PROJECT REF	**BS 1369**
DATE	**May 2020**
REVISION	**1 (December 2020)**

ABBEY ROAD – PHASE 2

SUSTAINABILITY STATEMENT

PREPARED FOR:

Wates Construction
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PREPARED BY:

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PROJECT REVISION SHEET

Revision No.	Date	Details	Changes	Author	Approved
0	*28/05/2020*	*For Comments*	*N/A*	*MR*	*MR*
1	*15/12/2020*		*Updated to include revised BREEAM Assessments and BRE Approvals*	*MR*	*MR*

Contents

1.0 SUSTAINABILITY STATEMENT

1.1. Introduction

Norman Bromley Partnership were commissioned by Wates Construction to provide a Sustainability Statement to support the planning application for the proposed Abbey Road Phase 2, London NW6 4DW

The scheme comprises of a 2 storey building with a community centre to the ground floor and a health centre to the first floor.

The proposal also includes the landscaping of the site and provision of play area.

Figure 1 – Abbey Centre View

In order to satisfy the requirements of the GLA London Plan, Intend to Publish London Plan (ITP, 2019) and the Camden Local Plan the Abbey Phase 2 scheme has been designed and engineered with a particular focus on sustainability. The design approach aimed to firstly minimize energy consumption by means of passive techniques before providing energy efficient systems.

The proposal for the new community centre and health centre will address sustainability through the inclusion of design requirements that comprehensively tackle impacts associated with building developments. The following areas are covered by the statement :-

- Passive and Active Design
- Energy
- Ecology and landscape
- Construction and Demolition
- Water
- Pollution
- BREEAM

1.2. Passive and Active Design

A passive design approach to the development of the proposed building is crucial to the success of reducing its carbon footprint. Our strategy incorporates a fine balance between natural daylight, natural ventilation and use of thermal mass, avoiding both discomfort glare and excessive solar gain during the summer months.

The building footprint has been kept as compact as possible to reduce its impact on the site and retain as many trees and as much open space as possible.

Daylighting
We believe that natural daylight is not just a key element to achieve energy savings, but it is a crucial element to deliver quality and comfort in public building environments. The glazing provided to the building also ensures good views of the surrounding park from the main public areas.

Cooling and Overheating
The proposed development utilises a number of design measures based on the London Plan Cooling Hierarchy to reduce the demand for cooling and prevent the risk of overheating.

An overheating analysis of the building has been carried out and demonstrates the effectiveness of the measures listed below, in ensuring the community centre and health centre achieves the thermal comfort levels as dictated by CIBSE TM52.

1 – Minimise internal heat generation through energy efficient design – The use of high efficiency insulation in excess of the levels required by the building regulations shall limit heat losses from heating distribution within the building. The heat distribution pipe lengths have been kept to a minimum.

2 – Reducing the amount of heat entering the building in the summer – The south facing glazing provided to the waiting areas to maximise views of the park have been provided with external solar shading. Additional external solar shading

is also provided to the windows on the west elevation. Internal blinds shall also be provided to consulting rooms and offices.

3 – Use of thermal mass and high ceilings to manage heat within the building – The community centre is being provided with high ceilings to assist with the management of heat in the building.

4 - Mechanical ventilation – The health centre is being provided with mechanical ventilation and partial cooling for clinical reasons. Heat recovery is being provided and the system can be used for free cooling in the summer. The community centre foyer, resource room and hall are also being provided with heat recovery mechanical ventilation due to the restricted use of opening windows for acoustic reasons.

5 - Passive ventilation – The rooms to the community centre shall generally be ventilated via opening windows and doors with the exception of the hall, foyer and resource room which require mechanical ventilation as window opening are restricted due to noise. The health centre is provided with opening windows although mechanical ventilation is required to clinical rooms.

The proposed ventilation strategy satisfies that CO_2 and overheating requirements of the CIBSE TM52.

A dynamic thermal simulation has been carried out for the naturally ventilated rooms to predict internal temperatures using IES thermal modelling software. The building will be compliant with the CIBSE TM52 overheating criteria.

Systems and Controls
Lighting to the offices, consulting rooms, function rooms etc., will be on movement sensors and will include daylight dimming.

The lighting to corridors, WC's and stores shall be controlled by movement sensors.

The new community centre and health centre shall be provided with a Building Management system to reduce and monitor energy usage.

Separate thermostat control shall be provided to control the heating in each room of the community centre and health centre which will be provided with underfloor heating.

Site Ecology and Biodiversity
Our design aims to enhance the ecology and biodiversity of the site. Refer to the Design and Access Statement for details.

1.3. Energy

Norman Bromley Partnership were commissioned by Wates London to provide an Energy Assessment to support the planning application for the proposed Abbey Road Phase 2, London NW6 4DW – Refer to Norman Bromley Partnership's Energy Efficiency and Renewable Energy Plan.

The aim of the Energy Efficiency and Renewable Energy Plan was to support the full planning application for the phase 2 development and addresses the key requirements of local, regional and national policy. The report has been updated to respond to planning condition 22.

The assessment concludes that the proposed Abbey Road Phase 2 development, based upon the proposed building geometry and incorporating the following measures will achieve compliance with the Building Regulation, the London Plan and the Camden Local Plan.

Energy Demand Reduction

1. Improved building fabric over Part L 2013
2. Low Energy Lighting with automated controls
3. High Efficiency Pumps
4. Intelligent Building Controls

Low Carbon Energy Supply

1. Heating and hot water supplied by air source heat pumps with a heating efficiency of 350% and a hot water efficiency of 250%.

Renewable Energy

1. Photovoltaic Cells providing an output of 18.5 kWp

It is predicted that the Abbey Road Phase 2 development shall achieve a 37.58% improvement over Part L2A 2013 in compliance with the London Plan.

The 37.58 % improvement over Part L2A 2013 shall wholly be satisfied by onsite measures.

It is also predicted that a reduction in carbon emissions of at least 20% will be achieved by the inclusion of complementary low and zero carbon technologies; namely photovoltaic panels and air source heat pumps.

1.4. Water

The scheme will adopt low-flow water consuming appliances and fittings throughout with at least 25% improvement against BREEAM's notional baseline performance.

These include :-

- Low Flush WC's
- Flow Restricting Taps

Meters are effective in encouraging people to reduce their water consumption and raises overall awareness. Separate water meters will be fitted to the mains water supply of the community centre and health centre.

The incoming water services shall be provided with leak detection.

Another proposed measure is to install flow control devices to WC areas to ensure water is not wasted.

1.5. Pollution

In addition to the reduced CO2 emissions achieved by the proposed development and set out in the energy section above, the use of air source heat pumps will result in zero NOx emissions.

The external lighting has been designed to avoid night-time light pollution and shall be compliant with the requirements of the ILP Guidance notes for the reduction of obtrusive light, 2011.

The external lighting shall also be provided with time switch control so that all external luminaires (except for safety and security lighting) can be switched off between 23:00 and 07:00.

1.6. BREEAM

The process of assessment uses the BREEAM for New Construction 2018 criteria issued by the BRE (Building Research Establishment). Hodkinson are appointed as BREEAM facilitator for the project and has prepared a report, the main points of which are summarised below:-

- BREEAM establishes a set of categories under which specific credit requirements are grouped: Management, Health and Wellbeing, Energy, Transport, Water, Materials, Waste, Land Use, Ecology, Pollution.

- Camden Council requires a BREEAM rating of 'Excellent' to be demonstrated as the possible outcome of the project,

- A pre-assessment meeting was attended by the client, architect, project manager and environmental services engineer.
- It was identified that an ‘Excellent’ rating could be achieved on the project.
- In order to ensure that the ‘Excellent’ rating is achieved in the completed project, the design team members need to ensure that the credit criteria are incorporated in the developing design and that suitable evidence can be provided to validate achievement.

The BREEAM Design Stage Certified Tracker is included in Section 2.0 of this report.

The BRE interim Certificates for the Design Stage are also included in Section 2.0 of this report.

2.0 DESIGN STAGE; BREEAM CERTIFIED TRACKERS AND BRE INTERIM CERTIFICATES

BREEAM 2018 TRACKER

Abbey Road, Phase 2

Project name & number	Abbey Road Phase 2 - Community Centre	**BREEAM assessor**	Maihul Varsani
Client	Wates Construction	**Project manager**	Zeta Watkins
Local authority & postcode	Camden, NW6 4DN	**Rating required**	Excellent
Reason for BREEAM	Planning Policy CC2	**Building type**	Community Centre
Status of project	Design Stage	**Assessment scope**	Fully fitted
Development description	Development of a new health centre & community centre, incorporated in a two-storey building. Health Centre cica. 800sqm at 1st floor level and a ground floor community centre, cica 990sqm. There are also shared facilites at ground level including plant and refuse spaces.		

BREEAM assessment details	
Reference number	BREEAM-0084-4597 / 4589
Scheme	New Construction 2018
Version	3.0
GIFA (m^2)	1858.7
Part L	2013

Target score
76.50%
Excellent

Awarded score
76.50%
Excellent

BREEAM rating benchmarks	
Pass	≥ 30
Good	≥ 45
Very Good	≥ 55
Excellent	≥ 70
Outstanding	≥ 85

Meeting log

Date	Location	Key actions from DTM

BREEAM credits

Section	Available credits	Target credits	Section weighting	% credits targeted	Category score
Management	21	18	11.00%	85.71%	9.42%
Health & Wellbeing	17	12	14.00%	70.59%	9.88%
Energy	19	11	16.00%	57.89%	9.26%
Transport	12	11	10.00%	91.67%	9.16%
Water	8	6	7.00%	75.00%	5.25%
Materials	14	9	15.00%	64.29%	9.64%
Waste	10	7	6.00%	70.00%	4.20%
Land Use & Ecology	13	11	13.00%	84.62%	11.00%
Pollution	12	10	8.00%	83.33%	6.66%
Innovation	10	2	10.00%	20.00%	2.00%
Rating	**Excellent**				

Revision	Date	Revision details	Author	QA	PM sign off
v1	09.10.2020	Draft issue for comment	MV	ZW	ZW
V2	27.10.2020	Updated tracker	MV	ZW	ZW
v3	14.12.2020	FINAL DESIGN STAGE CERTIFIED	MV	ZW	ZW

Producing BREEAM Evidence:
- All pieces of information need to have a clear source for the audit trail i.e. company branding, name of author and date;
- The BRE require calculator tools to be completed for specific issues. These will be completed by the assessor once all information required for the calculation is provided;
- Drawings produced for BREEAM should be annotated to show how each criterion is met. Notes can be added directly to the drawing, or annotated by hand.

Hodkinson Consultancy can provide you with a wide range of templates to help demonstrate compliance. Your assessor will discuss these with you.

For best results please print this document in A3 format.

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BREEAM New Construction 2018 Tracker

Issue				Credits			Evidence				Notes
Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Management	Man 01 Project brief and design	Project delivery planning	RIBA 2	The project delivery stakeholders will meet to identify and define roles, responsibilities and contributions for each key phase of project delivery. The project team will demonstrate how the project delivery stakeholders' contributions and the consultation process outcomes influence the Initial Project Brief, Project Execution Plan, Communication Strategy and Concept Design.	1	1			Provided Provided		
		Stakeholder consultation	RIBA 2	All interested parties will be consulted and the design team will demonstrate how the consultation exercise influences the Project Brief and Concept Design. Prior to completion of the detailed design all interested parties give and receive consultation feedback.	1	1			Provided		
		Pre-requisite - BREEAM Advisory Professional	RIBA 1	The project team, including the client, formally agree strategic performance targets early in the design process.	-	-			Provided		
		BREEAM Advisory Professional - Concept Design	RIBA 2	A BREEAM AP will work with the project team to maximise the project's overall performance against BREEAM. They will monitor progress against the performance targets and identify risks and opportunities related to the achievement of the rating.	1	1			Provided		Zeta Watkins
		BREEAM Advisory Professional (AP) - Detailed Design	RIBA 3	A BREEAM AP will continue to work with the project team to maximise the project's overall performance against BREEAM. Feedback will be provided to support them in taking corrective actions and achieving their agreed rating.	1	1			Provided		Zeta Watkins
	Man 02 Life cycle cost and service life planning	Elemental Life Cycle Cost (LCC)	RIBA 2	An entire asset LCC Plan will be produced with design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865: 2008. This will include an indication of future replacement costs over a period of analysis and will include service life, maintenance and operation cost estimates. Details of how the LCC Plan has been used to influence building and systems design and specifications to minimise life cycle costs and maximise critical value will be demonstrated by the team.	2	0			Not Targeted		
		Component level life options appraisal	RIBA 4	A component level LCC options appraisal will be produced in line with PD 156865: 2008 and will include details on the building envelope, building services, finishes and external spaces. Appropriate examples provided by the design team will be used to demonstrate how this appraisal has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.	1	0			Not Targeted		
		Capital cost reporting		Report the capital cost for the building in pounds per square metre of gross internal floor area (£k/ m^2).	1	1			Provided		
	Man 03 Responsible construction	**Pre-requisite -** Legally harvested and traded timber		All timber and timber-based products used during the construction process of the project are 'legally harvested and traded timber'.	-	-			Provided		
		Environmental management		The principal contractor will operate an Environmental Management System covering their main operations (e.g. ISO 14001). All parties who manage the construction site will also implement best practice pollution prevention policies and procedures on site.	1	1			Provided Provided		
		Pre-requisite - BREEAM Advisory Professional		The client and the contractor formally agree performance targets.	-	-			Provided		
		BREEAM Advisory Professional - Site		The BREEAM AP will also monitor construction progress throughout all stages where decisions critically impact BREEAM performance and will proactively identify risks and opportunities related to the procurement and construction process.	1	1			Provided Provided		
		Responsible construction management		The principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks. Compliance with Considerate Constructors is required for 1 credit.	1	1			Provided	1 credit - Excellent 2 credits - Outstanding	
				Compliance with Considerate Constructors is required whilst also undertaking additional responsible construction practices.	1	1			Provided		
		Monitoring of construction site impacts - Utility		Assign responsibility to an individual for monitoring, recording and reporting energy use and water consumption from all on-site construction processes throughout the build programme.	1	1			Provided		
		Monitoring of construction site impacts - Transport		Assign responsibility to an individual for monitoring, recording and reporting transportation data resulting from all on-site construction processes throughout the build programme.	1	1			Provided		
	Man 04 Commissioning and handover	Commissioning - testing schedule and responsibilities		A schedule of commissioning and testing will be produced. The schedule will comply with current building regulations, BSRIA and CIBSE guidelines and will be undertaken by an appropriate team member (pre-commissioning, commissioning and testing). Additional commissioning requirements apply where a building management system (BMS) is specified.	1	1			Provided Provided	Very Good Excellent Outstanding	
		Commissioning - design and preparation		During the design stage an appropriate project team member will be appointed with responsibility for: - Undertaking design reviews and giving advice on suitability for ease of commissioning, providing commissioning management input to construction programming and during installation stages and management of commissioning, performance testing and handover or post-handover stages. This role will be carried out by a specialist commissioning manager where complex building services are installed.	1	1			Provided		
		Testing and inspecting building fabric		Post-construction testing and inspection will be undertaken by a suitably qualified professional who will undertake the survey and testing in accordance with the appropriate standard. Any defects identified during post-construction testing and inspection will be rectified prior to building handover and close out.	1	1			Provided Provided		
		Handover		Prior to handover two building user guides and training schedules will be produced; one technical guide for facilities management and one non-technical guide for building users.	1	1			Provided Provided	Very Good Excellent Outstanding	
	Man 05 Aftercare	Aftercare support		Aftercare support will be provided through operational infrastructure and resources. This will take place in the first month of building occupation to support building users and management. Longer term aftercare support for at least the first 12 months from occupation will also be arranged. Energy and water consumption data will be recorded for a minimum of 12 months, once the building is substantially occupied.	1	1			Provided		
		Commissioning - implementation		The following commissioning activities will be undertaken over a 12-month period, once the building becomes occupied: All simple systems (naturally ventilated) will: - Review thermal comfort, ventilation, and lighting (at three, six and nine month intervals) after initial occupation, identify deficiencies and areas in need of improvement and re-commission systems and incorporate any revisions in operating procedures into O&M manuals. All complex systems (in addition to those noted above) will: - Identify changes made by the owner or operator, test all building services under full load conditions, carry out testing during periods of extreme (high or low) occupancy, interview building occupants to identify problems or concerns regarding the systems and produce monthly reports comparing sub-metered energy performance to those predicted	1	1			Provided	Excellent Outstanding	
		Post-Occupancy Evaluation (POE)		The client or building occupier commits to carrying out a POE one year after the building is occupied. This is carried out by an independent party and covers a review of the design intent and construction process and provides feedback from a wide range of building users. The client or building occupier will commit funds to pay for the POE in advance.	1	1			Provided		
				Total for management	**21**	**18**	**Credit weighting**				

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BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Health and wellbeing	Hea 01	Visual comfort	View Out		95% of the floor area in 95% of spaces for each relevant building area will be within 8m of an external wall. The external wall must have a window or permanent opening that provides an adequate view out. The window or opening must be ≥ 20% of the surrounding wall area.	1	0			Not Targeted		
			Glare control		Areas at risk of glare will be assessed using a glare control assessment. This will allow for potential glare in all relevant building areas to be designed out where risk has been identified. The prevention of glare will be achieved through building form and layout or building design measures and the strategy must not increase the energy consumption used for lighting.	1	1			Provided		
			Daylighting		At least 80% of floor area in occupied spaces (or 35% in retail sale areas) is adequately day lit with an average daylight factor of 2% or more.	1	1			Provided		
			Internal lighting		Internal lighting in all relevant areas of the building will be designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2012. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7.	1	1			Provided		
			External lighting		All external lighting located within the construction zone will be specified in accordance with BS 5489-1:2013 Code for the practice for the design of road lighting. Lighting of roads and public amenity areas and BS EN 12464-2:20145 Light and lighting - Lighting of work places - Part 2: Outdoor work places.					Provided		
			Zoning and controls		Internal lighting will be zoned to allow for occupant control.					Provided		
	Hea 02	Indoor air quality	**Pre-requisite -** Indoor air quality plan		A site-specific indoor air quality plan will be produced and implemented.	-	-			Provided		
			Ventilation		The building will be designed to minimise the indoor concentration and recirculation of pollutants. For naturally ventilated or mixed mode buildings, the design demonstrates that the ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates in accordance with CIBSE AM10.	1	0			Not Achievable		
			Emissions from construction products		All of the product types noted below will meet the emission limits and testing requirements: - Paints and varnishes; - Wood based products; - Flooring materials; - Ceiling, wall, acoustic, thermal insulation materials; - Interior adhesives and sealants.	2	2			Provided Provided		
			Post-construction indoor air quality measurement		The formaldehyde concentration in indoor air is measured post construction but pre-occupancy and does not exceed 100 µg/ m^3 averaged over 30 minutes. The total volatile organic compound (TVOC) concentration in indoor air is measured (in accordance with ISO 16000-5 and ISO 16000-6 or ISO 16017-1) post construction but pre-occupancy and does not exceed 500 µg/ m^3 over 8 hours.	1	0			Not Targeted		
	Hea 04	Thermal comfort	Thermal modelling		Thermal modelling will be carried out using software in accordance with CIBSE AM11. For air-conditioned buildings, summer and winter operative temperature ranges in occupied spaces will be in accordance with the criteria set out in CIBSE Guide A Environmental design. The PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices are reported. For naturally ventilated buildings winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design and the building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in either of the following standards as appropriate; CIBSE TM52.	1	1			Provided		
			Design for future thermal comfort		The thermal modelling demonstrates that the relevant requirements for air conditioned and naturally ventilated buildings will be achieved for a projected climate change environment. Note: Where this is not done the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements.	1	1			Provided		
			Thermal zoning and controls		The thermal modelling analysis will need to inform the temperature control strategy for the building and its users and the strategy for proposed heating or cooling systems.	1	1			Provided		
	Hea 05	Acoustic performance	Acoustic performance		Demonstrate that all spaces in the building achieve, and for the relevant areas exceed, the performance standards required by BS for sound insulation, indoor ambient noise levels and reverberation times.	3	1			Provided Provided Provided		
	Hea 06	Security	Security of site and building	RIBA 2	A Suitably Qualified Security Specialist (SQSS) will conduct an evidence-based Security Needs Assessment (SNA). This SNA will be used to identify attributes of the site and surroundings which may influence the approach to security for the development. The SQSS will develop a set of security controls and recommendations and these will be incorporated in the design.	1	1			Provided Provided		
	Hea 07	Safe and healthy surroundings	Safe access		Dedicated and safe cycle paths will be provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable. Also, dedicated and safe footpaths are provided on and around the site providing suitable links. Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths and it will ensured that any delivery areas are not accessed through general parking areas and do not cross or share pedestrian and cyclist paths. There will be dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. Also, parking and turning areas will be designed for simple manoeuvring according to the type of delivery vehicle likely to access the site, thus avoiding the need for repeated shunting.	1	1			Provided		
			Outdoor space		There will be outside space providing building users with an external amenity area.	1	1			Provided		
					Total for health and wellbeing	**17**	**12**	**Credit weighting**				

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BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Energy	Ene 01	Reduction of energy use and carbon emissions	Energy performance		An Energy Performance Ratio for New Construction (EPR_{NC}) will be calculated. The EPR_{NC} achieved will be compared with the benchmarks below in order to award the corresponding number of BREEAM credits.	9	6			Provided	4 credits - Excellent 6 credits - Outstanding	
			Pre-requisite	RIBA 2	All relevant members of the design team will hold a preliminary design workshop focusing on operational energy performance.	-	-			Not Targeted		
			Prediction of operational energy consumption		Additional energy modelling will be undertaken during the design and post-construction stage to generate predicted operational energy consumption figures. Predicted energy consumption targets will be reported by end use, design assumptions and input data (with justifications). A risk assessment will also be carried out to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.	4	0			Not Targeted	4 credits - Outstanding	
										Not Targeted		
	Ene 02	Energy monitoring	Sub-metering of end-use categories		Energy metering systems that enable at least 90% of the estimated annual energy consumption of each fuel will be installed. Floor area requirements: > 1,000 m^2, by end-use category with an appropriate energy monitoring and management system. < 1,000 m^2, use either an energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs.	1	1			Provided	Very Good Excellent Outstanding	
										Provided		
			Sub-metering of high energy load and tenancy areas		A significant majority of the energy supply will be monitored with an accessible energy monitoring and management system for tenanted areas or relevant function areas or departments in single occupancy buildings OR Provide separate accessible energy sub-meters with pulsed outputs for tenanted areas or relevant function areas or departments in single occupancy buildings.	1	1			Provided		
	Ene 03	External lighting	External lighting		External light fittings within the construction zone will have an average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt, automatic control to prevent operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.	1	1			Provided		
										Provided		
	Ene 04	Low carbon design	Passive design analysis	RIBA 2	Note - To achieve this the first credit under Hea 04 Thermal Modelling must be achieved. The project team will analyse the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures. As a minimum this must include; Site location, site weather, microclimate, building layout, building orientation, building form, building fabric, thermal mass or other fabric thermal storage, building occupancy type, daylighting strategy, ventilation strategy and adaptation to climate change. Passive design measures will be implemented to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings and the reduced total energy demand and carbon dioxide (CO_2) emissions resulting from the passive design measures will be calculated.	1	1			Provided		
			Free cooling		Note - To achieve this credit the passive design analysis credit must be awarded. A free cooling analysis will be included in the passive design analysis and it will identify opportunities for the implementation of free cooling solutions. The building will be naturally ventilated or will use a combination of the free cooling strategies.	1	0			Not Targeted		
			Low and zero carbon technologies	RIBA 2	An energy specialist will completes a feasibility study by the end of Concept Design, this will establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy sources for the building or development. The LZC technologies for the building will be specified in line with the feasibility study recommendations. The reduced regulated carbon dioxide (CO_2) emissions resulting from the feasibility study will be quantified.	1	1			Provided		
										Provided		
										Provided		
					Total for energy	**19**	**11**	**Credit weighting**				
Transport	Tra 01	Transport assessment and travel plan	Travel plan	RIBA 1	A travel plan is developed based on a site-specific travel assessment or statement. This statement should include: - Existing travel patterns and opinions of existing building or site users towards cycling and walking; - Travel patterns and transport impact of future building users; - Current local environment for walkers and cyclists; - Reporting of the number and type of existing accessible amenities within 500m of the site; - Disabled access; - Calculation of the existing public transport Accessibility Index (AI); - Current facilities for cyclists.	2	2			Provided		
										Provided		
	Tra 02	Sustainable transport	Transport options implementation		Note - At least one credit must be achieved for Tra 01 for any credits to be awarded in this issue. Credits will be awarded based on the Accessible Index (AI) of the project, and the number of transport measures implemented.	10	9			Provided		
										Provided		
					Total for transport	**12**	**11**	**Credit weighting**				

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BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence					Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards		
Water	Wat 01	Water consumption	Water consumption		The standard Wat 01 methodology will be used to compare the water consumption (litres/person/day) for the assessed building against a baseline performance. Credits will be awarded as follows: - 12.5% improvement on baseline > 1 credit - 25% improvement on baseline > 2 credits - 40% improvement on baseline > 3 credits - 50% improvement on baseline > 4 credits - 55% improvement on baseline > 5 credits	5	3			Provided	1 credit - Good, Very Good, Excellent 2 credits - Outstanding		
										Provided			
	Wat 02	Water meter	Water meter		A pulsed water meter is installed on the mains water supply to each building. This includes instances where water is supplied via a borehole or other private source. For water-consuming plant or building areas consuming 10% or more of the building's total water demand sub meters should be used or water monitoring equipment should be used. The water meter should connect to a BMS or utility monitoring system or should be capable of connecting to one.	1	1			Provided	Good Very Good Excellent Outstanding		
										Provided			
	Wat 03	Water leak detection	Flow control devices		Install flow control devices that regulate the water supply to each WC area or sanitary facility according to demand, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework.	1	1			Provided			
			Leak detection system		A leak detection system capable of detecting a major water leak on the utilities water supply within the building will be installed AND A leak detection will be installed between the buildings and the utilities water supply. This leak detection will be a permanent automated water leak detection system that alerts the building occupants to the leak and is activated when the flow of water passing through the water meter. Also, it will be able to identify different flow and therefore leakage rates and also programmable to suit the owner's or occupier's water consumption criteria.	1	1			Provided			
										Provided			
					Total for water	**8**	**6**	**Credit weighting**					
Materials	Mat 01	Environmental impacts - LCA	Environmental impacts from construction products - Building life cycle assessment (LCA)		During the Concept Design and Technical Design, demonstrate the environmental performance of the building as follows: - Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications).	7	4			Provided			
	Mat 02	Environmental impacts - EPD	Specification of products with a recognised environmental product declaration (EPD)		Construction products with an EPD that achieve a total EPD points score of at least 20 will be undertaken. Enter the details of each EPD into the Mat 01/02 Results Submission Tool, including the material category classification. The Mat 01/02 Results Submission Tool will verify the EPD points score and credit award.	1	1			Provided			
										Provided			
	Mat 03	Responsible sourcing of construction products	**Pre-requisite**		All timber and timber-based products used on the project will be legally harvested and traded as per the UK Government's Timber Procurement Policy (TPP)	-	-			Provided	All ratings		
			Enabling sustainable procurement	RIBA 2	A sustainable procurement plan will be used to guide the specification towards sustainable construction products. This plan will include sustainability aims, objectives and strategic targets to guide procurement activities and will also include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. Details of the checking and verifying the effectiveness of the procurement plan will also be included. In addition, if the plan is applied to several sites or adopted at an organisational level it will identify the risks and opportunities of procurement against the process set out in BS ISO 20400:2017.	1	1			Provided			
			Measuring responsible sourcing		Superstructure, internal finishes, substructure and hard landscaping are responsibly sourced in accordance with the below targets: 3 credits > 30% of points achieved 2 credits > 20% of points achieved 1 credit > 10% of points achieved	3	2			Provided			
										Provided			
	Mat 05	Designing for durability and resilience	Protecting vulnerable parts of the building from damage		Protection measures will be incorporated into the building's design and construction to reduce damage to the building's fabric or materials.	1	1			Provided			
			Protecting exposed parts of the building from material degradation		Provide a detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors and provide convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design will be implemented and the design the roof and façade to prevent water damage, ingress and detrimental ponding will also be undertaken.					Provided			
	Mat 06	Material efficiency	Material efficiency	RIBA 1	Targets will be set and opportunities and methods to optimise the use of materials will be reported for all RIBA stages. The implementation of material efficiency will be reported on during developed design through to construction.	1	0			Not Targeted			
					Total for materials	**14**	**9**	**Credit weighting**					

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BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Waste	Wst 01	Construction waste management	Pre demolition audit	RIBA 2	A pre-demolition audit of any existing buildings, structures or hard surfaces will be carried out This will be used to determine whether refurbishment or reuse is feasible and to maximise the recovery of material for subsequent high grade or value applications.	1	1			Provided	1 credit - Outstanding	
			Construction resource efficiency		A compliant Resource Management Plan (RMP) covering non-hazardous waste materials, demolition and excavation waste will be produced. The site will meet or improve on the benchmarks as shown below: - One credit - <11.1 tonnes per 100m^2 - Two credits - <6.5 tonnes per 100m^2 - Three credits - <3.2 tonnes per 100m^2	3	2			Provided		
			Diversion of resources from landfill		Waste materials will be sorted into separate key waste groups either on-site or through a licensed contractor for recovery. The diversion from landfill benchmarks for non-hazardous construction waste and demolition and excavation waste generated will meet the following: - Non Demolition - 80% (tonnage) - Demolition - 90% (tonnage)	1	1			Provided		
	Wst 02	Recycled aggregates	**Pre-requisite**	RIBA 2	To encourage the reuse of site material, a pre demolition audit of any existing buildings, structures or hard surfaces will be undertaken.	-	-			Provided		
			Project Sustainable Aggregate Points		Aggregate uses, types and quantities will be identified for each identified use and aggregate type. The region in which the aggregates are sourced will be calculated (km).	1	0			Not Targeted		
	Wst 03	Operational waste	Operational waste		Provide a dedicated space for the segregation and storage of operational recyclable waste generated. This will be appropriately labelled, accessible to building users and waste management contractors and be of a sufficient size. If large amounts of waste are expected, waste compactors or balers will be provided and if appropriate, organic waste facilities (with a water outlet).	1	1			Provided	Excellent Outstanding	
	Wst 05	Adaptation to climate change	Resilience of structure, fabric, building services and renewables installation	RIBA 2	A climate change adaptation strategy appraisal will be undertaken using a systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. Following this study develop recommendations or solutions based on the climate change adaptation strategy appraisal that aim to mitigate the identified impact.	1	1			Provided		
				RIBA 4	An update will be provided during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective.					Provided		
	Wst 06	Design for disassembly and adaptability	Design for disassembly and functional adaptability - recommendations	RIBA 2	A study to explore the ease of disassembly and the functional adaptation potential of different design scenarios will be carried out. Following this recommendations or solutions will be developed, based on the study that aim to enable and facilitate disassembly and functional adaptation.	1	1			Provided		
			Disassembly and functional adaptability – implementation	RIBA 4	The team will provide an update on how the recommendations or solutions have been implemented where practical and cost effective. Omissions will also justified in writing to the assessor. Any changes to the recommendations and solutions during the development of the Technical Design should also be recorded. A building adaptability and disassembly guide will be produced to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	1	0			Not Targeted Not Targeted		
					Total for waste	**10**	**7**	**Credit weighting**				
Land Use and Ecology	Le 01	Site selection	Previously occupied land		At least 75% of the proposed development's footprint is on an area of land which has previously been occupied.	1	0			Not Achievable		
			Contaminated land		A contaminated land professional's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. The site investigation, risk assessment and appraisal have identified the degree of contamination, contaminant sources or types and the options for remediating sources of contamination. The remediation of the site will be carried out in accordance with the remediation strategy.	1	0			Not Achievable		
	Le 02	Risks and opportunities	**Pre-requisite -** Assessment route selection		An assessment route for the project has been determined using BREEAM Guidance Note GN34 BREEAM Ecological Risk Evaluation Checklist.	-	-			Provided		
			Survey and evaluation	RIBA 1	Route 2 only: An appropriate individual is appointed at an early stage for the involvement of site configuration and to ensure that they can influence strategic planning decisions. An appropriate level of survey and evaluation will be carried out to determine the ecological baseline of the site.	1	1			Provided		
			Determining the ecological outcomes for the site	RIBA 2	To achieve this credit the survey and evaluation criteria must have been achieved. The project team will liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the sites for the project. When determining the ecological impact of the site this will involve the identification, appraisal and selection of specific solutions and measures sufficiently early to influence key project planning decisions. The optimal ecological outcome for the site will be selected after liaising with representative stakeholders and the project team.	1	1			Provided		
	Le 03	Managing negative impacts on ecology	**Pre-requisite –** Identification and understanding the risks and opportunities		To achieve this credit the credits under LE 02 must be achieved.	-	-			Provided		
			Planning, liaison, implementation and data	RIBA 2	Roles and responsibilities will be clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief. Site preparation and construction works will be planned and implemented at an early project stage to optimise benefits and outputs. The project team will implement the solutions, and measures that have been selected (see LE 02) during site preparation and construction works.	1	1			Provided		
			Managing negative impacts of the project		Route two only: Negative impacts from site preparation and construction works will be managed according to the hierarchy and either: - No overall loss of ecological value has occurred (2 credits) OR - The loss of ecological value has been limited as far as possible (1 credit)	2	2			Provided		
	Le 04	Change and enhancement of ecological value	**Pre-requisite -** Identifying and understanding the risks and opportunities		To achieve this credit the credits under LE 03 must be achieved.	-	-			Provided		
			Liaison, implementation and data collation		Route two only: The project team will implement the solutions and measures selected in a way that enhances ecological value in the following order: - On site, and where this is not feasible; - Off site within the zone of influence.	1	1			Provided		
			Enhancement of ecology		Route two only: Credits will be awarded on a scale of 1 to 3, based on the calculation of the change in ecological value occurring as a result of the project.	3	3			Provided		
	Le 05	Long term ecology management and maintenance	**Pre-requisite -** Roles and responsibilities, implementation, statutory obligations		The client or contractor will confirm that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site.	-	-			Provided		
			Planning, liaison, data, monitoring and review management and maintenance		The project team will liaise and collaborate with representative stakeholders to: - Monitor and review implementation and the effectiveness; - Develop and review management and maintenance solutions, actions or measures. The monitoring and reporting of on the ecological outcomes/successes for site implemented at the design and construction stage and the arrangements of ongoing management of the new landscape and habitats will be reviewed. Also, he ecological value of the site and its relationship to its zone of influence and any linked sustainable activities will be maintained. As part of the tenant or building owner information supplied a section on Ecology and Biodiversity to inform the owner or occupant of local ecological features will be included.	1	1			Provided		
			Landscape and ecology management plan		A landscape and ecology management plan will be developed in accordance with BS 42020:20131 covering the first five years. The landscape and management plan will be updated as appropriate to support maintenance of the ecological value of the site.	1	1			Provided		
					Total for land use and ecology	**13**	**11**	**Credit weighting**				

BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Pollution	Pol 01	Impact of refrigerants	**Pre-requisite**		All systems with electric compressors comply with the requirements of BS EN 378:2016 (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice.	-	-			Provided		
			Impact of refrigerant		Two credits - The direct effect life cycle CO_2 equivalent emissions (DELC) of ≤ 100 CO_2-eq/kW. For systems which provide cooling and heating, the worst performing output based on the lower of kW cooling output and kW heating output is used to complete the calculation One credit - Systems using refrigerants have a DELC of ≤ 1000 $kgCO_2$-eq/kW cooling and heating capacity.	2	1			Provided		
										Provided		
			Leak detection		All systems are hermetically sealed or use environmentally benign refrigerants OR where the systems are not hermetically sealed the systems have a permanent automated refrigerant leak detection system, that is robust and tested, and capable of continuously monitoring for leaks.	1	1			Provided		
	Pol 02	Local air quality	Local air quality		All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity OR Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set.	2	2			Provided		
	Pol 03	Flood and surface water management	**Pre-requisite**		An appropriate consultant is appointed to carry out the following requirements; an appropriate consultant is one who has qualifications and experience relevant to designing SuDS and flood prevention measures and completing peak rate of run-off calculations.	-	-			Provided		
			Flood resilience		A site-specific flood risk assessment (FRA) confirms the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA takes all current and future sources of flooding into consideration.	2	2			Provided		
			Pre-requisite - Surface water run-off		Surface water run-off design solutions must be bespoke.	-	-			Provided		
			Surface water run-off - volume		Drainage measures will be specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long term operation and will also be in place and all calculations will include an allowance for climate change.	1	1			Provided		
			Surface water run-off - volume		Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND Drainage design measures will be specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change. Any additional predicted volume of run-off for this event will be prevented from leaving the site by using infiltration or other SuDS techniques.	1	1			Provided		
			Minimising watercourse pollution		Drainage strategy confirms that there is no discharge from the developed site for rainfall up to 5 mm and that areas with a low risk source of watercourse pollution will have an appropriate level of pollution prevention treatment provided. Areas with a high risk of contamination or spillage of substances have separators installed in surface water drainage systems. All water pollution prevention systems will be designed and installed in accordance with the recommendations of documents such as the SuDS manual and other relevant industry best practice. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS will also be in place.	1	0			Not Targeted		
	Pol 04	Reduction of night time light pollution	Reduction of night time light pollution		The external lighting strategy has been designed in compliance with Table 2 (ILP) Guidance notes for the reduction of obtrusive light, 2011. Also All external lighting will have the capabilities to be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this will comply with the lower levels of lighting recommended during these hours in Table 2 of the ILP guidance notes. Illuminated advertisements will be designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements.	1	1			Provided		
										Provided		
	Pol 05	Noise attenuation	Reduction of noise pollution		Where there are noise-sensitive areas within the assessed building or noise-sensitive areas within an 800 m radius a noise impact assessment will be undertaken by a suitably qualified acoustician (this will be compliant with BS 4142:20141). Noise levels will be measured/determined for: - Existing background noise levels; - Noise rating level from the assessed building. The noise level as measured in the locality of the nearest or most exposed noise-sensitive development will be at least 5dB lower than the background noise throughout the day and night. If not, measures will be installed to attenuate the noise at its source to a level where it will comply with the criterion.	1	1			Provided		
										Provided		
					Total for pollution	**12**	**10**	**Credit weighting**				

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BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Innovation	Man 03	Responsible construction	Responsible construction management		The principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks, covering the items included in the Responsible Construction Management Template. All criteria must be met to achieve this credit.	1	1			Provided		
	Hea 01	Visual comfort	Daylighting		At least 80% of floor area in occupied spaces (or 50% in retail sale areas) is adequately day lit with an average daylight factor of 3% or more.	1	0			Not Targeted		
	Hea 02	Indoor air quality	Emissions from construction products		Three of the product types noted below will meet the emission limits, testing requirements and any additional requirements as listed in the HEA02 table: - Paints and varnishes; - Wood based products; - Flooring materials; - Ceiling, wall, acoustic, thermal insulation materials; - Interior adhesives and sealants.	1	0			Not Targeted		
	Hea 06	Security	Security of site and building		A compliant risk based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	1	0			Not Targeted		
	Ene 01	Reduction of energy use	Beyond zero net regulated carbon		The building will achieve an EPR NC ≥ 0.9 and zero net regulated CO_2 emissions. Energy generation from on-site and near-site LZC sources will be sufficient to offset carbon emissions from regulated energy use plus a percentage of emissions from unregulated energy use. The exemplary credits will be awarded as follows: 1 credit - 10% 2 credits - 50% 3 credits - 100% (carbon negative)	3	0			Not Targeted		
	Wat 01	Water consumption	Water consumption		The standard Wat 01 methodology will be used to compare the water consumption (litres/person/day) for the assessed building against a baseline performance. Exemplary credits will be awarded where a 65% improvement on the baseline has been achieved.	1	0			Not Targeted Not Targeted		
	Mat 01	Environmental impacts	Third party verification		A suitably qualified third party will carry out the building LCAs OR produces a report verifying the building LCAs accurately represent the designs under consideration during Concept Design and Technical Design. For each LCA option, the findings of the verification checks made by the suitably qualified third party will be itemised in the report including. The suitably qualified third party's relevant skills and experience will be provided and a declaration of their third party independence from the project client and design team will be included in their report.	1	0			Not Targeted		
	Mat 03	Responsible Sourcing	Measuring responsible sourcing		Superstructure, internal finishes, substructure and hard landscaping and core services are responsibly sourced in accordance with the below targets: 3 credits plus 1 exemplary credit > 50% of points achieved.	1	0			Not Targeted Not Targeted		
	Wst 01	Construction waste management	Construction waste management		Prepare a compliant Resource Management Plan (RMP) covering non-hazardous waste materials, demolition and excavation waste and less than <1.9 tonnes of waste per 100m^2 will be generated. Sort waste materials into separate key waste groups either on-site or through a licensed contractor for recovery. Meet the diversion from landfill benchmarks for non-hazardous construction waste and demolition and excavation waste generated: Non Demolition - 95% (tonnage) Demolition - 85% (tonnage)	1	0			Not Targeted Not Targeted		
	Wst 02	Recycled and sustainably sourced	Project sustainable aggregate points		Identify all aggregate uses and types on the project and determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located and calculate the distance in kilometres travelled by all aggregates by transport type.	1	0			Not Targeted Not Targeted		
	Wst 05	Adaptation to climate change	Responding to climate change		In addition to the Wst 05 criteria the following credits will also need to be achieved: - Hea 04 thermal comfort; - Ene 01 reduction of energy use and carbon emissions; - Ene 04 low carbon design; - Wat 01 water consumption; - Mat 05 designing for durability and resilience; - Pol 03 Flood and surface water management.	1	0			Not Targeted		
	Le 02	Risks and opportunities	Determine the ecological outcomes for the site		When determining the optimal ecological outcome for the site the wider site sustainability-related activities and the potential for ecosystem service related benefits will be considered. This will include opportunities for integrating ecology with wider site sustainability-related activities and ecosystem service related benefits, including as a minimum: - Landscape; - Health and wellbeing; - Resilience; - Infrastructure; - Community and end user involvement. The following must also be achieved: - Hea 07 Safe and healthy surroundings; - Pol 03 Flood and surface water management - Achieve credits for 'Surface water run-off' and 'Minimising watercourse pollution'; - Pol 05 Reduction of noise pollution.	1	1			Provided Provided		
					Total for Innovation	**10**	**2**	**Credit weighting**				

BREEAM 2018 TRACKER

Abbey Road, Phase 2

Project name & number	Abbey Road Phase 2 - Health Centre	**BREEAM assessor**	Maihul Varsani
Client	Wates Construction	**Project manager**	Zeta Watkins
Local authority & postcode	Camden, NW6 4DN	**Rating required**	Excellent
Reason for BREEAM	Planning Policy CC2	**Building type**	Health Centre
Status of project	Design Stage	**Assessment scope**	Fully fitted

Development description	Development of a new health centre & community centre, incorporated in a two-storey building. Health Centre cica. 800sqm at 1st floor level and a ground floor community centre, cica 990sqm. There are also shared facilites at ground level including plant and refuse spaces.

BREEAM assessment details	
Reference number	BREEAM-0084-4597 / 4589
Scheme	New Construction 2018
Version	3.0
GIFA (m^2)	1858.7
Part L	2013

Target score
75.71%
Excellent

Awarded score
75.71%
Excellent

BREEAM rating benchmarks	
Pass	≥ 30
Good	≥ 45
Very Good	≥ 55
Excellent	≥ 70
Outstanding	≥ 85

Meeting log

Date	Location	Key actions from DTM

BREEAM credits

Section	Available credits	Target credits	Section weighting	% credits targeted	Category score
Management	21	18	11.00%	85.71%	9.42%
Health & Wellbeing	18	12	14.00%	66.67%	9.33%
Energy	21	13	16.00%	61.90%	9.90%
Transport	12	11	10.00%	91.67%	9.16%
Water	8	5	7.00%	62.50%	4.37%
Materials	14	9	15.00%	64.29%	9.64%
Waste	10	7	6.00%	70.00%	4.20%
Land Use & Ecology	13	11	13.00%	84.62%	11.00%
Pollution	12	10	8.00%	83.33%	6.66%
Innovation	10	2	10.00%	20.00%	2.00%
Rating	**Excellent**				

Revision	Date	Revision details	Author	QA	PM sign off
v1	09.10.2020	Draft issue for comment	MV	ZW	ZW
V2	27.10.2020	Updated tracker	MV	ZW	ZW
v3	14.12.2020	FINAL DESIGN STAGE CERTIFIED	MV	ZW	ZW

Producing BREEAM Evidence:
- All pieces of information need to have a clear source for the audit trail i.e. company branding, name of author and date;
- The BRE require calculator tools to be completed for specific issues. These will be completed by the assessor once all information required for the calculation is provided;
- Drawings produced for BREEAM should be annotated to show how each criterion is met. Notes can be added directly to the drawing, or annotated by hand.

Hodkinson Consultancy can provide you with a wide range of templates to help demonstrate compliance. Your assessor will discuss these with you.

For best results please print this document in A3 format.

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BREEAM New Construction 2018 Tracker

Issue				Credits			Evidence				Notes
Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Management	Man 01 Project brief and design	Project delivery planning	RIBA 2	The project delivery stakeholders will meet to identify and define roles, responsibilities and contributions for each key phase of project delivery. The project team will demonstrate how the project delivery stakeholders' contributions and the consultation process outcomes influence the Initial Project Brief, Project Execution Plan, Communication Strategy and Concept Design.	1	1			Provided Provided		
		Stakeholder consultation	RIBA 2	All interested parties will be consulted and the design team will demonstrate how the consultation exercise influences the Project Brief and Concept Design. Prior to completion of the detailed design all interested parties give and receive consultation feedback.	1	1			Provided		
		Pre-requisite - BREEAM Advisory Professional	RIBA 1	The project team, including the client, formally agree strategic performance targets early in the design process.	-	-			Provided		
		BREEAM Advisory Professional - Concept Design	RIBA 2	A BREEAM AP will work with the project team to maximise the project's overall performance against BREEAM. They will monitor progress against the performance targets and identify risks and opportunities related to the achievement of the rating.	1	1			Provided		Zeta Watkins
		BREEAM Advisory Professional (AP) - Detailed Design	RIBA 3	A BREEAM AP will continue to work with the project team to maximise the project's overall performance against BREEAM. Feedback will be provided to support them in taking corrective actions and achieving their agreed rating.	1	1			Provided		Zeta Watkins
	Man 02 Life cycle cost and service life planning	Elemental Life Cycle Cost (LCC)	RIBA 2	An entire asset LCC Plan will be produced with design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865: 2008. This will include an indication of future replacement costs over a period of analysis and will include service life, maintenance and operation cost estimates. Details of how the LCC Plan has been used to influence building and systems design and specifications to minimise life cycle costs and maximise critical value will be demonstrated by the team.	2	0			Not Targeted		
		Component level life options appraisal	RIBA 4	A component level LCC options appraisal will be produced in line with PD 156865: 2008 and will include details on the building envelope, building services, finishes and external spaces. Appropriate examples provided by the design team will be used to demonstrate how this appraisal has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.	1	0			Not Targeted		
		Capital cost reporting		Report the capital cost for the building in pounds per square metre of gross internal floor area (£k/ m^2).	1	1			Provided		
	Man 03 Responsible construction	**Pre-requisite -** Legally harvested and traded timber		All timber and timber-based products used during the construction process of the project are 'legally harvested and traded timber'.	-	-			Provided		
		Environmental management		The principal contractor will operate an Environmental Management System covering their main operations (e.g. ISO 14001). All parties who manage the construction site will also implement best practice pollution prevention policies and procedures on site.	1	1			Provided Provided		
		Pre-requisite - BREEAM Advisory Professional		The client and the contractor formally agree performance targets.	-	-			Not Targeted		
		BREEAM Advisory Professional - Site		The BREEAM AP will also monitor construction progress throughout all stages where decisions critically impact BREEAM performance and will proactively identify risks and opportunities related to the procurement and construction process.	1	1			Provided Provided		
		Responsible construction management		The principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks. Compliance with Considerate Constructors is required for 1 credit.	1	1			Provided	1 credit - Excellent 2 credits - Outstanding	
				Compliance with Considerate Constructors is required whilst also undertaking additional responsible construction practices.	1	1			Provided		
		Monitoring of construction site impacts - Utility		Assign responsibility to an individual for monitoring, recording and reporting energy use and water consumption from all on-site construction processes throughout the build programme.	1	1			Provided		
		Monitoring of construction site impacts - Transport		Assign responsibility to an individual for monitoring, recording and reporting transportation data resulting from all on-site construction processes throughout the build programme.	1	1			Provided		
	Man 04 Commissioning and handover	Commissioning - testing schedule and responsibilities		A schedule of commissioning and testing will be produced. The schedule will comply with current building regulations, BSRIA and CIBSE guidelines and will be undertaken by an appropriate team member (pre-commissioning, commissioning and testing). Additional commissioning requirements apply where a building management system (BMS) is specified.	1	1			Provided Provided	Very Good Excellent Outstanding	
		Commissioning - design and preparation		During the design stage an appropriate project team member will be appointed with responsibility for: - Undertaking design reviews and giving advice on suitability for ease of commissioning, providing commissioning management input to construction programming and during installation stages and management of commissioning, performance testing and handover or post-handover stages. This role will be carried out by a specialist commissioning manager where complex building services are installed.	1	1			Provided		
		Testing and inspecting building fabric		Post-construction testing and inspection will be undertaken by a suitably qualified professional who will undertake the survey and testing in accordance with the appropriate standard. Any defects identified during post-construction testing and inspection will be rectified prior to building handover and close out.	1	1			Provided Provided		
		Handover		Prior to handover two building user guides and training schedules will be produced; one technical guide for facilities management and one non-technical guide for building users.	1	1			Provided Provided	Very Good Excellent Outstanding	
	Man 05 Aftercare	Aftercare support		Aftercare support will be provided through operational infrastructure and resources. This will take place in the first month of building occupation to support building users and management. Longer term aftercare support for at least the first 12 months from occupation will also be arranged. Energy and water consumption data will be recorded for a minimum of 12 months, once the building is substantially occupied.	1	1			Provided		
		Commissioning - implementation		The following commissioning activities will be undertaken over a 12-month period, once the building becomes occupied: All simple systems (naturally ventilated) will: - Review thermal comfort, ventilation, and lighting (at three, six and nine month intervals) after initial occupation, identify deficiencies and areas in need of improvement and re-commission systems and incorporate any revisions in operating procedures into O&M manuals. All complex systems (in addition to those noted above) will: - Identify changes made by the owner or operator, test all building services under full load conditions, carry out testing during periods of extreme (high or low) occupancy, interview building occupants to identify problems or concerns regarding the systems and produce monthly reports comparing sub-metered energy performance to those predicted	1	1			Provided	Excellent Outstanding	
		Post-Occupancy Evaluation (POE)		The client or building occupier commits to carrying out a POE one year after the building is occupied. This is carried out by an independent party and covers a review of the design intent and construction process and provides feedback from a wide range of building users. The client or building occupier will commit funds to pay for the POE in advance.	1	1			Provided		
				Total for management	**21**	**18**	**Credit weighting**				

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BREEAM New Construction 2018 Tracker

	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Health and wellbeing	Hea 01	Visual comfort	View Out		95% of the floor area in 95% of spaces for each relevant building area will be within 8m of an external wall. The external wall must have a window or permanent opening that provides an adequate view out. The window or opening must be ≥ 20% of the surrounding wall area.	1	0			Not Targeted		
			Glare control		Areas at risk of glare will be assessed using a glare control assessment. This will allow for potential glare in all relevant building areas to be designed out where risk has been identified. The prevention of glare will be achieved through building form and layout or building design measures and the strategy must not increase the energy consumption used for lighting.	1	1			Provided		
			Daylighting		At least 80% of floor area in occupied spaces (or 35% in retail sale areas) is adequately day lit with an average daylight factor of 2% or more.	2	1			Provided		
			Internal lighting		Internal lighting in all relevant areas of the building will be designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2012. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7.	1	1			Provided		
			External lighting		All external lighting located within the construction zone will be specified in accordance with BS 5489-1:2013 Code for the practice for the design of road lighting. Lighting of roads and public amenity areas and BS EN 12464-2:20145 Light and lighting - Lighting of work places - Part 2: Outdoor work places.					Provided		
			Zoning and controls		Internal lighting will be zoned to allow for occupant control.					Provided		
	Hea 02	Indoor air quality	**Pre-requisite -** Indoor air quality plan		A site-specific indoor air quality plan will be produced and implemented.	-	-			Provided		
			Ventilation		The building will be designed to minimise the indoor concentration and recirculation of pollutants. For naturally ventilated or mixed mode buildings, the design demonstrates that the ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates in accordance with CIBSE AM10.	1	0			Not Achievable		
			Emissions from construction products		All of the product types noted below will meet the emission limits and testing requirements: - Paints and varnishes; - Wood based products; - Flooring materials; - Ceiling, wall, acoustic, thermal insulation materials; - Interior adhesives and sealants.	2	2			Provided Provided		
			Post-construction indoor air quality measurement		The formaldehyde concentration in indoor air is measured post construction but pre-occupancy and does not exceed 100 µg/ m^3 averaged over 30 minutes. The total volatile organic compound (TVOC) concentration in indoor air is measured (in accordance with ISO 16000-5 and ISO 16000-6 or ISO 16017-1) post construction but pre-occupancy and does not exceed 500 µg/ m^3 over 8 hours.	1	0			Not Targeted		
	Hea 04	Thermal comfort	Thermal modelling		Thermal modelling will be carried out using software in accordance with CIBSE AM11. For air-conditioned buildings, summer and winter operative temperature ranges in occupied spaces will be in accordance with the criteria set out in CIBSE Guide A Environmental design. The PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices are reported. For naturally ventilated buildings winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design and the building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in either of the following standards as appropriate; CIBSE TM52.	1	1			Provided		
			Design for future thermal comfort		The thermal modelling demonstrates that the relevant requirements for air conditioned and naturally ventilated buildings will be achieved for a projected climate change environment. Note: Where this is not done the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements.	1	1			Provided		
			Thermal zoning and controls		The thermal modelling analysis will need to inform the temperature control strategy for the building and its users and the strategy for proposed heating or cooling systems.	1	1			Provided		
	Hea 05	Acoustic performance	Acoustic performance		Demonstrate that all spaces in the building achieve, and for the relevant areas exceed, the performance standards required by BS for sound insulation, indoor ambient noise levels and reverberation times.	3	1			Provided Provided Provided		
	Hea 06	Security	Security of site and building	RIBA 2	A Suitably Qualified Security Specialist (SQSS) will conduct an evidence-based Security Needs Assessment (SNA). This SNA will be used to identify attributes of the site and surroundings which may influence the approach to security for the development. The SQSS will develop a set of security controls and recommendations and these will be incorporated in the design.	1	1			Provided Provided		
	Hea 07	Safe and healthy surroundings	Safe access		Dedicated and safe cycle paths will be provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable. Also, dedicated and safe footpaths are provided on and around the site providing suitable links. Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths and it will ensured that any delivery areas are not accessed through general parking areas and do not cross or share pedestrian and cyclist paths. There will be dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. Also, parking and turning areas will be designed for simple manoeuvring according to the type of delivery vehicle likely to access the site, thus avoiding the need for repeated shunting.	1	1			Provided		
			Outdoor space		There will be outside space providing building users with an external amenity area.	1	1			Provided		
					Total for health and wellbeing	**18**	**12**	**Credit weighting**				

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	Issue				Credits			Evidence				Minimum standards	Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status			
Energy	Ene 01	Reduction of energy use and carbon emissions	Energy performance		An Energy Performance Ratio for New Construction (EPR_{NC}) will be calculated. The EPR_{NC} achieved will be compared with the benchmarks below in order to award the corresponding number of BREEAM credits.	9	6			Provided		4 credits - Excellent 6 credits - Outstanding	
			Pre-requisite	RIBA 2	All relevant members of the design team will hold a preliminary design workshop focusing on operational energy performance.	-	-			Not Targeted			
			Prediction of operational energy consumption		Additional energy modelling will be undertaken during the design and post-construction stage to generate predicted operational energy consumption figures. Predicted energy consumption targets will be reported by end use, design assumptions and input data (with justifications). A risk assessment will also be carried out to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.	4	0			Not Targeted		4 credits - Outstanding	
										Not Targeted			
	Ene 02	Energy monitoring	Sub-metering of end-use categories		Energy metering systems that enable at least 90% of the estimated annual energy consumption of each fuel will be installed. Floor area requirements: > 1,000 m^2, by end-use category with an appropriate energy monitoring and management system. < 1,000 m^2, use either an energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs.	1	1			Provided		Very Good Excellent Outstanding	
										Provided			
			Sub-metering of high energy load and tenancy areas		A significant majority of the energy supply will be monitored with an accessible energy monitoring and management system for tenanted areas or relevant function areas or departments in single occupancy buildings OR Provide separate accessible energy sub-meters with pulsed outputs for tenanted areas or relevant function areas or departments in single occupancy buildings.	1	1			Provided			
	Ene 03	External lighting	External lighting		External light fittings within the construction zone will have an average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt, automatic control to prevent operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.	1	1			Provided			
										Provided			
	Ene 04	Low carbon design	Passive design analysis	RIBA 2	Note - To achieve this the first credit under Hea 04 Thermal Modelling must be achieved. The project team will analyse the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures. As a minimum this must include; Site location, site weather, microclimate, building layout, building orientation, building form, building fabric, thermal mass or other fabric thermal storage, building occupancy type, daylighting strategy, ventilation strategy and adaptation to climate change. Passive design measures will be implemented to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings and the reduced total energy demand and carbon dioxide (CO_2) emissions resulting from the passive design measures will be calculated.	1	1			Provided			
			Free cooling		Note - To achieve this credit the passive design analysis credit must be awarded. A free cooling analysis will be included in the passive design analysis and it will identify opportunities for the implementation of free cooling solutions. The building will be naturally ventilated or will use a combination of the free cooling strategies.	1	0			Not Targeted			
			Low and zero carbon technologies	RIBA 2	An energy specialist will completes a feasibility study by the end of Concept Design, this will establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy sources for the building or development. The LZC technologies for the building will be specified in line with the feasibility study recommendations. The reduced regulated carbon dioxide (CO_2) emissions resulting from the feasibility study will be quantified.	1	1			Provided			
										Provided			
										Provided			
	Ene 06	Energy efficient transportation	Energy consumption		For specified lifts, escalators or moving walks the following will be done: - Analyse the transportation demand and usage patterns for the building to determine the optimum number and size of lifts, escalators or moving walks; - Calculate the energy consumption in accordance with BS EN ISO 25745 Part 2 or Part 3 for at least two types of system for each transportation type required OR an arrangement of systems - Consider the use of regenerative drives, subject to the requirements in Regenerative drives; - Specify the transportation system with the lowest energy consumption.	1	1			Provided			
			Energy efficient features		Specify the following three 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 > 70 luminaire lumens per circuit Watt - Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.	1	1			Provided			
					Total for energy	**21**	**13**	**Credit weighting**					
Transport	Tra 01	Transport assessment and travel plan	Travel plan	RIBA 1	A travel plan is developed based on a site-specific travel assessment or statement. This statement should include: - Existing travel patterns and opinions of existing building or site users towards cycling and walking; - Travel patterns and transport impact of future building users; - Current local environment for walkers and cyclists; - Reporting of the number and type of existing accessible amenities within 500m of the site; - Disabled access; - Calculation of the existing public transport Accessibility Index (AI); - Current facilities for cyclists.	2	2			Provided			
										Provided			
	Tra 02	Sustainable transport	Transport options implementation		Note - At least one credit must be achieved for Tra 01 for any credits to be awarded in this issue. Credits will be awarded based on the Accessible Index (AI) of the project, and the number of transport measures implemented.	10	9			Provided			
										Provided			
					Total for transport	**12**	**11**	**Credit weighting**					

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	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Water	Wat 01	Water consumption	Water consumption		The standard Wat 01 methodology will be used to compare the water consumption (litres/person/day) for the assessed building against a baseline performance. Credits will be awarded as follows: - 12.5% improvement on baseline > 1 credit - 25% improvement on baseline > 2 credits - 40% improvement on baseline > 3 credits - 50% improvement on baseline > 4 credits - 55% improvement on baseline > 5 credits	5	2			Provided Provided	1 credit - Good, Very Good, Excellent 2 credits - Outstanding	
	Wat 02	Water meter	Water meter		A pulsed water meter is installed on the mains water supply to each building. This includes instances where water is supplied via a borehole or other private source. For water-consuming plant or building areas consuming 10% or more of the building's total water demand sub meters should be used or water monitoring equipment should be used. The water meter should connect to a BMS or utility monitoring system or should be capable of connecting to one.	1	1			Provided Provided	Good Very Good Excellent Outstanding	
	Wat 03	Water leak detection	Flow control devices		Install flow control devices that regulate the water supply to each WC area or sanitary facility according to demand, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework.	1	1			Provided		
			Leak detection system		A leak detection system capable of detecting a major water leak on the utilities water supply within the building will be installed AND A leak detection will be installed between the buildings and the utilities water supply. This leak detection will be a permanent automated water leak detection system that alerts the building occupants to the leak and is activated when the flow of water passing through the water meter. Also, it will be able to identify different flow and therefore leakage rates and also programmable to suit the owner's or occupier's water consumption criteria.	1	1			Provided Provided		
					Total for water	8	5	**Credit weighting**				
Materials	Mat 01	Environmental impacts - LCA	Environmental impacts from construction products - Building life cycle assessment (LCA)		During the Concept Design and Technical Design, demonstrate the environmental performance of the building as follows: - Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications).	7	4			Provided		
	Mat 02	Environmental impacts - EPD	Specification of products with a recognised environmental product declaration (EPD)		Construction products with an EPD that achieve a total EPD points score of at least 20 will be undertaken. Enter the details of each EPD into the Mat 01/02 Results Submission Tool, including the material category classification. The Mat 01/02 Results Submission Tool will verify the EPD points score and credit award.	1	1			Provided Provided		
	Mat 03	Responsible sourcing of construction products	**Pre-requisite**		All timber and timber-based products used on the project will be legally harvested and traded as per the UK Government's Timber Procurement Policy (TPP)	-	-			Provided	All ratings	
			Enabling sustainable procurement	RIBA 2	A sustainable procurement plan will be used to guide the specification towards sustainable construction products. This plan will include sustainability aims, objectives and strategic targets to guide procurement activities and will also include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. Details of the checking and verifying the effectiveness of the procurement plan will also be included. In addition, if the plan is applied to several sites or adopted at an organisational level it will identify the risks and opportunities of procurement against the process set out in BS ISO 20400:2017.	1	1			Provided		
			Measuring responsible sourcing		Superstructure, internal finishes, substructure and hard landscaping are responsibly sourced in accordance with the below targets: 3 credits > 30% of points achieved 2 credits > 20% of points achieved 1 credit > 10% of points achieved	3	2			Provided Provided		
	Mat 05	Designing for durability and resilience	Protecting vulnerable parts of the building from damage		Protection measures will be incorporated into the building's design and construction to reduce damage to the building's fabric or materials.	1	1			Provided		
			Protecting exposed parts of the building from material degradation		Provide a detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors and provide convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design will be implemented and the design the roof and façade to prevent water damage, ingress and detrimental ponding will also be undertaken.					Provided		
	Mat 06	Material efficiency	Material efficiency	RIBA 1	Targets will be set and opportunities and methods to optimise the use of materials will be reported for all RIBA stages. The implementation of material efficiency will be reported on during developed design through to construction.	1	0			Provided		
					Total for materials	14	9	**Credit weighting**				

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	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Waste	Wst 01	Construction waste management	Pre demolition audit	RIBA 2	A pre-demolition audit of any existing buildings, structures or hard surfaces will be carried out This will be used to determine whether refurbishment or reuse is feasible and to maximise the recovery of material for subsequent high grade or value applications.	1	1			Provided	1 credit - Outstanding	
			Construction resource efficiency		A compliant Resource Management Plan (RMP) covering non-hazardous waste materials, demolition and excavation waste will be produced. The site will meet or improve on the benchmarks as shown below: - One credit - <11.1 tonnes per 100m^2 - Two credits - <6.5 tonnes per 100m^2 - Three credits - <3.2 tonnes per 100m^2	3	2			Provided		
			Diversion of resources from landfill		Waste materials will be sorted into separate key waste groups either on-site or through a licensed contractor for recovery. The diversion from landfill benchmarks for non-hazardous construction waste and demolition and excavation waste generated will meet the following: - Non Demolition - 80% (tonnage) - Demolition - 90% (tonnage)	1	1			Provided		
	Wst 02	Recycled aggregates	**Pre-requisite**	RIBA 2	To encourage the reuse of site material, a pre demolition audit of any existing buildings, structures or hard surfaces will be undertaken.	-	-			Not Targeted		
			Project Sustainable Aggregate Points		Aggregate uses, types and quantities will be identified for each identified use and aggregate type. The region in which the aggregates are sourced will be calculated (km).	1	0			Not Targeted		
	Wst 03	Operational waste	Operational waste		Provide a dedicated space for the segregation and storage of operational recyclable waste generated. This will be appropriately labelled, accessible to building users and waste management contractors and be of a sufficient size. If large amounts of waste are expected, waste compactors or balers will be provided and if appropriate, organic waste facilities (with a water outlet).	1	1			Provided	Excellent Outstanding	
	Wst 05	Adaptation to climate change	Resilience of structure, fabric, building services and renewables installation	RIBA 2	A climate change adaptation strategy appraisal will be undertaken using a systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. Following this study develop recommendations or solutions based on the climate change adaptation strategy appraisal that aim to mitigate the identified impact.	1	1			Provided		
				RIBA 4	An update will be provided during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective.					Provided		
	Wst 06	Design for disassembly and adaptability	Design for disassembly and functional adaptability - recommendations	RIBA 2	A study to explore the ease of disassembly and the functional adaptation potential of different design scenarios will be carried out. Following this recommendations or solutions will be developed, based on the study that aim to enable and facilitate disassembly and functional adaptation.	1	1			Provided		
			Disassembly and functional adaptability – implementation	RIBA 4	The team will provide an update on how the recommendations or solutions have been implemented where practical and cost effective. Omissions will also justified in writing to the assessor. Any changes to the recommendations and solutions during the development of the Technical Design should also be recorded. A building adaptability and disassembly guide will be produced to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	1	0			Not Targeted Not Targeted		
					Total for waste	**10**	**7**	**Credit weighting**				
Land Use and Ecology	Le 01	Site selection	Previously occupied land		At least 75% of the proposed development's footprint is on an area of land which has previously been occupied.	1	0			Not Achievable		
			Contaminated land		A contaminated land professional's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. The site investigation, risk assessment and appraisal have identified the degree of contamination, contaminant sources or types and the options for remediating sources of contamination. The remediation of the site will be carried out in accordance with the remediation strategy.	1	0			Not Achievable		
	Le 02	Risks and opportunities	**Pre-requisite -** Assessment route selection		An assessment route for the project has been determined using BREEAM Guidance Note GN34 BREEAM Ecological Risk Evaluation Checklist.	-	-			Provided		
			Survey and evaluation	RIBA 1	Route 2 only: An appropriate individual is appointed at an early stage for the involvement of site configuration and to ensure that they can influence strategic planning decisions. An appropriate level of survey and evaluation will be carried out to determine the ecological baseline of the site.	1	1			Provided		
			Determining the ecological outcomes for the site	RIBA 2	To achieve this credit the survey and evaluation criteria must have been achieved. The project team will liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the sites for the project. When determining the ecological impact of the site this will involve the identification, appraisal and selection of specific solutions and measures sufficiently early to influence key project planning decisions. The optimal ecological outcome for the site will be selected after liaising with representative stakeholders and the project team.	1	1			Provided		
	Le 03	Managing negative impacts on ecology	**Pre-requisite –** Identification and understanding the risks and opportunities		To achieve this credit the credits under LE 02 must be achieved.	-	-			Provided		
			Planning, liaison, implementation and data	RIBA 2	Roles and responsibilities will be clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief. Site preparation and construction works will be planned and implemented at an early project stage to optimise benefits and outputs. The project team will implement the solutions, and measures that have been selected (see LE 02) during site preparation and construction works.	1	1			Provided		
			Managing negative impacts of the project		Route two only: Negative impacts from site preparation and construction works will be managed according to the hierarchy and either: - No overall loss of ecological value has occurred (2 credits) OR - The loss of ecological value has been limited as far as possible (1 credit)	2	2			Provided		
	Le 04	Change and enhancement of ecological value	**Pre-requisite -** Identifying and understanding the risks and opportunities		To achieve this credit the credits under LE 03 must be achieved.	-	-			Provided		
			Liaison, implementation and data collation		Route two only: The project team will implement the solutions and measures selected in a way that enhances ecological value in the following order: - On site, and where this is not feasible; - Off site within the zone of influence.	1	1			Provided		
			Enhancement of ecology		Route two only: Credits will be awarded on a scale of 1 to 3, based on the calculation of the change in ecological value occurring as a result of the project.	3	3			Provided		
	Le 05	Long term ecology management and maintenance	**Pre-requisite -** Roles and responsibilities, implementation, statutory obligations		The client or contractor will confirm that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site.	-	-			Provided		
			Planning, liaison, data, monitoring and review management and maintenance		The project team will liaise and collaborate with representative stakeholders to: - Monitor and review implementation and the effectiveness; - Develop and review management and maintenance solutions, actions or measures. The monitoring and reporting of on the ecological outcomes/successes for site implemented at the design and construction stage and the arrangements of ongoing management of the new landscape and habitats will be reviewed. Also, he ecological value of the site and its relationship to its zone of influence and any linked sustainable activities will be maintained. As part of the tenant or building owner information supplied a section on Ecology and Biodiversity to inform the owner or occupant of local ecological features will be included.	1	1			Provided		
			Landscape and ecology management plan		A landscape and ecology management plan will be developed in accordance with BS 42020:20131 covering the first five years. The landscape and management plan will be updated as appropriate to support maintenance of the ecological value of the site.	1	1			Provided		
					Total for land use and ecology	**13**	**11**	**Credit weighting**				

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	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Pollution	Pol 01	Impact of refrigerants	**Pre-requisite**		All systems with electric compressors comply with the requirements of BS EN 378:2016 (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice.	-	-			Provided		
			Impact of refrigerant		Two credits - The direct effect life cycle CO_2 equivalent emissions (DELC) of ≤ 100 CO_2-eq/kW. For systems which provide cooling and heating, the worst performing output based on the lower of kW cooling output and kW heating output is used to complete the calculation One credit - Systems using refrigerants have a DELC of ≤ 1000 $kgCO_2$-eq/kW cooling and heating capacity.	2	1			Provided		
										Provided		
			Leak detection		All systems are hermetically sealed or use environmentally benign refrigerants OR where the systems are not hermetically sealed the systems have a permanent automated refrigerant leak detection system, that is robust and tested, and capable of continuously monitoring for leaks.	1	1			Provided		
	Pol 02	Local air quality	Local air quality		All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity OR Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set.	2	2			Provided		
	Pol 03	Flood and surface water management	**Pre-requisite**		An appropriate consultant is appointed to carry out the following requirements; an appropriate consultant is one who has qualifications and experience relevant to designing SuDS and flood prevention measures and completing peak rate of run-off calculations.	-	-			Provided		
			Flood resilience		A site-specific flood risk assessment (FRA) confirms the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA takes all current and future sources of flooding into consideration.	2	2			Provided		
			Pre-requisite - Surface water run-off		Surface water run-off design solutions must be bespoke.	-	-			Provided		
			Surface water run-off - volume		Drainage measures will be specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long term operation and will also be in place and all calculations will include an allowance for climate change.	1	1			Provided		
			Surface water run-off - volume		Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND Drainage design measures will be specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change. Any additional predicted volume of run-off for this event will be prevented from leaving the site by using infiltration or other SuDS techniques.	1	1			Provided		
			Minimising watercourse pollution		Drainage strategy confirms that there is no discharge from the developed site for rainfall up to 5 mm and that areas with a low risk source of watercourse pollution will have an appropriate level of pollution prevention treatment provided. Areas with a high risk of contamination or spillage of substances have separators installed in surface water drainage systems. All water pollution prevention systems will be designed and installed in accordance with the recommendations of documents such as the SuDS manual and other relevant industry best practice. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS will also be in place.	1	0			Not Targeted		
	Pol 04	Reduction of night time light pollution	Reduction of night time light pollution		The external lighting strategy has been designed in compliance with Table 2 (ILP) Guidance notes for the reduction of obtrusive light, 2011. Also All external lighting will have the capabilities to be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this will comply with the lower levels of lighting recommended during these hours in Table 2 of the ILP guidance notes. Illuminated advertisements will be designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements.	1	1			Provided		
										Provided		
	Pol 05	Noise attenuation	Reduction of noise pollution		Where there are noise-sensitive areas within the assessed building or noise-sensitive areas within an 800 m radius a noise impact assessment will be undertaken by a suitably qualified acoustician (this will be compliant with BS 4142:20141). Noise levels will be measured/determined for: - Existing background noise levels; - Noise rating level from the assessed building. The noise level as measured in the locality of the nearest or most exposed noise-sensitive development will be at least 5dB lower than the background noise throughout the day and night. If not, measures will be installed to attenuate the noise at its source to a level where it will comply with the criterion.	1	1			Provided		
										Provided		
					Total for pollution	**12**	**10**	**Credit weighting**				

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	Issue				Credits			Evidence				Notes
	Issue		Issue sub-title	RIBA Stage	Credit description	Available	Targeted	Design Stage evidence description	Responsibility	Status	Minimum standards	
Innovation	Man 03	Responsible construction	Responsible construction management		The principal contractor evaluates the risks (on site and off site), plans and implements actions to minimise the identified risks, covering the items included in the Responsible Construction Management Template. All criteria must be met to achieve this credit.	1	1			Provided		
	Hea 01	Visual comfort	Daylighting		At least 80% of floor area in occupied spaces (or 50% in retail sale areas) is adequately day lit with an average daylight factor of 3% or more.	1	0			Not Targeted		
	Hea 02	Indoor air quality	Emissions from construction products		Three of the product types noted below will meet the emission limits, testing requirements and any additional requirements as listed in the HEA02 table: - Paints and varnishes; - Wood based products; - Flooring materials; - Ceiling, wall, acoustic, thermal insulation materials; - Interior adhesives and sealants.	1	0			Not Targeted		
	Hea 06	Security	Security of site and building		A compliant risk based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	1	0			Not Targeted		
	Ene 01	Reduction of energy use	Beyond zero net regulated carbon		The building will achieve an EPR NC ≥ 0.9 and zero net regulated CO_2 emissions. Energy generation from on-site and near-site LZC sources will be sufficient to offset carbon emissions from regulated energy use plus a percentage of emissions from unregulated energy use. The exemplary credits will be awarded as follows: 1 credit - 10% 2 credits - 50% 3 credits - 100% (carbon negative)	3	0			Not Targeted		
	Wat 01	Water consumption	Water consumption		The standard Wat 01 methodology will be used to compare the water consumption (litres/person/day) for the assessed building against a baseline performance. Exemplary credits will be awarded where a 65% improvement on the baseline has been achieved.	1	0			Not Targeted Not Targeted		
	Mat 01	Environmental impacts	Third party verification		A suitably qualified third party will carry out the building LCAs OR produces a report verifying the building LCAs accurately represent the designs under consideration during Concept Design and Technical Design. For each LCA option, the findings of the verification checks made by the suitably qualified third party will be itemised in the report including. The suitably qualified third party's relevant skills and experience will be provided and a declaration of their third party independence from the project client and design team will be included in their report.	1	0			Not Targeted		
	Mat 03	Responsible Sourcing	Measuring responsible sourcing		Superstructure, internal finishes, substructure and hard landscaping and core services are responsibly sourced in accordance with the below targets: 3 credits plus 1 exemplary credit > 50% of points achieved.	1	0			Not Targeted Not Targeted		
	Wst 01	Construction waste management	Construction waste management		Prepare a compliant Resource Management Plan (RMP) covering non-hazardous waste materials, demolition and excavation waste and less than <1.9 tonnes of waste per 100m^2 will be generated. Sort waste materials into separate key waste groups either on-site or through a licensed contractor for recovery. Meet the diversion from landfill benchmarks for non-hazardous construction waste and demolition and excavation waste generated: Non Demolition - 95% (tonnage) Demolition - 85% (tonnage)	1	0			Not Targeted Not Targeted		
	Wst 02	Recycled and sustainably sourced	Project sustainable aggregate points		Identify all aggregate uses and types on the project and determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located and calculate the distance in kilometres travelled by all aggregates by transport type.	1	0			Not Targeted Not Targeted		
	Wst 05	Adaptation to climate change	Responding to climate change		In addition to the Wst 05 criteria the following credits will also need to be achieved: - Hea 04 thermal comfort; - Ene 01 reduction of energy use and carbon emissions; - Ene 04 low carbon design; - Wat 01 water consumption; - Mat 05 designing for durability and resilience; - Pol 03 Flood and surface water management.	1	0			Not Targeted		
	Le 02	Risks and opportunities	Determine the ecological outcomes for the site		When determining the optimal ecological outcome for the site the wider site sustainability-related activities and the potential for ecosystem service related benefits will be considered. This will include opportunities for integrating ecology with wider site sustainability-related activities and ecosystem service related benefits, including as a minimum: - Landscape; - Health and wellbeing; - Resilience; - Infrastructure; - Community and end user involvement. The following must also be achieved: - Hea 07 Safe and healthy surroundings; - Pol 03 Flood and surface water management - Achieve credits for 'Surface water run-off' and 'Minimising watercourse pollution'; - Pol 05 Reduction of noise pollution.	1	1			Provided Provided		
					Total for Innovation	**10**	**2**	**Credit weighting**				

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Code for a Sustainable Built Environment
www.breeam.com

Interim Certificate: Design Stage

The assessment of:

Abbey Road Phase 2 - Health Centre
Abbey Road
London
NW6

has been carried out according to Technical Manual:

BREEAM New Construction 2018

Healthcare

Fully fitted

and based on the Assessment Report produced by:

Hodkinson Consultancy Ltd

has achieved a score of **75.7%**

Excellent

Certificate Number: **BREEAM-0084-4589** Issue: **01**

BRE Global Limited is accredited by UKAS. The assessment process is certified by BRE Global Limited in accordance with the requirements of Scheme Document SD123

14 December 2020 Date of Issue	London Borough of Camden Client for the Assessment
C Butcher Signed for BRE Global Ltd., Catherine Butcher	Maihul Varsani Licensed Assessor
AHR Architects Ltd Architect	MV16 Assessor Number
Wates Group Ltd Developer	Norman Bromley Partnership M & E Engineers
Stantec Structural Engineers	Zeta Watkins (Hodkinson Consultancy) BREEAM Accredited Professional

SD123 Cert. No. BREEAM-0084-4589

This certificate is issued to the Licensed Assessor Organisation named above based on their application of the assessment process in accordance with Scheme Document SD123.

This certificate is valid on the date of issue on the basis of the data provided by the client and verified by the Assessor Organisation.

To check the authenticity of this certificate visit www.greenbooklive.com/check, scan the QR Tag or contact us: E: breeam@bre.co.uk T. +44 (0)333 321 8811

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Interim Certificate Number: BREEAM-0084-4589 Issue: 01

Abbey Road Phase 2 - Health Centre
Abbey Road
London
NW6

Assessed for: London Borough of Camden

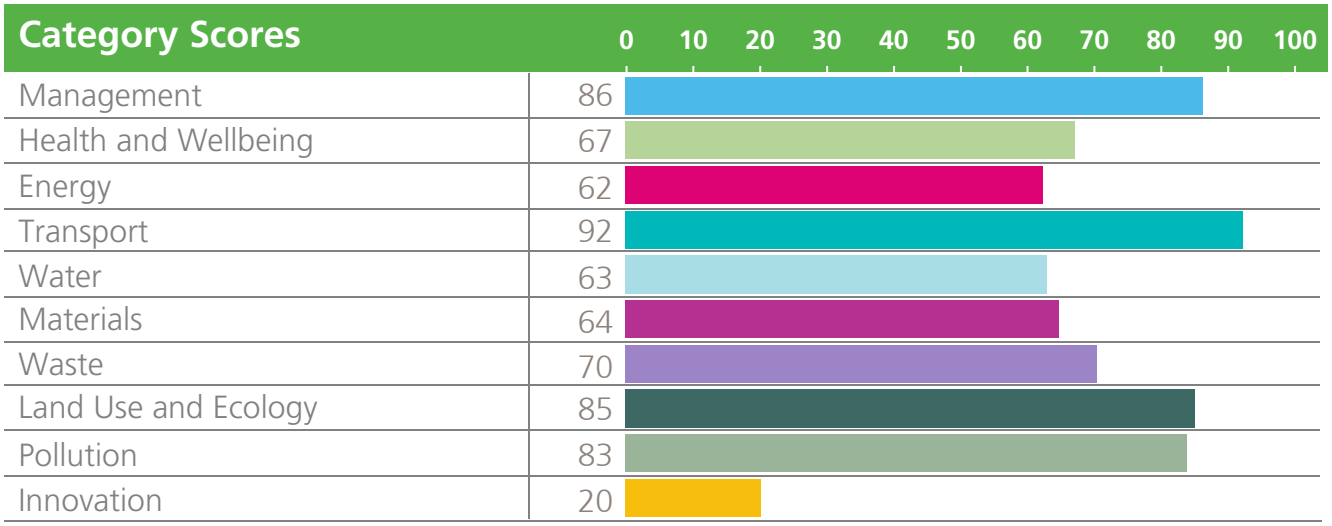
by: Hodkinson Consultancy Ltd
Assessor Company

Maihul Varsani — MV16
Licensed Assessor — Assessor Number

BREEAM New Construction 2018
Healthcare
Fully fitted

Overall Score: 75.7%
Rating: Excellent

Category Scores



C Butcher
Signed for BRE Global Ltd., Catherine Butcher

14 December 2020
Date of Issue

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BREEAM® UK

Code for a Sustainable Built Environment
www.breeam.com

Interim Certificate: Design Stage

The assessment of:

Abbey Road Community Centre
Abbey Road
London
NW6

has been carried out according to Technical Manual:

BREEAM New Construction 2018

Non-residential institution

Fully fitted

and based on the Assessment Report produced by:

Hodkinson Consultancy Ltd

has achieved a score of **76.5%**

Excellent

Certificate Number: **BREEAM-0084-4597** Issue: **01**

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10 December 2020 Date of Issue	London Borough of Camden Client for the Assessment
C Butcher Signed for BRE Global Ltd., Catherine Butcher	Maihul Varsani Licensed Assessor
AHR Architects Ltd Architect	MV16 Assessor Number
Wates Group Ltd Developer	Norman Bromley Partnership M & E Engineers
Stantec Structural Engineers	Zeta Watkins (Hodkinson Consultancy) BREEAM Accredited Professional

SD123 Cert. No. BREEAM-0084-4597

This certificate is issued to the Licensed Assessor Organisation named above based on their application of the assessment process in accordance with Scheme Document SD123.

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Interim Certificate Number: BREEAM-0084-4597 Issue: 01

Abbey Road Community Centre
Abbey Road
London
NW6

Assessed for: London Borough of Camden

by: Hodkinson Consultancy Ltd
Assessor Company

Maihul Varsani — MV16
Licensed Assessor — Assessor Number

BREEAM New Construction 2018

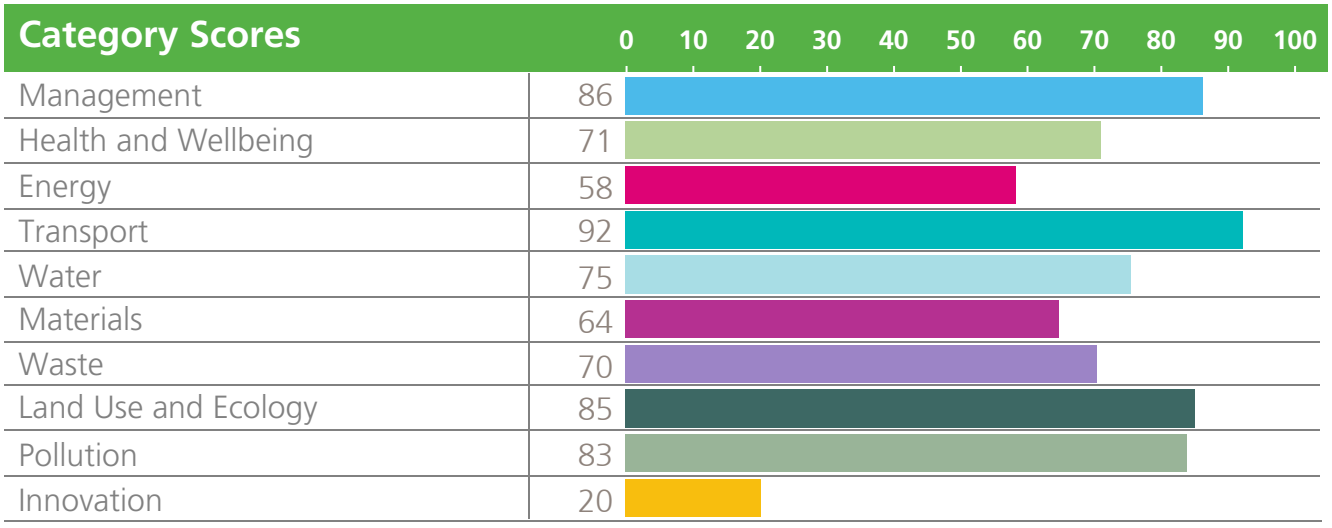
Non-residential institution

Fully fitted

Overall Score: 76.5%

Rating: Excellent

Category Scores



C Butcher

Signed for BRE Global Ltd., Catherine Butcher

10 December 2020
Date of Issue

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