RIDGE

ST MARY'S UNIVERSITY
REDEVELOPMENT OF 'R' BUILDING

BREEAM PRE ASSESSMENT REPORT
31.10.2024

ST MARY'S UNIVERSITY, REDEVELOPMENT OF 'R' BUILDING
BREEAM PRE ASSESSMENT REPORT
31/10/2024

Prepared for

St Mary's University

Prepared by

Ridge and Partners LLP
1 Royal Court,
Kings Worthy,
Winchester
SO23 7TW
Tel: 01962834400

Contact

India Yeardley
Graduate Sustainability Consultant
indiayeardley@ridge.co.uk

Rich Knight
Sustainability Senior Associate
richknight@ridge.co.uk

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1. INTRODUCTION

Ridge and Partners LLP have been appointed by St Mary's University to provide a BREEAM pre assessment for the demolition of existing R Block and the erection of a replacement teaching block (Use Class F1) comprising 1419 sq m of floorspace to provide facilities appropriate for the operation of a new School of Medicine at the Strawberry Hill Campus, with associated landscaping.

The aim of the appointment is to provide guidance to the project design team and to demonstrate the project's commitment to the issues of sustainable building design, construction and operation. Further, this report has been produced to be submitted alongside the wider planning application. It outlines how the pre-assessment will aim to achieve BREEAM "excellent", in line with Policy CP1 Sustainable Development, within the Richmond Upon Thames Core Strategy (adopted 2009).

This report has been written by a qualified Building Research Establishment Environmental Assessment Method (BREEAM) assessor to provide guidance and information on the following:

- An overview of the BREEAM process,
- The mandatory credits that are required to achieve each BREEAM rating,
- Early stage actions to be considered,
- The requirements for specialist consultants, and
- The Project's BREEAM Schedule (as of 25/10/2024).

The scheme is targeting BREEAM accreditation under the current version, BREEAM New Construction V6.

Figure 1 - BREEAM Categories

This report is based on the current situation the project is in. It is based off existing evidence and logical assumptions. Therefore, everything included is subject to change as the project progresses.

2. BREEAM

2.1. Project Details

Project:	St Mary's University – Redevelopment of 'R' Building
Project type:	BREEAM UK New Construction V6
Building type:	Education
Building subtype:	Further Education
Assessment type:	Fully Fitted

The Proposed Development will be assessed under the current version of the BREEAM assessment methodology which is BREEAM New Construction V6.

2.2. Overview

BREEAM is a performance-based assessment method and certification scheme for new buildings. The primary aim of the BREEAM process is to mitigate the life cycle impacts of new 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 procurement process. This enables the client, through the BREEAM Assessor and the BRE Global certification process, to measure, evaluate and reflect the performance of their building against best practice in an independent and robust manner. This performance is quantified by a number of individual measures and associated criteria stretching across a range of environmental issues as shown in Figure 1 which is ultimately expressed as a single certified BREEAM rating.

The potential BREEAM ratings for a building are as shown in Table 1. This scheme is aiming to achieve Excellent, which is a score of 70%+.

Table 1 – BREEAM Rating Benchmarks

RATING	PERCENTAGE SCORE	EQUIVALENT PERFORMANCE
Outstanding	>85	Less than 1% of UK new non-domestic buildings
Excellent	**>70**	**Top 10% of UK new non-domestic buildings**
Very Good	>55	Top 25% of UK new non-domestic buildings
Good	>45	Top 50% of UK new non-domestic buildings
Pass	>30	Top 75% of UK new non-domestic buildings
Unclassified	<30	Failed to meet minimum BREEAM criteria

In order to achieve a BREEAM rating for a building, the client must appoint an independent person, accredited by the BRE, to act as an assessor. A list of all accredited assessors is available on the Green Book Live (www.greenbooklive.com).

The assessor's role will typically include the following;

- Provision of a Pre-assessment Report with input from the design team which will summarise the anticipated approach for achieving the targeted rating,
- Register the project with the Building Research Establishment (BRE) who administers the scheme,
- Assess evidence provided by the client and design team to validate targeted BREEAM criteria,
- Collate a Design Stage Assessment Report for submission to BRE, feeding back to the team any QA issues that arise,
- Issue Interim Certificate and report on completion of QA,
- Assess evidence provided by the construction team to validate targeted BREEAM criteria,
- Visit the completed site and collate photographic and other evidence to show that the building has been built to incorporate those features that were agreed as part of the design stage assessment,
- Collate a Post Construction Assessment Report for submission to BRE, feeding back to the team any QA issues that arise, and
- Issue Final Certificate and report on completion of QA.

Once the final certificate has been issued, the details of the building's final BREEAM score will also be listed on Green Book Live (www.greenbooklive.com) which is publicly available.

Design teams should be aware that typically it takes approximately 8 weeks for the BRE to consider the evidence provided in assessment reports as part of their QA process, therefore there is frequently a substantial delay between submitting a report and achieving the certification, particularly if any QA issues are identified. There is an option to undertake fast track QA for an additional fee.

With regards to the final BREEAM certificate this will only be available once the building is completed and the assessor has undertaken a Site Inspection and submitted their detailed report to the BRE for review, this tends to be around the same time as practical completion. The assessment will then enter the BRE's QA system once again, for this reason, the final BREEAM certificate tends to be available between 3 - 6 months after completion.

2.3. Assessment Timeline

Figure 2 below provides a comparison of the RIBA outline plan of work with the BREEAM assessment stages.

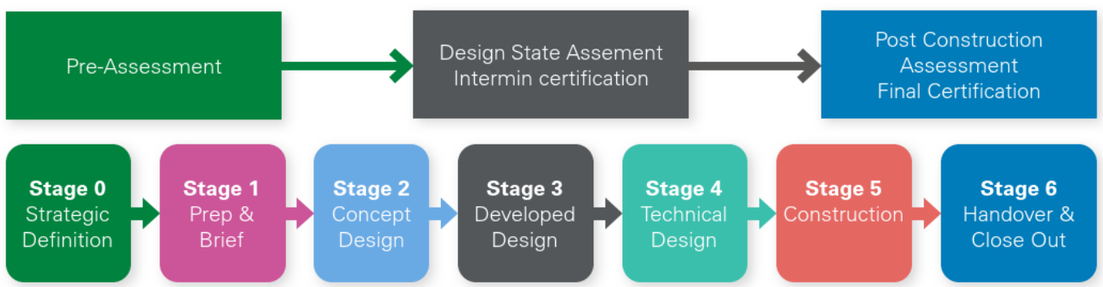


Figure 2 - BREEAM assessment and certification stages and the RIBA Outline plan of works

2.4. Scoring

The BREEAM assessment is made up of a total of 10 separate categories as summarised in Figure 1 on the previous page, each containing a variety of different environmental issues. Although some of the issues are mandatory for specific scores, as summarised in the next section, the majority are tradable i.e. the team can choose to target them or not depending on their suitability and achievability for the assessed building.

Each of the categories carries an associated weighting which is applied to credits achieved in that category to calculate the total score for the assessed building. The weightings vary depending on the type of building being assessed and whether certain elements are included or excluded from the scheme e.g. if a lift or escalator are not part of the proposals then Ene 06 – Energy Efficient Transportation Systems will be filtered out of the assessment and the weightings updated accordingly.

As a summary, the fully fitted scheme weightings are typically as follows:

Table 2 – Scheme weightings

ENVIRONMENTAL CATEGORY	WEIGHTING
Management	11%
Health & Wellbeing	14%
Energy	16%
Transport	10%
Water	7%
Materials	15%
Waste	6%
Land Use & Ecology	13%
Pollution	8%
Innovation (additional)	10%

Therefore, when design teams are considering tradable credits, it is important to remember that the loss of a single credit in the Materials and Land Use & Ecology category is likely to have a different impact on the overall score than the loss of a Water or Pollution credit.

2.5. Mandatory Requirements

Whilst most BREEAM credits are tradable and can be targeted in various configurations to achieve the required overall score, there are minimum requirements set to achieve certain BREEAM ratings. For example, to achieve a BREEAM 'Excellent' rating the following credits must be achieved, in addition to achieving a score of >70% overall. Table below highlights the mandatory requirements for all of the different BREEAM scores.

All Mandatory Requirements fall into the scope of this scheme and are outlined in the Table below.

Table 3 – BREEAM New Construction V6 Mandatory Requirements

BREEAM ISSUE	PASS	GOOD	VERY GOOD	EXCELLENT	OUTSTANDING
Man 03: Responsible construction practices	None	None	None	**One credit (Responsible Construction Management)**	Two credits (Responsible Construction Management)
Man 04: Commissioning and handover	None	None	One credit (Commissioning test schedule and responsibilities)	**One credit (Commissioning test schedule and responsibilities)**	One credit (Commissioning test schedule and responsibilities)
Man 04: Commissioning and handover	None	None	Criterion 11 (Building User Guide)	**Criterion 11 (Building User Guide)**	Criterion 11 (Building User Guide)
Man 05: Aftercare	None	None	None	**One credit (Commissioning implementation)**	One credit (Commissioning implementation)
Ene 01: Reduction of energy use and carbon emissions	None	None	None	**Four credits (Energy performance)**	Six credits (Energy performance) and Four credits (Energy modelling and reporting)
Ene 02: Energy monitoring	None	None	One credit (First sub-metering credit)	**One credit (First sub-metering credit)**	One credit (First sub-metering credit)
Wat 01: Water consumption	None	One credit	One credit	**One credit**	Two credits
Wat 02: Water monitoring	None	Criterion 1 only	Criterion 1 only	**Criterion 1 only**	Criterion 1 only
Mat 03: Responsible sourcing of materials	Criterion 1 only	Criterion 1 only	Criterion 1 only	**Criterion 1 only**	Criterion 1 only
Wst 01: Construction waste management	None	None	None	**None**	One credit
Wst 03: Operational waste	None	None	None	**One credit**	One credit

2.6. Evidence

Throughout a BREEAM assessment, the appointed BREEAM Assessor will require evidence to validate the achievement of the various targeted criteria. There are a few issues where specific items are required and where this is the case these will be listed in the BREEAM technical manual, for example Ene 01 requires a copy of the Building Regulations Output Document from approved software. However, for the majority of issues the evidence requirements have been left as deliberately flexible to reduce the amount of additional documentation that must be produced to satisfy the BREEAM requirement only.

As part of the assessment process it is up to the project team to provide documentation that they believe confirms compliance with the specific criteria however generally speaking the following documents could be considered for submission as evidence;

- Meeting minutes and agendas,
- Drawings,
- Specifications,
- Letters / email correspondence,
- Project programmes,
- Certificates,
- Specialist reports – where necessary the author may need to confirm that they meet the BREEAM requirements of suitably qualified, this is outlined in more detail in a later section,
- Specialist software outputs, and
- Confirmation of intent from client / developer if detailed information is not available due to the stage of the project.

In all instances, it is important that there is a robust audit trail for the documentation provided i.e. it should be clear who it has come from and when it was produced, there should also be an obvious indication of the project it is referring to. If relevant the documentation should also be signed (for example if it is a BRE checklist or a letter of confirmation from a member of the team).

2.7. Early-Stage Actions

It is recommended that the client and design team review all available credits as early as possible in the project, as they can become difficult or indeed impossible to achieve if considered later in the design stages of the development as it is generally easier to incorporate changes into the design before it has developed too far. As demonstrated in Section 3, there are some credits that have already been dropped due to the current stage of the project. Some of these credits are in Stage 2, which will be completed by the time the time the project team can begin implementing the BREEAM requirements.

Ridge and Partners LLP sustainability team were appointed from April 2024. Abby Foster has been appointed as the BREEAM AP and Rich Knight has been appointed as BREEAM Assessor. A BREEAM project team meeting was undertaken 21/06/2024 and the initial Waste and Materials workshop was held 02/08/2024.

2.8. Requirements for Specialist Consultants

There are various BREEAM credits which require suitably qualified consultants to consider and report on specific elements of the project. This section identifies the specialist consultants that may be appointed and provides a summary of the current BREEAM related requirements with regards to the definition of "suitably qualified":

BREEAM Advisory Professional / Sustainability Champion

The appointment of a BREEAM Advisory Professional or AP (previously known as a BREEAM Sustainability Champion) is not mandatory for BREEAM assessments but will facilitate the assessment process. The BREEAM assessment methodology focuses very much on the importance of early involvement of the relevant specialists, as such there are additional credits available for the appointment of a BREEAM AP within BREEAM issues Man 01 and Man 03. However, based on the current timeline of the project, these credits are only available within Man 03. It should be noted that although this is often provided as an optional extra service by BREEAM assessors, this is something that other appropriate professionals can offer, such as architects or engineers, if they have the relevant qualification.

Currently only members of the BREEAM AP membership scheme are deemed to be suitably qualified for the purpose of this issue. This qualification indicates that the individual has been trained and qualified by BRE as a specialist in built environment sustainability, environmental design, and assessment. This membership is subject to ongoing CPD in key relevant areas.

The appointment of a BREEAM AP can be recognised within the assessment as follows:

Man 03 - related to the post construction stage BREEAM Assessment. A credit is available where a BREEAM AP is appointed to enable ongoing compliance with relevant sustainability performance criteria, to confirm this they will need to visit site regularly at key stages to carry out spot checks and have the relevant authority to do so.

Abby Foster, Ridge & Partners LLP has been appointed as the BREEAM AP. She led both the Pre-Assessment meeting 21/06/2024 and the Waste and Materials workshop 02/08/2024.

Acoustician

A suitably qualified acoustician can be used to provide evidence for both Hea 05 Acoustic Performance (related to internal acoustics).

To meet the requirements of suitably qualified the acoustician should meet all of the following criteria:

- Hold a degree, PhD or equivalent qualification in a relevant subject i.e. acoustics or sound testing
- Have at least 3 years work experience that is relevant to the project and this should be within the last 5 years. The experience should clearly demonstrate a practical understanding of factors affecting acoustics in construction and the built environment including acting in an advisory capacity to provide recommendations for suitable acoustic performance levels and mitigation measures
- Hold a recognised acoustic qualification and membership of an appropriate professional body e.g. the Institute of Acoustics

The Project Manager is in the process of securing an Acoustician for this project, ensuring the relevant BREEAM requirements are scoped in.

Air Quality Consultant

An Air Quality Assessment was considered for the proposed development. However, it was deemed unnecessary for the proposed development at St Mary's due to its urban context. This was confirmed by the Local Planning Authority's pre-application feedback not requiring an Air Quality Assessment.

Energy Specialist

The use of a building energy specialist is applicable to several issues in BREEAM however the requirements do vary from issue to issue therefore for simplicity they are summarised for the various issues below.

Ene 01 – Reduction of energy use and carbon emissions – although not specifically stated in the manual, the definition of suitably qualified energy assessor is still provided, therefore the required model should be produced by a licensed energy assessor who has access to the relevant software via an accredited energy assessment scheme provider. For England accredited energy assessors are listed at www.ndepcregister.com for non-domestic properties.

Ene 04 – Low Carbon Design – This issue requires an energy specialist to review the low and zero carbon technologies applicable to the assessed building. For the purpose of this issue an energy specialist is defined as someone who has acquired substantial expertise or a recognised qualification for undertaking assessments, designs and installations of low or zero carbon solutions in the commercial building sector however they must not be professionally connected to a single LZC technology or manufacturer.

Tom Green, Ridge & Partners LLP has written an Energy and Thermal Assessments Report (which includes Thermal Comfort Analysis) with a LZC feasibility assessment appended. He has also provided a Passive Design report. Further, Michaela Parkinson, Ridge & Partners LLP has produced a Life Cycle Assessment (LCA) (Mat 01).

Security Consultant

There is a single credit available for Hea 06 if a suitably qualified security specialist (SQSS) undertakes a Security Needs Assessment of the assessed building / site. To meet the definition of "suitably qualified" this should be undertaken by someone who meets with one of the following:

- Crime Prevention Design Advisor (CPDA)
- Architectural Liaison Officer (ALO)
- Counter Terrorism Security Advisor (CTSA)
- A specialist registered with a BREEAM recognised third party accreditation scheme for security specialists
- A practising security consultant that meets the following requirements:
  - Minimum of three years relevant experience within the last five years. This experience must clearly demonstrate a practical understanding of factors affecting security in relation to construction and the built environment, relevant to the type and scale of the project being undertaken
  - Hold a suitable qualification relevant to security

  - Maintain (full) membership to a relevant professional body or accreditation scheme that meets the following:
    - Has a professional code of conduct to which members must adhere
    - Ongoing membership is subject to peer review

The University have their own security professionals who are taking security concerns into consideration outside of BREEAM. This credit (Hea 06) therefore has not been pursued, as it would fragment the overall security strategy for the campus.

Ecologist

There are four issues under the land use and ecology category where the use of a suitably qualified ecologist (SQE) can assist with the achievement of credits whereby it is possible to achieve credits more credits through the appointment of a SQE.

To meet the definition of SQE the ecologist completing the survey and report for the site must meet the following criteria:

- Hold a degree or equivalent qualification in ecology or a related subject, acceptable subjects (depending on their ecological content) would be Ecology, Biological Sciences, Zoology, Botany, Countryside Management, Environmental Science, Marine and Freshwater Management, Earth Sciences, Agriculture, Forestry, Geography and Landscape Management
- Be a practising ecologist with at least 3 years relevant experience (within the last 5 years). This experience should demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment and should include acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures.
- Should be covered by a professional code of conduct and be subject to peer review. Full members of the following organisations would meet this criterion:
  - Chartered Institution of Water and Environmental Management (CIWEM)
  - Chartered Institute of Ecology and Environmental Management (CIEEM)
  - Institute of Environmental Management and Assessment (IEMA)
  - Landscape Institute (LI)
  - The Institution of Environmental Sciences (IES)

If the ecology report is undertaken by an ecologist who does not meet the above criteria then a Suitably Qualified Ecologist can verify them. In order for this to comply the SQE must confirm as a minimum that they have reviewed the report and have found it to:

- Represent sound industry practice
- Report and recommend correctly, truthfully and objectively
- Be appropriate given the local site conditions and scope of works proposed
- Avoid invalid, biased and exaggerated statements

Dan Simpson, Aspect Ecology is the suitably qualified ecologist for this project.

Civil Engineer

BREEAM issue Pol 03 criteria 7-15 consider the surface water run-off from the site, to achieve maximum credits here it is necessary for an appropriate consultant to be appointed to undertake the necessary calculations. The BREEAM Manual recognises that the qualifications here will to an extent depend on the complexity of the site, however generally it is necessary for the engineer to be able to demonstrate that they have the following:

- An appropriate qualification
- Relevant experience i.e. designing SUDs and flood prevention measures and completing peak rate of run off calculations
- If complex flooding calculations and prevention measures are require this must be a specialist hydrological engineer

Paul Chance, Ridge & Partners LLP is the suitably qualified Civil Engineer for this project.

Contaminated Land Specialist

BREEAM issue Le 01 offers a credit for developing on land that is deemed to be significantly contaminated and therefore requires remediation in order for the development to take place. The details of this must be confirmed by a suitably qualified contaminated land specialist who is required to meet the following criteria;

- Hold a degree or equivalent qualification in chemistry, environmental science / management, earth sciences, civil engineering or a related subject
- Have a minimum of 3 years relevant experience (within the last 5 years) in site investigation, risk assessment and appraisal – such experience must clearly demonstrate a practical knowledge of site investigation methodologies and understanding of remediation techniques and national legislation on the subject, as well as acting in an advisory capacity to provide recommendations for remediation

The land at the site is not suspected to be contaminated, so this was deemed irrelevant for this project.

Other Consultants

This report has outlined the BREEAM requirements relating to qualifications where they are clearly stated within the BREEAM manual. There are other areas where a specialist could be used to assist with the production of the required evidence but no specific requirements regarding qualifications are stated within the BREEAM manual including;

- Man 02 – Cost consultant
  Tom Adams, McComb Partnership Ltd is the suitably qualified cost consultant for this project.

- Tra 01/Tra 02 – Transport consultants
  Olivia Hennessy, Evoke Transport is the suitably qualified transport consultant for this project.

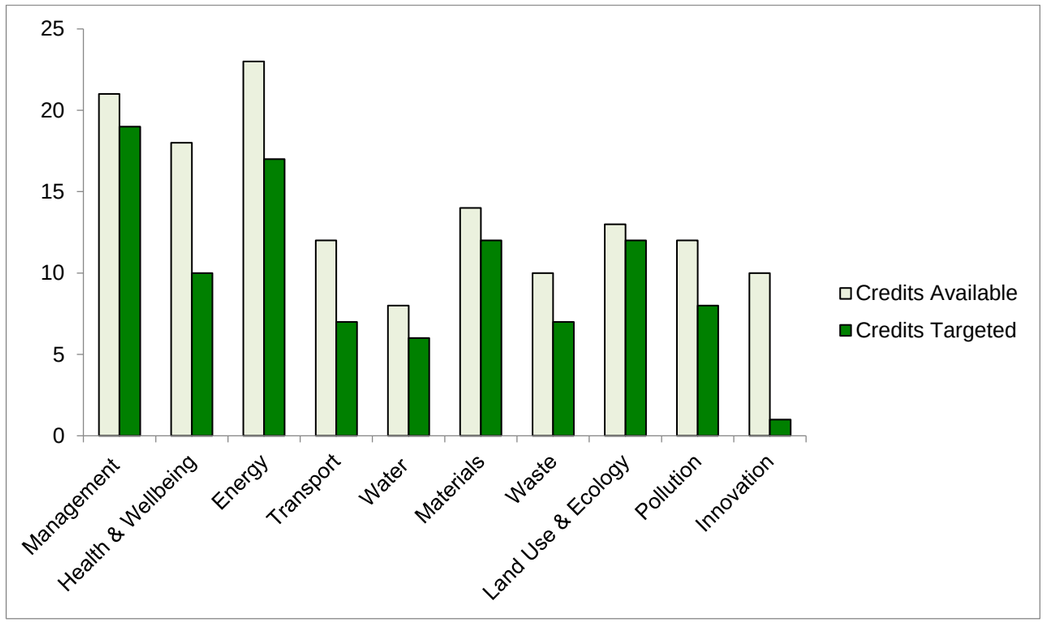
- Wst 01 – Pre demolition audit by relevant professional
  Material Index has provided a Pre-Demolition Audit for the site. They are a company consisting of architects, engineers and software developers committed to helping the construction industry become more sustainable.

2.9. BREEAM Pre-Assessment

Rich Knight, licensed BREEAM assessor, has conducted a desk-based study to review the potential score that the development could achieve under BREEAM V6 should a formal BREEAM assessment be undertaken.

The BREEAM Schedule included in Section 3 indicates that a potential score of 76.3% is currently assumed for St Mary's University – Redevelopment of 'R' Building which would achieve a BREEAM Excellent, requiring a score of at least 70% to be achieved. Our recommendation is to maintain at least a 5% buffer over the targeted score pursued, as this provides some flexibility as the scheme design evolves and works commence on site.

The graph below is extracted from the Ridge BREEAM Pre-Assessment Schedule included in Section 3 and indicates the percentage of credits targeted for each of the nine categories. This shows that a broad range of targets are included for the scheme currently, comprehensively covering all of the available BREEAM categories.



Building Performance by Section					
	Environmental weighting	Credits Available	Credits Targeted	% Targeted	Weighted Score
Management	11.00%	21	19	90.48%	9.95%
Health & Wellbeing	14.00%	18	10	55.56%	7.78%
Energy	16.00%	23	17	73.91%	11.83%
Transport	10.00%	12	7	58.33%	5.83%
Water	7.00%	8	6	75.00%	5.25%
Materials	15.00%	14	12	85.71%	12.86%
Waste	6.00%	10	7	70.00%	4.20%
Land Use & Ecology	13.00%	13	12	92.31%	12.00%
Pollution	8.00%	12	8	66.67%	5.33%
Innovation	10.00%	10	1	10.00%	1.00%
			Total BREEAM Score		**76.03%**

2.10. Next Steps

This report has demonstrated that a score of BREEAM Excellent could be achievable. As the scheme moves forwards it will be essential for the relevant members of the project team to keep the assumptions outlined in the Schedule in Section 3 under review and provide the relevant documentary evidence to confirm achievability for their particular disciplines, highlighting any areas of concern so that these can be considered further.

It is recommended that a BREEAM workshop is undertaken with the design team to review the BREEAM targets and enable all targeted credits to be met so that BREEAM Excellent can be achieved.

3. RIDGE BREEAM SCHEDULE

The current stage of the BREEAM schedule is shown below. This will be updated as the project progresses.

BREEAM Scheme: New Construction 2018
Building Name: St Marys R Building
Registration No.: TBC
Assessor: Ridge

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
	Management					
Man 1	Project Brief and Design	To optimise final building design through recognising and encouraging an integrated design process and robust stakeholder engagement.	**4**	**2**	2	The Pre Assessment meeting with the BREEAM AP (Abby Foster, Ridge & Partners LLP) and project team was undertaken 21/06/2024. Since appointment, BREEAM progress has been monitored, for example during the Waste and Materials workshop 02/08/2024.
Man 2	Lifecycle 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.	**4**	**4**	2	Tom Adams (Head of Cost Management, McComb Partnership) is completing the Elemental Life Cycle Costing (LCC). He also intends to complete the Component level LCC options appraisal and Capital Cost Reporting at RIBA Stage 4.

BREEAM Scheme: New Construction 2018
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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Man 3	Responsible Construction Practices	To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.	6	6		All the timber for the development will be sourced legally and the Client and Contractor will formally agree performance targets at an appropriate stage. There is currently no reason to suggest that any credits will be unachievable for Man 03.
Man 4	Commissioning and Handover	To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	4	4	5	The design team is well experienced in the handover and commissioning processes. There is currently no reason to suggest that any credits will be unachievable for Man 04.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Man 5	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.	3	3		The design team will enable the contractor to provide aftercare support and commissioning implementation. A Post Occupancy Evaluation is intended be undertaken.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Health & Wellbeing						
Hea 1	Visual Comfort	To encourage best practice in visual performance and comfort by ensuring daylighting, artificial lighting and occupant controls are considered.	**5**	**2**		Glare from sunlight, and compliance with internal and external lighting level standards have been considered. The building has been designed primarily to provide higher education teaching spaces. Therefore, the nature of the building has prohibited it meeting the daylighting and view out BREEAM requirements.
Hea 2	Indoor air quality	To encourage and support healthy internal environments with good indoor air quality.	**4**	**0**	2	The location of the site, urban in nature and constrained by neighbouring buildings and roads, suggests that it is unlikely that many of the Hea 02 credits would be met. It is also not required following the pre-application response from the Local Authority.
Hea 4	Thermal Comfort	To ensure the building is capable of providing an appropriate level of thermal comfort.	**3**	**3**		Tom Green (Senior Sustainability Engineer, Ridge & Partners LLP) has provided an Energy and Thermal Assessments Report which includes a Thermal Comfort Analysis.
Hea 5	Acoustic Performance	To ensure the building is capable of providing an appropriate acoustic environment to provide comfort for building users.	**3**	**3**	2	The Project Manager is currently in the process of securing an Acoustician for this project. There is currently no reason to suggest that any credits will be unachievable for Hea 05.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Hea 6	Security	To encourage the planning and implementation of effective measures that provide an appropriate level of security to the building and site.	1	0		The University have their own security professionals who are taking this into consideration outside of BREEAM. This credit has not been pursued as it would fragment the overall security strategy for the campus.
Hea 7	Safe & Healthy Surroundings	To encourage the provision of safe access around the site and outdoor space that enhances the wellbeing of building users.	2	2		Liz Morgan (Architectural Senior Associate, Ridge & Partners LLP) has confirmed that this credit looks achieveable, 09/07/2024. The Design and Access Statement submitted for planning demonstrates a safe site access in Section 5.3 'Access' (page 35).
	Energy					
Ene 1	Reduction of Energy Use and Carbon Emissions	To minimise operational energy demand, primary energy consumption and CO_2 emissions.	13	8		Yash Ammanabrolu (Sustainability Engineer, Ridge & Partners LLP) provided an initial BRUKL which showed that 8 credits could be achieved. Due to the intended use of the development being medical and/or other higher education, operational energy consumption by the University will be very hard to predict, so this part of the credit has not been pursued.
Ene 2	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.	2	2		Sub-metering of major energy consuming systems and high energy load areas is intended to be pursued. There is currently no reason to suggest that any credits will be unachievable for Ene 02.
Ene 3	External Lighting	To reduce energy consumption through the specification of energy efficient light fittings for external areas of the development.	1	1		External lighting will be controlled and it is intended to have an efficacy of no more than 70.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Ene 4	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.	**3**	**2**	2	Tom Green (Senior Sustainability Engineer, Ridge & Partners LLP) has provided a Passive Design report and an Energy and Thermal Assessments Report which has an Low and Zero Carbon (LZC) Feasibility Assessment appended to it.
Ene 6	Energy efficient transportation systems	To encourage the specification of energy efficient transportation systems within buildings.	**2**	**2**		There is nothing in the design which precludes the inclusion of energy efficient transportation systems within buildings. Therefore, there is currently no reason to suggest that any credits will be unachievable for Ene 06.
Ene 8	Energy Efficient Equipment	To encourage installation of energy efficient equipment to ensure optimum performance and energy savings in operation.	**2**	**2**		The University will likely be pursuing this for it's likely energy and cost savings. There is currently no reason to suggest that any credits will be unachievable for Ene 08.

BREEAM Scheme: New Construction 2018
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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
		Transport				
Tra 1	Transport Assessment and Travel Plan	To reward awareness of existing local transport and identify improvements to make it more sustainable.	**2**	**2**	1	A Transport Assessment and Travel Plan have been created by Olivia Hennessy (Principal Transport Consultant, Evoke Transport).
Tra 2	Sustainable Transport Measures	To maximise the potential for local public, private and active transport through provision of sustainable transport measures appropriate to the site.	**10**	**5**	1	There are limited changes to the existing amenities as the site is located on brownfield land, within the St Mary's campus. Points have been achieved by: A public transport information system will be put in a publicly accessible area; encouragement of car sharing; provision of 14 cycle spaces and cyclist facilities; and as the site has three existing accessible amenities nearby.
		Water				
Wat 1	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.	**5**	**3**		The santiaryware specification is yet to be finalised however there is nothing to preclude the use of water efficient appliances for WC, taps and showers.
Wat 2	Water monitoring	To reduce the consumption of potable water in new buildings through the effective management and monitoring of water consumption.	**1**	**1**		Having a water meter is now a mandatory requirement and the University are keen to understand their potable water use and to reduce their water consumption. Thus, there is currently no reason to suggest that any credits will be unachievable for Wat 02.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Wat 3	Major leak detection and prevention	To reduce the consumption of potable water in new buildings through minimising wastage due to water leaks.	2	2		The University are keen to reduce their water consumption. Thus, there is currently no reason to suggest that any credits will be unachievable for Wat 03.

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		Materials				
Mat 1	Life Cycle Impacts	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.	**7**	**7**	2	An LCA has been completed by Michaela Parkinson (Sustainability Consultant, Ridge & Partners LLP) and uploaded to the BRE website, which confirms that 7 credits are achieveable.
Mat 2	Environmental impacts from construction products - Environmental Product Declarations (EPD)	To encourage availability of robust and comparable data on the impacts of construction products through the provision of EPD.	**1**	**1**		Environmental Product Declarations for construction materials will be sought and the Client and Contractor will formally agree performance targets at an appropriate stage. There is currently no reason to suggest that the credit will be unachievable for Mat 02.
Mat 3	Responsible sourcing	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.	**4**	**2**	1	The early action was covered by the Waste and Material Workshop 02/08/2024 and all the timber for the development will be sourced legally. It is anticipated that the responsible sourcing will fall in the mid range, but there is an aspiration for it to be higher.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
Mat 5	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.	1	1		The architects have designed the building with durability and resilience as top priorities. For example, the plans labelled '5025779-RDG-ZZ-00-D-A-031201-FLOOR FINISHES - GROUND FLOOR PLAN' and '5025779-RDG-ZZ-01-D-A-031202-FLOOR FINISHES - FIRST FLOOR PLAN' demonstrate that floor materials have been selected for their hardwearing properties e.g. the Clinical Teaching space consists of two types of Vinyl flooring.
Mat 6	Material Efficiency	To avoid unnecessary materials use arising from over specification without compromising structural stability, durability or the service life of the building.	1	1	1	Early action covered by Waste and Materials Workshop 02/08/2024. Material efficiency targets were agreed. As the development progressed they will be endevored to be reached, or justification will be provided why they are unviable.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
		Waste				
Wst 1	Construction Site Waste Management	To reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.	**5**	**4**	2	Material Index has provided a Pre-Demolition Audit for the site, satisfying the timebound element. Following this, a Site Waste Management Plan is intended to be produced in RIBA Stage 4.
Wst 2	Recycled 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.	**1**	**0**		It is unknown at this stage whether the aggregates will be appropriate for reuse, i.e. if they contain aspestos they may not be. Therefore this criteria is not assumed.
Wst 3	Operational Waste	To encourage the recycling of operational waste through the provision of dedicated storage facilities and space.	**1**	**0**		A bin storage area will be located on site. However, it is unknown at this stage how this will be integrated into the overall waste strategy for St Mary's University. The approach chosen will be led by the most appropriate strategy for the University, rather than Wst 03.
Wst 5	Adaption 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.	**1**	**1**	2	Early action covered by Waste and Materials Workshop 02/08/2024. A Climate Change Adaptation Strategy Appraisal was discussed and agreed on.
Wst 6	Designing 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.	**2**	**2**	2	Early action covered by Waste and Materials Workshop 02/08/2024. A Functional Adaptability Appraisal was discussed and agreed on.
		Land Use & Ecology				

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LE1	Site selection	To encourage the use of previously occupied or contaminated land and avoid land which has not been previously disturbed.	2	1		The site constitutes previously developed land but it is assumed that the site is not be contaminated. Therefore, only one credit can be achieved.
LE2	Ecological Risks and Opportunities	To determine the existing ecological value associated with the site, including surrounding areas, and the risks and opportunities for ecological protection and enhancement as part of the project.	2	2		Dan Simpson (Director, Aspect Ecology) has identified risks and opportunities through the Ecological Appraisal.
LE3	Minimising impact on ecology	To avoid, or limit as far as possible, negative ecological impacts associated with the site and surrounding areas resulting from the project.	3	3		Dan Simpson (Director, Aspect Ecology) has confirmed via email that this is subject to implementation of recommended ecological safeguards.
LE4	Ecological change and Enhancement	To enhance ecological value of the area associated with the site in support of local, regional and national priorities.	4	4		Dan Simpson (Director, Aspect Ecology) confirms that the initial BNG metric run indicates a net gain is achievable.
LE5	Long term ecology management and maintenance	To secure ongoing monitoring, management and maintenance of the site and its habitats and ecological features, to ensure intended outcomes are realised for the long term.	2	2		Dan Simpson (Director, Aspect Ecology) confirms that this is subject to a LEMP being prepared.

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Ref	Title	Aim	BREEAM credits available	Targeted Scores	RIBA Stage	Comments
		Pollution				
Pol 1	Impact of refrigerants	To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.	**3**	**0**		The development will use an Air Source Heat Pump (ASHP), therefore the Pol 01 credits cannot be awarded.
Pol 2	Local Air Quality	To contribute to a reduction in local air pollution through the use of low emission combustion appliances in the building.	**2**	**2**		The inclusion of a ASHP's on site will facilitate the achievement of Pol 02 credits.
Pol 3	Surface water run-off	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.	**5**	**4**		Paul Chance (Civil & Structural Senior Associate, Ridge & Partners LLP) has confirmed via email that the site is at a low risk of flooding.
Pol 4	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.	**1**	**1**		It is intended that the external lighting will be in compliance with ILP guidance and will be turned off between 2300 and 0700 automatically.
Pol 5	Reduction of Noise 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.	**1**	**1**		The Project Manager is currently in the process of securing an Acoustician for this project. There is currently no reason to suggest that any credits will be unachievable for Pol 05.
		Innovation - Exemplary Level Criteria				
		Innovation/Exemplar	**10**	**1**		There is an aspiration to achieve an innovation credit for Man 03 Responsible Construction Practices.

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