) exercise one year after initial building occupation, providing funds in advance. The POE will be carried out by a third-party consultant.

One of one credit targeted.

In total, three of three credits are currently targeted for this issue.

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Health and Wellbeing

Hea 01: Visual Comfort

3 of 7

Control of Glare from Sunlight (one credit)

The design team has confirmed that occupant controllable blinds will be provided in all relevant occupied areas to reduce the potential for disabling glare. The glare control strategy will be designed to maximise daylight levels under all conditions, while avoiding glare, in order to avoid increasing lighting energy consumption.

One of one credit targeted.

Daylighting (three credits)

Daylight modelling is not currently included within the design scope. The development of daylighting calculations will be considered as the design progresses.

Zero out of three credits targeted.

View Out (two credits)

The design team has confirmed that the 80% of the floor area in each relevant building area is within 7m of a wall which has a window or permanent opening that provides an adequate view out.

For living rooms, communal lounges, individual bedrooms and bedsits all positions within relevant areas are to be within 5m of a wall which has a window or permanent opening providing an adequate view out.

Windows or openings will comprise at least 20% of the surrounding wall area.

One of two credit targeted.

Internal and External Lighting Levels, Zoning and Controls (one credit)

The design team has confirmed the following will be met for the scheme:

- Where specified, all fluorescent and compact fluorescent lamps will be fitted with high frequency ballasts;
- Internal lighting will provide illuminance levels in accordance with the SLL Code of Lighting 2012 (and any other relevant industry standard);
- For areas where computer screens are regularly used the lighting design will comply with the appropriate sections of CIBSE Lighting Guide 7;
- All external lighting will provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately;
- Internal lighting will be appropriately zoned to allow for occupant control within relevant building areas in accordance with the BREEAM criteria;
- External lighting will be specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of workplaces - Part 2: Outdoor workplaces).

One of one credit targeted.

In total, three of seven credits are currently targeted for this issue.

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Hea 02: Indoor Air Quality

3 of 5

Indoor Air Quality Plan (one credit)

The design team has confirmed that an Indoor Air Quality (IAQ) plan will be provided in line with BREEAM requirements.

One of one credit targeted.

Ventilation (one credit)

The design team confirmed the ventilation requirements are unlikely to be achieved.

Zero of one credit targeted.

Volatile Organic Compounds - VOCs (one credit)

The design team has confirmed that at least 5 of the product types listed in the [BREEAM RFO 2014 manual Table 20](#) will meet the emission limits, testing standards and any additional requirements in line with the BREEAM guidance. Please see Appendix B for full compliance details.

One of one credit targeted.

Post-Construction Indoor Air Quality Measurement (one credit)

The design team has confirmed that testing to measure VOC and formaldehyde concentration levels at post-construction stage (but pre-occupancy) will be undertaken.

Where VOC and formaldehyde levels are found to exceed the limits defined by BREEAM criteria, a set of the measures will be taken, in accordance with the IAQ plan, to reduce the levels to within these limits, including re-measurement.

One of one credit targeted.

Adaptability - Potential for natural ventilation (one credit)

The design team will review the requirements for potential for natural ventilation. The credit is not currently targeted.

Zero of one credit targeted.

In total, three of five credits are currently targeted for this issue.

Hea 04: Thermal Comfort

3 of 3

Thermal Modelling (one credit)

Thermal modelling, in line with CIBSE AM11, will be undertaken for the development using full dynamic thermal analysis software. Summer and winter operative temperature ranges in occupied spaces will be in accordance with the criteria set out in CIBSE Guide A Environmental design.

One of one credit targeted.

Design for Future Thermal Comfort (one credit)

The design team has confirmed that the thermal modelling will include an allowance for a projected climate change environment.

One of one credit targeted.

Thermal Zoning and Controls (one credit)

The thermal modelling analysis will be undertaken and will inform the thermal comfort strategy. The heating and cooling will be zoned and controlled appropriately for the building type and its users' requirements.

One of one credit targeted.

In total, three of three credits are currently targeted for this issue.

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Hea 05: Acoustic Performance

1 of 4

A suitably qualified acoustician will define an appropriate set of performance requirements for the building for:

- Airborne sound insulation
- Impact sound insulation

The acoustic performance will be confirmed via a programme of pre-completion testing, carried out by a compliant test body.

Please see Appendix C for full compliance details.

In total, one of four credits are currently targeted for this issue.

Hea 06: Security

1 of 1

Security of Site and Building (one credit)

The design team has confirmed that a suitably qualified security consultant will be appointed to carry out a Security needs assessment for the building and recommendations will be incorporated into the design.

In total, one of one credit is currently targeted for this issue.

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Energy

Ene 01: Reduction of CO₂ emissions

6 of 15

Mandatory Requirement:

At least six credits must be achieved to secure an Excellent rating.

Energy modelling and BRUKL reports will be produced for the existing building and proposed design at design stage.

Please note that the BREEAM guidance requests "A copy of the Building Regulations Output Document from the Part L Approved Documents check (BRUKL Output Document)" and an "As Built" copy of the document for the PCR stage.

In total, six of fifteen credits are currently targeted for this issue.

Ene 02: Energy Monitoring

1 of 1

Mandatory Requirement:

For parts 2, 3 & 4 one credit (first sub-metering credit) must be achieved to secure a Very Good or Excellent rating.

Sub-Metering of End-Use Categories (one credit)

Pulsed sub-meters will be provided to ensure the following are met:

Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems.

The energy consuming systems in buildings with a total useful floor area greater than 1,000m² are metered using an appropriate energy monitoring and management system.

The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.

One of one credit targeted.

In total, one of one credit is currently targeted for this issue.

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Ene 03: External Lighting

1 of 1

The design team has confirmed that any external lighting will have an average initial luminous efficacy of greater than 60 luminaire lumens per circuit Watt. All external light fittings will be automatically controlled to prevent operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.

In total, one of one credit is currently targeted for this issue.

Ene 04: Low Carbon Design

2 of 3

Passive Design Analysis (one credit)

The design team will carry out an analysis of the proposed building design/development to influence decisions made during Concept Design stage and identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services.

The building will use passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis, and the analysis will demonstrate a meaningful percentage reduction in the total energy demand.

One of one credit targeted.

Free cooling (one credit)

The design team has confirmed that the credit for free cooling will not be targeted as mechanical cooling is proposed.

Zero of one credit targeted.

Low and Zero Carbon Technologies (one credit)

A feasibility study will be carried out by an independent energy specialist during Concept Design to establish the most appropriate local low or zero carbon energy source for the development, and an LZC technology will be specified in line with the recommendations of this report (resulting in a reduction in CO2 emissions).

One of one credit targeted.

In total, two of three credits are currently targeted for this issue.

Ene 06: Energy Efficient Transportation Systems

3 of 3

Energy Consumption (one credit)

The design team has confirmed that a transportation demand and usage pattern analysis will be carried out for the building to determine the optimum number and size of lifts, escalators or moving walks in accordance with BS EN ISO 25745. The energy consumption will be calculated for at least two types of system and the one with the lowest energy consumption specified.

One of one credit targeted.

Energy Efficient Features (two credits)

The design team has confirmed they will specify the following energy efficient features for each lift:

- A standby condition for off-peak periods.
- The lift car lighting and display lighting provides an average luminous efficacy across all fittings in the car of >55 luminaire lumens per circuit Watt.
- Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVF) control of the drive motor.

Regenerative drives will be considered where these would produce an energy saving greater than the additional standby energy used to support the drives.

Two of two credits targeted.

In total, three of three credits are currently targeted for this issue.

Ene 08: Energy Efficient Equipment

2 of 2

The design team has confirmed that the building's unregulated energy consuming loads will be identified and estimate their contribution to the total annual unregulated energy consumption of the building (assuming a typical/standard specification).

Also, a meaningful reduction in the total annual unregulated energy consumption of the building will be demonstrated.

Two of two credits targeted.

In total, two of two credits are currently targeted for this issue.

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Transport

Tra 01: Public Transport Accessibility

3 of 3

The development is located in Manchester, Piccadilly, and according to GMAL information has an Accessibility Index of 108.

In total, three of three credits are currently targeted for this issue.

Tra 02: Proximity to Amenities

1 of 1

The development is located in Manchester, Piccadilly, in proximity to a number of local amenities.

In total, one of one credit is currently targeted for this issue.

Tra 03: Cyclist Facilities

2 of 2

Cycle Storage (1 credit)

The design team has confirmed that the development will provide cycle racks of one space per 10 staff and compliant cyclist facilities.

The easily accessible cycle storage will be secured in racks and covered overhead, any lighting will comply with BREEAM criteria.
One of one credit targeted.

Cyclist Facilities (1 credit)

At least two cyclist facilities, showers, changing space, lockers or a drying space, will be incorporated within the design. The following will be met regarding the specified facilities:

- One shower will be provided for every 10 cycle spaces. Both male and female users will be catered for i.e. either separate showers within shared gender-specific facilities (required provision split 50-50) or single shower cubicles and changing space for mixed use.
- Changing areas will be provided and include adequate space and facilities to hang/store clothing and equipment whilst changing/showering.
- The number of lockers is at least equal to the number of cycle spaces provided and are either in or adjacent to compliant changing rooms. The lockers are sized appropriately for the storage of a cyclist's equipment.
- A drying space is specifically designed and designated with adequate heating/ventilation for the drying of wet clothes.

One of one credit targeted.

In total, two of two credits are currently targeted for this issue.

Tra 05: Travel Plan

1 of 1

A site-specific travel plan will be developed as part of the feasibility and design stages, which will consider all types of travel relevant to the building type and users.

In total, one of one credit is currently targeted for this issue.

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Water

Wat 01: Water Consumption

2 of 5

Mandatory Requirement:

One credit is required in order to achieve an Excellent rating.

The design team has confirmed that they will aim for a 25% improvement in water consumption (litres/person/day) compared to BREEAM's notional baseline performance.

To achieve this, it is anticipated that specified sanitaryware will meet the following thresholds:

- WCs will have 4.5 litres effective flush volume.
- Wash hand basins will have a flow rate of no greater than 7.5 litres/min.
- Showers will have a flow rate of no greater than 8 litres/min.
- Kitchen taps will have a flow rate of no greater than 7.5 litres/min.
- Domestic dishwashers will have a capacity of no greater than 13 litres/cycle.
- Commercial dishwashers will have a capacity of no greater than 6 litres/rack.
- Domestic washing machine will have a capacity of no greater than 50 litres/use.
- Commercial washing machine will have a capacity of no greater than 10 litres/kg.

Any greywater systems must be specified and installed in compliance with BS 8525-1:2010 and any rainwater systems must be specified and installed in compliance with BS EN 16941-1:2018.

Two of five credits are currently targeted for this issue.

Wat 02: Water Monitoring

1 of 1

Mandatory Requirement:

A water meter must be specified (even if this issue is not targeted) in order to achieve an Excellent rating.

The design team has confirmed that a pulsed water meter will be installed on the mains water supply to each building.

Water-consuming plant or building areas consuming 10% or more of the building's total water demand will be fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area.

In total, one of one credit is currently targeted for this issue.

Wat 03: Water Leak Detection and Prevention

2 of 2

Leak Detection (one credit)

The design team has confirmed a major leak detection system on the mains water supply within the building and between the building and the utilities water meter will be provided. The system will comply with the following:

- Permanent and automated.
- Activated when the flow of water is at a flow rate above a pre-set maximum for a pre-set period of time.
- Able to identify different flow and leakage rates.
- Programmable to suit the owner/occupiers' water consumption criteria.
- Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.

One of one credit targeted.

Sanitary Shut-Off System (one credit)

Flow control devices that regulate the supply of water to each WC area/facility according to demand will be proposed (and therefore minimise water leaks and wastage from sanitary fittings).

One of one credit targeted.

In total, two of two credits are currently targeted for this issue.

Wat 04: Water Efficient Equipment

1 of 1

The design team has confirmed that they will provide an irrigation system that uses rainwater.

One of one credit targeted.

In total, one of one credit is currently targeted for this issue.

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Materials

Mat 01: Environmental Impact of Materials

6 of 6

Option 1: Project lifecycle assessment study

The design team has confirmed that a Life Cycle Assessment study will be undertaken for the project to measure the life cycle environmental impact of the refurbishment or fit-out works.

In total, two of six credits are currently targeted for this issue.

Mat 03: Responsible Sourcing of Materials

3 of 4

Mandatory Requirement:

The pre-requisite for this issue must be complied with (even if this issue is not targeted) in order to achieve all ratings.

Pre-Requisite

The design team has confirmed that all timber used on the project will be legally harvested and traded timber.

Sustainable Procurement Plan (one credit)

The main contractor will be required to implement a sustainable procurement plan to guide specification towards sustainable construction products.
One of one credit targeted.

Measuring Responsible Sourcing (3 credits)

The design team has confirmed that, where possible, key building elements will be responsibly sourced (e.g. all timber FSC certified, and any bricks, pavers, concrete, glass, metals, plaster etc. covered by BRE Global, BES 60001 certification, or EMS certified for both the key process and supply chain extraction process).

Two of three credits targeted.

In total, three of four credits are targeted for this issue.

Mat 04: Insulation

1 of 1

The design team has confirmed that any new insulation specified and installed for the external walls, ground floor, roof and building services will be A or A+ rated under the Green Guide.

In total, one of one credit is currently targeted for this issue.

Mat 05: Designing for Durability and Resilience

1 of 1

Protecting Vulnerable Parts of the Building from Damage

Materials and features will be specified to protect vulnerable parts of both the internal and external areas of the building.

Protecting Exposed Parts of the Building from Material Degradation

The relevant building elements will incorporate appropriate design and specification measures to limit material degradation due to environmental factors. The elements will either achieve an appropriate quality or durability standard or a resilience assessment will be carried out on the element.

In total, one of one credit is currently targeted for this issue.

Mat 06: Materials Efficiency

1 of 1

The design team has confirmed that opportunities will be identified, and appropriate measures investigated and implemented to optimise the use of materials in building design, procurement, construction, maintenance and end of life.

The above will be carried out by the design team in consultation with the relevant parties at each of the following RIBA stages:

- Preparation and Brief
- Concept Design
- Developed Design
- Technical Design
- Construction.

In total, one of one credit is currently targeted for this issue.

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Waste

Wst 01: Construction Waste Management

4 of 7

Pre-Refurbishment Audit (one credit)

The design team will complete a pre-refurbishment audit of any existing buildings or hard surfaces being considered for demolition. This will be used to determine materials can be reused or recycled where possible, in line with BREEAM requirements.
One of one credit targeted.

Reuse and direct recycling of materials (two credits)

The design team has confirmed that the requirements for reuse and direct recycling of materials will be reviewed. The credit is not currently targeted.
Zero of two credits targeted.

Resource Efficiency (three credits)

The design team has confirmed that a BREEAM compliant resource management plan will be produced and will ensure that non-hazardous waste generated by the building's design and construction (excluding demolition and excavation waste) is less than 4.5m³ (or 1.2 tonnes) per 100m² of gross internal floor area.
Two of three credits targeted.

Diversion of Resources from Landfill (one credit)

It is likely that at least 85% (by volume) or 90% (tonnage), for the refurbishment / fit out works, of non-hazardous construction waste generated will be diverted from landfill.
One of one credit targeted.

In total, four of seven credits are targeted for this issue.

Wst 02: Recycled aggregates

0 of 1

The design team has confirmed that the requirements for recycled aggregates will be reviewed. The credit is not currently targeted.
Zero of two credits targeted.

Wst 03: Operational Waste

1 of 1

Mandatory Requirement:

One credit is required in order to achieve an Excellent rating.

The design team has confirmed that a dedicated recyclable waste storage area will be provided for the scheme. The space will be clearly labelled and accessible:

- Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams
- Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors
- Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities and occupancy rates.

Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operation, the following facilities will be provided:

- Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space.
- Vessel(s) for composting suitable organic waste resulting from the building's daily operation and use; OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility.
- Where organic waste is to be stored/composted on-site, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes.

In total, one of one credit is currently targeted for this issue.

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Wst 05: Adaptation to Climate Change

1 of 1

Structural and fabric resilience (one credit)

The design team has confirmed that a climate change adaptation strategy will be undertaken for the development at present.
One of one credit targeted.

In total, one of one credit is currently targeted for this issue.

Wst 06: Functional Adaptability

1 of 1

Functional Adaptability (one credit)

The design team will conduct a study to explore the ease of functional adaptation of different scenarios before the end of Concept Design. Recommendations/solutions will be developed based on the study that aims to enable and facilitate future adaptation.
One of one credit targeted.

In total, one of one credit is currently targeted for this issue.

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Land Use and Ecology

LE 02: Protection of Ecological Features

1 of 1

A suitably qualified ecologist will confirm the ecological value of the site.

In total, one of one credit is currently targeted for this issue.

LE 04: Change and Enhancement of Ecological Value

1 of 1

The design team has confirmed that a suitably qualified ecologist will be appointed and the recommendations in their ecology report for the enhancement of site ecology will be implemented in the final design.

The ecologist will need to confirm that the ecological value of the site has increased as a result of the development.

In total, one of one credit is currently targeted for this issue.

LE 05: Long term impact on biodiversity

2 of 2

The design team has confirmed that a suitably qualified ecologist will be appointed, and a Landscape and Habitat Management Plan will be produced, covering at least the first five years after project completion in accordance with BS 42020:20131 Section 11.1

In total, two of two credits are currently targeted for this issue.

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Pollution

Pol 01: Impact of Refrigerants

2 of 3

Pre-requisite

All systems with electronic compressors will comply with the requirements of BS EN 378:2008 (parts 2 and 3) and, where systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice.

Impact of refrigerants (one credit)

It is confirmed that the cooling strategy of the scheme will have Direct Effect Life Cycle CO₂ equivalent emissions (DELC CO₂e) of ≤ 1000 kgCO₂e/kW cooling/heating capacity.
One of two credits targeted.

Leak detection (one credit)

The design team confirmed that a permanent automated refrigerant leak detection system will be installed.
One of one credit targeted.

In total, two of three credits are targeted for this issue.

Pol 02: NO_x Emissions

0 of 3

The design team has confirmed that requirements for this credit are unlikely to be achieved.

In total, zero of one credit is targeted for this issue.

Pol 03: Surface Water Run-Off

3 of 5

Low Flood Risk (two credits)

The site is situated in a low flood risk area.
Two of two credits targeted.

Surface Water Run-Off (two credits)

There is not likely to be an increase in the impermeable surfaces as a result of the refurbishment works.
One of two credits targeted.

Minimising Watercourse Pollution (one credit)

This credit will be investigated further to determine if attenuation measures can be installed to ensure there is no discharge from the site for rainfall depths of up to 5mm.
Zero of one credit targeted.

In total, three of five credits currently targeted for this issue.

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Pol 04: Reduction of Night Time Light Pollution

0 of 1

The design team has confirmed that requirements for this credit are unlikely to be achieved.

In total, zero of one credit is targeted for this issue.

Pol 05: Noise Attenuation

1 of 1

A Suitably Qualified Acoustic Consultant will conduct a noise impact assessment in compliance with BS7445. Where noise sources from the development are greater than +5dB (during the day) and +3dB (during the night) compared to the background noise level, attenuation measures will be specified.

In total, one of one credit is currently targeted for this issue.

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Action Plan

Action Plan

The following Action Plan outlines the credits that could be targeted to achieve a higher EXCELLENT rating. Please note that Eight Versa recommends a safety margin of 3-5% above the minimum score in order to ensure that the rating is secured at assessment stage.

Current Score	EXCELLENT (minimum 70%)	73.61%
Man 02: Life cycle cost and service life planning	Elemental life cycle costing Two credits could be achieved if an elemental life cycle cost analysis will be carried out at RIBA stage 2 in accordance with PD 156865-2008.	1.3%
Man 02: Life cycle cost and service life planning	Component level life cycle options appraisal One credit could be achieved if a component level LCC options appraisal is being considered and is carried out by RIBA stage 4 to minimise life cycle costs and maximise value.	0.65%
Man 04: Commissioning and handover	Testing and inspecting building fabric This credit can be achieved if a survey and air tightness testing is carried out for the project. This can be achieved by a Level 2 thermographer carrying out a thermographic survey at post construction stage. Any defects identified must be remedied.	0.65%
Hea 01: Visual comfort	Daylighting One credit could be achieved where daylighting calculations are carried out to confirm the Average Daylight Factor and Uniformity Ratio.	0.77%
Hea 02: Indoor Air Quality	Adaptability - Potential for Natural Ventilation (one credit) One credit could be achieved if local services will be designed to provide fresh air via a natural ventilation strategy and appropriately designed according to the room depth in accordance with CIBSE AM10.	0.77%
Hea 05: Acoustic performance	Acoustic performance Two additional credits can be achieved if Airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant Building Regulations or Standards.	1.54%
Ene 01: Energy performance	Reduction of CO₂ emissions	2.64%

Current Score	EXCELLENT (minimum 70%)	73.61%
	Up to four additional credits could be achieved if the building demonstrates a considerable improvement of energy performance.	
Wat 01: Water consumption	Water consumption One additional credit could be achieved if an improvement of 40% over baseline building water consumption will be achieved.	0.76%
Mat 03: Responsible sourcing of materials	Responsible sourcing of materials (RSM) One additional credit can be achieved if 54% of the available RSM points are achieved.	1.10%
Wst 01: Construction Site Waste Management	Reuse and Direct Recycling of Materials One credit can be achieved if 50% of the total available points for the waste material types detailed in Table 65 in the BREEAM RFO 2014 manual , that are present on the project will be achieved (using the Wst 01 calculator tool).	0.65%
Wst 02: Recycled Aggregates	Recycled Aggregates One credit could be achieved if the total amount of recycled and/or secondary aggregate specified will be greater than 35% (by weight or volume) of the total high-grade aggregate specified for the development.	0.65%
Pol 03: Flood risk management and reducing surface water run-off	Minimising water course pollution One credit could be achieved if attenuation measures to ensure there is no discharge from the site for rainfall depths of up to 5mm can be installed.	0.88%
Score with actions	OUTSTANDING (minimum 85%)	86.02%

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Appendix A

In order to meet the Man 04 credit requirements, all following contents list should be used:

Requirements	
Building User Guide	The aim of the Building User Guide is to ensure the appropriate provision of guidance for the non-technical building user, so they can access, understand and operate the building efficiently and in a manner in keeping with the original design intent. The guide should provide information relevant to the following stakeholders: <ul style="list-style-type: none"> • The building's staff (or where relevant residents) • The non-technical facilities management team/building manager • Other building users e.g. visitors / community users
Overview of building and its environmental strategy	Energy / water / waste efficiency policy / strategy and how users should engage with / deliver the policy/strategy.
Building services	The building services overview and access to controls (where to find them, what they control, how to operate effectively and efficiently etc.)
Access and security	Pre-arrival information for visitors e.g. access and security procedures / provisions
Shared facilities	Provision of and access to shared facilities
Safety and emergency information	Safety and emergency information / instructions
Operational procedures	Building related operational procedures specific to building type / operation e.g. labs.
Reporting arrangements	Building related incident reporting/feedback arrangements
Training information / links	Building related training information / links including information on legionella
Provision of and access to transport facilities	Provision of and access to transport facilities e.g. public transport, cyclist facilities, pedestrian routes etc.
Provision of and access to local amenities	Provision of and access to local amenities, e.g. supermarkets, ATM, etc.

Re-fit, refurbishment and maintenance arrangements -

Links, references and relevant contact details -

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Appendix B

Ref	Product	Requirements
A	Paints and varnishes	
	Performance requirements	VOC content limit
	Compliant performance standard	EU Directive 2004/42/CE ('Paints Directive')
	Compliant testing standard	BS EN ISO 11890-2:2013 - Paints and varnishes - Determination of VOC content, Part 2 - Gas Chromatographic method
		OR
		ASTM D2369 - 10(2015) Standard Test Method for Volatile Content of Coatings (only where reactive diluents are present)
B		OR
		Manufacturers' calculations of VOC content (based on the constituent ingredients)
	Manufacturer also to confirm	Paint to be fungal and algal resistant in wet areas e.g. bathrooms, kitchens, utility rooms
	Wood panels (including particle board, fibreboard including MDF, OSB, cement bonded particle board, plywood, solid wood panel and acoustic board)	
	Option 1	
	Performance requirements	Formaldehyde E1 class
	Compliant performance standard	BS EN 13986:2004+A1:2015 Wood-based panels for use in construction - Characteristics evaluation of conformity and marking
	Compliant testing standard(s)	In accordance with Annex B of BS EN 13986:2004 A1:2015
	Manufacturer also to confirm	The absence of prohibited wood preservatives.
	Option 2	
C	Performance requirements	Formaldehyde concentration in indoor air of 0.1mg/m ³
	Compliant testing standard(s)	1. BS EN ISO 16000-9:2006 Indoor air - Part 9: Determination of the emission of volatile organic compounds from building products and furnishing - Emission test chamber method. OR
		2. Californian Department for Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.2 (Emission testing method for California Specification 01350), 2017.
		Note: For either method the resultant emission rate obtained from the chamber test method must be extrapolated to predict what the emissions would be in a theoretical model room (as detailed in the standard) and this extrapolated emission rate compared with the required formaldehyde concentration of 0.1mg/m ³ .
	Manufacturer also to confirm	The absence of prohibited wood preservatives.
	Timber structures (e.g. glue laminated timber)	
	Option 1	
	Performance requirements	Formaldehyde E1 Class
	Compliant performance standards	BS EN 14080:2013 Timber structures - Glued laminated timber and glued solid timber - Requirements
	Compliant testing standards	In accordance with Annex A of BS EN 14080:2013
	Option 2	

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Ref	Product	Requirements
	Performance requirements	As category B Option 2.
	Compliant testing standards	As category B Option 2.
D	Wood flooring (e.g. parquet)	
	Option 1	
	Performance requirements	Formaldehyde E1 Class
	Compliant performance standard	BS EN 14342:2013+A1:2008 Wood flooring - Characteristics, evaluation of conformity and marking
	Compliant testing standards	In accordance with Annex A of BS EN 14342:2013
	Option 2	
	Performance requirements	As category B Option 2.
	Compliant testing standards	As category B Option 2.
E	Resilient textile and laminated floor coverings (e.g. vinyl, linoleum, cork, rubber, carpet, laminated wood flooring)	
	Option 1	
	Performance requirements	Option 1 - Formaldehyde E1 Class
	Compliant performance standard	BS EN 14041:2018 Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics
	Compliant testing standards	In accordance with Section 4.3.3 of BS EN 14041:2018
	Option 2	
	Performance requirements	As category B Option 2.
	Compliant testing standards	As category B Option 2.
F	Suspended ceiling tiles	
	Option 1	
	Performance requirements	Formaldehyde E1 Class
	Compliant performance standard	BS EN 13964:2014 Suspended ceilings - Requirements and test methods
	Compliant testing standards	In accordance with Annex E of BS EN 13964:2014
	Option 2	
	Performance requirements	As category B Option 2.
	Compliant testing standards	As category B Option 2.
G	Flooring adhesives	
	Performance requirements	Carcinogenic or sensitising volatile substances are substantially absent
	Compliant performance standard	BS EN 13999-1:2013 Adhesives - Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application - Part 1: General procedure
	Compliant testing standard	<ol style="list-style-type: none"> BS EN 13999-1:2013 Adhesives - Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application - Part 1: General procedure BS EN 13999-2:2013 Adhesives - Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application - Part 2: Determination of volatile organic compounds BS EN 13999-3:2007+A1:2009 Adhesives - Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application - Part 3: Determination of volatile aldehydes

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Ref	Product	Requirements
		4. BS EN 13999-4:2007+A1:2009 Adhesives - Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application - Part 4: Determination of volatile diisocyanates
H	Wall coverings	
	Performance requirements	<ul style="list-style-type: none"> Vinyl chloride monomer (VCM) content Formaldehyde level Migration of heavy metals
	Compliant performance standard	1. BS EN 233:2016 Wallcoverings in roll form - Specification for finished wallpapers, wall vinyls and plastics wall coverings 2. BS EN 15102:2019 Decorative wallcoverings - Roll form 3. BS EN 259-1:2001 Wallcoverings in roll form - Heavy duty wallcoverings - Part 1: Specifications
	Compliant testing standard	BS EN 12149:1998 - Wall coverings in roll form - Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release

Relevant standards - VOCs

All standards outlined the table are standards recognised across Europe and internationally for VOC content and testing. In instances where a product is not assessed against the listed European or International standard, it is acceptable to use an alternative, nationally recognised, standard provided the following is met as a minimum:

- The performance level requirements required by the alternative standard are equivalent to or better than those specified in the standards in Table 20. For example, if a material containing formaldehyde has been added to the floor covering product as part of the production process, then the E1 emission measured for formaldehyde must be less than 0.124mg/m³ (as required by BS EN 14041:2004).
- Where an alternative standard omits evaluation of a particular material, it is only acceptable to use the alternative standard in instances where the product does not contain that particular material.

BREEAM assessors should seek confirmation from BRE Global Limited prior to awarding credits for compliance with standards not listed in Table 20 or previously approved as alternative nationally recognised standards.

Products with no formaldehyde containing materials

For some floor coverings and wood-based panels, the requirement for formaldehyde testing (referred to in the above criteria) does not apply to 'floor coverings to which no formaldehyde containing materials were added during production or post-production processing', or in the case of EN 13986:2004, wood-based panels.

As such, if a product manufacturer confirms that they have made a declaration of formaldehyde class E1 without testing (in writing or via a company product fact sheet or literature) then the product in question meets the BREEAM requirement relevant to formaldehyde testing. A declaration of E1 without testing is effectively confirmation from the manufacturer that formaldehyde emissions comply with the emission level requirements of the relevant standard(s) and therefore, evidence confirming the actual emission level(s) via testing will not be required by the assessor to demonstrate compliance with that particular requirement.

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Appendix C

BREEAM acoustic criteria for Multi-residential and Other, Residential institutions building types

One, three or four credits are available for Multi-residential and Other, Residential institution buildings where the relevant criteria in the checklists and table section have been applied. Please also see compliance note CN7.

Multi-residential and 'Other residential' buildings (four credits)		
Room function	Individual bedrooms and self-contained dwellings	
Criteria	One credit Airborne sound insulation values are at least 3dB higher and impact sound insulation values are at least 3dB lower than the performance standards in the relevant Building Regulations or Standards. Three credits Airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant Building Regulations or Standards. Four credits Airborne sound insulation values are at least 8dB higher and impact sound insulation values are at least 8dB lower than the performance standards in the relevant Building Regulations or Standards.	
Testing requirement	A programme of pre-completion testing is carried out by a compliant test body based on the normal programme of testing described in the relevant Building Regulations or Standards for every group or sub-group of dwellings (houses, flats or rooms for residential purposes) this must demonstrate that the performance standards detailed within this table are achieved. OR Use of constructions for all relevant building elements have been registered with and assessed and approved by Robust Details Limited (RDL) and found to achieve the performance standards required for the number of credits sought (see additional information section for further information on Robust Details).	
Notes	Testing should be between habitable rooms on the ground floor and at higher storey levels if applicable. Where there are insufficient suitable separating walls or floors in a development to carry out the number of tests specified in the appropriate Building Regulations or Standards, all of the available suitable separating walls or floors must be tested. See also CN14 and CN7 .	
General		
CN7	Building types without areas 'used for speech' (only Part 4)	Where a building type does not have areas 'used for speech', it does not need to comply with the relevant 'reverberation times' criteria. In these instances, the credit available for reverberation can be awarded by default where the building complies with the sound insulation criteria. Where there are no acoustically sensitive rooms or rooms 'used for speech', this needs to be confirmed in writing by the SQA.
CN14	Country specific guidance	The following Standards or Building Regulations etc. are relevant for the assessment of the issue: England For Multi-residential assessments, where the criteria refer to the performance standards in Building Regulations, in England, this is referring to Approved Document E 2003 edition, with amendments 2004 and 2010 – Resistance to the passage of sound.