

14 Blackburn Road (Commercial Floorspace)

BREEAM 2018 Pre-Assessment Report

Job No:0627Report Version:3Client:HampsteadDevelopment Partner:Fifth StatePrepared by:Austin ThoDate:27 March 2

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JAWSustainability



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1. Introduction

This pre-assessment has been prepared for the new development located at 14 Blackburn Road, NW6 1RZ. The proposed development comprises demolition and redevelopment of the Site for a mixed-use development comprising purpose built student accommodation (Sui Generis), affordable housing (Use Class C3), lower ground and ground floor flexible commercial/business space comprising of showrooms, retail and ancillary offices (Use Class E/Sui Generis) and a café/PBSA amenity space (Use Class E/Sui Generis) and associated works including service yard, cycle parking, hard and soft landscaping, amenity spaces and plant." ('the proposed development').

The proposed development comprises of two distinct buildings that are linked at ground level. The C3 building will be 4-7 storeys including a taller ground floor and the PBSA building will be 10 storeys including a ground floor and amenity mezzanine level. There is a double height space spanning these lower two floors in the café at the base of the PBSA.

The proposed development would deliver:

- x192 purpose-built student accommodation rooms (Sui Generis),
- x35 affordable homes (C3) and,
- x1,619sqm of lower ground and ground floor commercial floorspace

The site falls within a wider consented masterplan (The 02 Centre- 2022/0528/P) to provide a mixed-use development which extends to the Finchley Road tube station to the East. 14 Blackburn Road is within Outline Phase 2 of the O2 masterplan, referred to as plot S8.

This pre assessment has been developed by JAW Sustainability and through the collaboration with CGP MEP, Fifth State and HTA Architects to ensure that the targeted credits are achievable. BREEAM credits that have been selected as 'Not Targeted' have been discussed during a workshop and therefore, the design team have agreed that these credits are not feasible to target.

This draft assessment currently shows a rating of Excellent, but there are various items to review with the design team, which are highlighted as potential in the report. The results presented are indicative

2. BREEAM 2018 New Construction

BREEAM 2018 is an environmental assessment method used to evaluate new build non-domestic buildings.

The performance of the building is assessed using a framework of environmental benchmarks. The standards against which the building is evaluated encapsulate the following categories:

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

3. BREEAM Scoring

There are a wide range of credits to be achieved within the categories listed above. There are a number of minimum mandatory standards that must be met and tradable credits that can be achieved in order to meet the target score.

Once an appropriate credit strategy has been targets, environmental weightings are applied, that vary between each category to demonstrate their environmental impact.

The current rating benchmarks for the BREEAM 2018 scheme are detailed in the

BREEAM Rating	% Score
Outstanding	≥ 85
Excellent	≥ 70
Very Good	≥ 55
Good	≥ 45
Pass	≥ 30
Unclassified	< 30
Table 2.1 RREEAM 20	19 rating bonobmarks

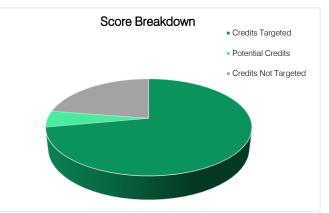


5. Score Summary	
Building Type	Retail
Project Type	Shell and Core
Target BREEAM Score (%)	75.87

Target BREEAM Rating	Excellent	
Miniumum Standards for target rating met?		YES

Potential BREEAM Score (%)	79.16
Potential BREEAM Rating	Excellent

BREEAM Category	Credits Available	Targeted Credits	Potential Credits	% of Credits Achieved	Environmental Weighting	Section Score
Management	18	15	3	83.3%	11.0%	9.17
Health & Wellbeing	11	7	2	63.6%	8.0%	5.09
Energy	21	17	0	81.0%	14.0%	11.33
Transport	12	4	0	33.3%	11.5%	3.83
Water	8	6	0	75.0%	7.0%	5.25
Materials	14	12	0	85.7%	17.5%	15.00
Waste	10	8	0	80.0%	7.0%	5.60
Land Use & Ecology	13	12	0	92.3%	15.0%	13.85
Pollution	12	9	0	75.0%	9.0%	6.75
Innovation	10	0	1	0.0%	10.0%	0.00



This report demonstrates that the development has met all of the minimum standards and can achieve a Excellent rating on the BREEAM 2018 scheme.

6. Pre-Assessment Credit Strategy Summary Report

Management								
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility	BREEAM Evidence Required	Minimum Standard for Retion	Points Available	Status	Points Targeted
Man 01 Project Brief and Design								
Project delivery stakeholders meet to set out compliant roles and responsibilities established in accordance with details in Appendix A1	The design team have met from Stage 2 to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery.			Project Brief / Responsibility				
	The organised nature of this project means that this credit should be readily achievable.	2	Fifth State / HTA	Summary	-	0.61	Targeted	0.61
Third party consultation activities undertaken in line with requirements in Appendix A1	Fifth State to collate design team meeting minutes.							
	the party i.e. the individual(s) rather than the organisation undertaking the consultation is independent of the design process.	2	Fifth State / HTA	Design Team Meeting minutes	-	0.61	Targeted	0.61
The project team, including the client, formally agree strategic performance targets	The project team have formally agreed to achieve the target BREEAM rating.			BREEAM Excellent is targeted		Prerequisite	Targeted	Prerequisite
BREEAM AP appointed and a target rating contractually agreed. To achieve the credit at the Design Stage	A BREEAM AP has been involved with the project from Stage 2.							
Assessment the agreed performance targets must be demonstrably achieved by the project design and demonstrated via the BREEAM Assessor's Design Stage report.		2	Consultant	BREEAM AP Reports	-	0.61	Targeted	0.61
BREEAM AP involved and reports on progress. The BREEAM AP will monitor against agreed targets throughout the	Th BREEAM AP should continue their involvement throughout the next stages							
design process and formally report the progress. The previous credit must be achieved to receive this credit.		2-4	Consultant	BREEAM AP Reports	-	0.61	Targeted	0.61
Man 02 Life Cycle Cost and Service Life Planning			I	l				
An elemental LCC analysis is commissioned in line with requirements in Appendix A2	Evidence: A Stage 2 & Stage 4 LCC may be desirable to further inform technical			1				
	design and achieve a further credits.	2	Client / QS	Stage 2 LCC	-	1.22	Potential	0.00
A component level LCC plan has been developed in line with requirements in Appendix A2	It was discussed during the pre assessment workshop that Knight Frank may be undertaking an LCC. Fifth State to confirm.	4	Client / QS	Stage 4 LCC	-	0.61	Potential	0.00
The capital cost of the building will be reported in £k/m ² via the BREEAM Assessment Scoring and Reporting tool	The capital cost will be confirmed at design and post construction stages.		Contractor	Capital Cost Letter at DS & PC		0.61	Targeted	0.61
Man 03 Responsible Construction Practices								
All limber and limber-based products used during the construction process of the project are legally harvested and traded limber (FSC compliant or equivalent)	All site timber (including formwork, hoarding, shuttering etc.) will be from FSC sources, with Certificate of conformity (COC).	-		Provide all Timber Delivery				Prerequisite
	Evidence: Copy of COC certificates and completed timber record if available. Ensure that the contractor keeps all delivery notes.		Contractor	Notes and CoC certificates (FSC / PEFC)	-	Prerequisite	Targeted	Prerequisite
All parties who at any stage manage the construction site (e.g. the principal contractor, the denolition contractor) must portrate an environmental management system (EMS) covering their main operations and implement best practice pollution prevention policies (air & water pollution).	The main contractor is expected to operate an EMS (ISO 14001 or equivalent) and implement best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction and demolition-sites: PPG6.	-	Contractor	EMS ISO 14001 Cert PPG6	-	0.61	Targeted	0.61
The client and the contractor formally agree BREEAM performance targets	This will be undertaken.					Prerequisite	Targeted	Prerequisite
BREEAM AP monitors and reports progress through construction.	Can be targeted if a sustainability champion should be appointed by the contractor at staces 5-6.	5-6	Contractor	BREEAM AP Reports Stages 5-6	-	0.61	Targeted	0.61
Responsible construction management checklist followed, with all minimum requirements met and 6 additional items. CCS Score 27 - 34 (correr of 9) nearb section)	The Responsible construction management checklist will be followed on site to achieve 2 credits.	-	Contractor	CCS Checklist Completed	Very Good	0.61	Targeted	0.61
CCS Score 35 - 38	Evidence: Contractor to register with Considerate Construction Scheme.		T					
(score of 11 in each section)				CCS Checklist Completed	Excellent	0.61	Targeted	0.61
Site energy and water consumption recorded / monitored. See Appendix A3 for details of the requirements.	All site energy, water and transport of materials and waste will be monitored during the construction process and reported monthly.							
	Evidence: Individual responsible for monitoring and recording the utility data. - Water and energy targets set for the project - Collated at construction phase; total of site water (m3) and energy usage (kWh)	-	Contractor	Provide Site Energy / Water Figures		0.61	Targeted	0.61
Transport of construction materials and waste metered / monitored. See Appendix A3 for details of the requirements.	$\label{eq:constraint} \begin{split} \hline Evbarcos & - Record transport of materials to site: total distance (km), CO_2 & kgCO_{ab}$ and CO_/project value. (kgCO_{ab})E) & - For waster from site: report total distance (km) CO_2 (kgCO_{ab}) and CO_/project value. (kgCO_{ab}), constraints, con			Transport of Waste and Material Figures		0.61	Targeted	0.61



Man 04 Commissioning and Handover								
A schedule of commissioning and testing is required. Commissioning and testing of building services to CBSE, BSRA regs, monitored on behalf of the client by an appropriate person. Refer to Appendix A4 for detailed requirements	A schedule of commissioning and testing will be prepared. An appropriate project team member will be appointed to monitor and programme pre- commissioning, commissioning and, where necessary, re-commissioning. All commissioning will be carried out in accordance with the relevant guidelines.	-	CGP / Contractor	Provide commissioning certificates / programme / schedule	Very Good	0.61	Targeted	0.61
During the design stage, an appropriate project team member is apported, provided they are not involved in the general installation works for the building services systems, with responsibility for: a. Undersking deservices and yards achieven suitability brase of commissioning. b. Providing commissioning, entranagement input to construction programming and during installation stages. C. Management of commissioning, entranagement and the stage of the stage of the stage. For complex systems, a specialist commissioning agent must be appointed during the design stage. Refer to Appendix.	An appropriate project team member will be appointed to carry out the commissioning requirements. A specialist commissioning manager will be appointed during the design stage to provide design advice regarding commissioning of complex systems.	-	Contractor	Provide commissioning certificates / programme / schedule CV of commissioning manager	-	0.61	Targeted	0.61
Af for detailed requirements Complete post-construction testing and inspection to quality-assure the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through artightness testing and a thermographic survey), delects must be nectified. See Appendix Af to details	Evidence: This is through airtightness testing and a thermographic survey.	-	Client / Contractor to appoint specialist	Airtightness Test and Thermographic Survey	-	0.61	Targeted	0.61
Tan Building Uler Guides (BGG) and training schedules are developed to provide: - Non-technical guidance for distribution to the building occupiers. - Technical guidance for premises facilities managers. Refer to Appendix AI for detailed contents requirements	The contractor will produce compliant BUGs & training schedules.	-	Contractor	BUG & Training Schedule	Very Good	0.61	Targeted	0.61
Health & Wellbeing Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility	BREEAM Evidence Required	Minimum Standard for Rating	Points Available	Status	Points Targeted
Hea 01 Visual Comfort								
Identify arras at risk of glare using a glare control assessment. The glare control assessment also justifies any areas deemed not at risk of glare. Withou increasing energy consumption, glare is designed out through building form and layout or building design massures.	Blinds are not expected to be installed on the commercial floorspace .	-	HTA		-	0.73	Not Targeted	0.00
Dayloghting Should be met following either option A. or B. A. 2% duyloph factor. AND either (a) OR ((b) and (c)) (a) Unidemity rais of 0.3 or point duyloph factor of 0.3 times the relevant average dayloph factor Uniformity raiso of 0.7 or point duyloph factor of 0.7 times the relevant average dayloph factor where the spaces with guard mofa, a rais (b) Al tesas 00% of the room has a view of sky from desk or table top height (0.85m in mult-residential buildings, 0.7m in other buildings).	It is expected that at least one credit will be achievable. Additional calculations would be needed to achieve the second credit.	-	Client appointed specialist.	Daylighting / Sunlight Calculations	-	0.73	Targeted	0.73
(c) The room depth criterion d/w + dHW < 2((1-RB) is satisfied B. Minimum 80% of the relevant building areas meet 300 lux Average daylight illuminance and 90 lux Minimum daylight illuminance for yoo0 hours are very or more.						0.73	Not Targeted	0.00
View Out. Sind the floor verse in 95% of space for each relevant building area is within 8 m of an external wall. The external wall has a window or opening must be 20% of the surrounding wall area See Appendix 81.	Vew out criteria confirmed following pre assessment workshop on (03/12)	-	Fifth State / HTA	Drawings showing internal lighting layout	-	0.73	Targeted	0.73
The response of the second sec	All lighting will be designed to meet CIBSE standards and will be appropriately zoned, with use controls.	-	CGP MEP	Internal / External Lighting Schedule / Specifications Drawings showing internal lighting layout, zoning and controls	-	0.73	Targeted	0.73
Hea 02 Indoor Air Quality	·					·		
A site-specific indoor air quality plan has been produced and implemented no later than the end of Concept Design Refer to Appendix B2 for detailed requirements	An air quality plan will be developed.	2		IAQP	-	Pre-Requisite	Targeted	
The building is designed to minimise the holor concentration and rescruction of polytarits. Polytariong the building is minise and exhausts at least 10 in or horizontal distances apart. Positioning intakes at least 10 no horizontal distance from sources of external polytarion (including the location of all enhauts from other buildings). - CO, seriors are provided for high/variable occupy areas. - For naturally entited or mixer dista buildings, the design demonstrates that the ventilation natating provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates in accordance with CBSE RM10	An indoor air quality assessment will be completed. This will be dependent on where the air intakes are for the mechanical vertilation. Please see credit summary box for more information. Evideoco: Michael and availings showing the air intake locations for the mechanical vertilation.	-	HTA / CGP MEP	Mechanical Ventilation Drawings	-	0.73	Targeted	0.73



Hea 04 Thermal Comfort								
Thermal modelling is carried out using software in accordance with CIBSE AM11 and confirms:	Thermal modeling will be carried out and it is expected that the design will							
For air conditioned buildings - comfort levels meet CIBSE Guide A	demonstrate summer comfort levels within CIBSE Guide A can be met.							
 For naturally ventilated buildings - comfort levels meet CIBSE Guide A and CIBSE TM52 or CIBSE TM59 	control of the summer control with order odde real being.		CGP	There is the state of the state		0.73	Targeted	0.73
To hatalay venture balange context even met obde date rand obde mate of obde mos		-	CGP	Thermal Comfort Report	-	0.75	Targeted	0.73
See Appendix B3 for full details								
Thermal modelling demonstrates the relevant requirements set out in the above credit for a projected climate change	Thermal modelling will include an analysis of internal temperatures in a projected							
environment. See Appendix B3 for full details	climate change environment.							
	dinute charge dimonitorit.		CGP	M&E As-built Thermal Zoning &		0.73	Targeted	0.73
		-	UGP	Control Drawings	-	0.75	Targeteu	0.73
				-				
Appropriate thermal zoning strategy, providing user control within the zone.	The thermal modelling analysis will aim to inform the temperature control strategy							
Less complex systems require separate occupant control for perimeter zone (7m from perimeter) and central zone.	for the building and it's users. Adequate user control will be provided for each					0.73		0.00
See Appendix B3 for full details	thermal zone and areas appropriately zoned.	-	M&E		-	0.73	Not Targeted	0.00
Hes 05 Acoustic Performance	and the and areas appropriately contra.							
			1					r
Achieve indoor ambient noise levels that comply with the design ranges given in Section 7 of BS 8233:2014	Acoustic testing should be carried out by a suitably qualified individual.							
A programme of acoustic measurements is carried out by a compliant test body.			Assurations	Acoustic Report & Confirmation		0.73		0.73
A programme of acoustic measurements is carried out by a compliant lest body.		-	Acoustician	of targeted acoustic levels being	-	0.73	Targeted	0.73
				achieved				
Hea 06 Security								
			r	1				
A Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA). They	A Security Needs Assessment should be undertaken - this has been targeted under the assumption a SNA will completed for the wider site, of which							
produce a set of recommendations and solutions to ensure the design of the development is planned, designed and specified to address the issues identified in the preceding SNA.	incorporate the assessed BREEAM area.	2	Client appointed	Security Needs Assessment		0.73	Potential	0.00
specified to address the issues identified in the preceding StvA.	Incorporate the assessed BREEAW area.	z	specialist & Architect	Security Needs Assessment	-	0.75	Potential	0.00
Hea 07 Safe and Healthy Surroundings								
Dedicated and safe cycle paths are provided from the site entrance to any cycle storage, and connect to offsite cycle	There will be shared access for people and cyclists so this is may be achievable.							
paths where applicable.								
Dedicated and safe footpaths are provided on and around the site providing suitable links between site areas (e.g. car	There is no pedestrian drop-off areas.							
park to building entrance)		-	HTA		-	0.73	Potential	0.00
Pedestrian drop-off areas provide direct access to footpaths								
Delivery areas are not accessed through general parking areas and there are dedicated parking/waiting/turning areas								
for delivery vehicles	There is not external amenity snace provided within the boundary of this							
	There is not external amenity space provided within the boundary of this assessment.	-	HTA		-	0.73	Not Targeted	0.00
for delivery vehicles		-	HTA		-	0.73	Not Targeted	0.00
for deliver vehicles. There is an outside space providing building users with an external amenity area. Energy	assessment.	-			- Minimum			
for delivery vehicles There is an outside space providing building users with an external amenity area.		Action at RIBA Stage	HTA DT Responsibility		Standard for	0.73 Points Available	Not Targeted Status	Points
for delivere an outside space providing building users with an external amenity area. Envrgy Crodit Summary	assessment.					Points		Points
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Ene 02 Energy Monitoring								
Install energy meering systems to that at least 1996 of the estimated annual energy consumption of each fuel is assigned to the end-use catagories. Meer the energy consumption in buildings according to the total useful floor area Through libelling of as outputs, building users can identify energy consuming end uses. See Appendix C1 for further details.	All major energy consuming terms wit be metered (with a pulsed output and/or connected to a BMS): - Space Heating - Domesic Hot Water Heating - Humdification - Humdification - Pumpt - Wentildion Le fans (major) - Pumpt - Small Prover (lighting and snall power can be on the same sub-meter where supplies takin and choor/department) - Control - Control Loss Caston Systems (separately) - Control Loss Constructions - Colter maior energy - company Determs	-	CGP MEP	As-designed and As-built Schematics showing location of Energy Meter and BMS & Datasheet	Very Good	0.67	Targeted	0.67
Monitor a significant majority of the energy supply Sub-meter per floor plate in large single occupancy or single-tenancy buildings with one homogeneous function	The metering strategy will be designed to meet this criteria.		CGP MEP		-	0.67	Not Targeted	0.00
Ene 03 External Lighting				1				
Specification of energy-efficient tight fittings for external areas (in line with Appendix C2), controlled through a time which, or displays tensor, to prevert organization during displays hours, with average initial luminous efficacy of not less than 70 I/W, and with presence detection in areas of intermittent pedestrian traffic	The luminous efficacy of the external light fittings will be No greater than 70 lumens per circuit Watt All lighting will be on a timeclock to prevent operation during daylight hours PIR - presence detection	-	CGP MEP	External Lighting Specifications (Timeclock & PIR) As-designed and Aa-built drawings showing location	-	0.67	Targeted	0.67
Ene 04 Law Carbon Deelgn								
Analysis of the proposed building design/development before RIBA Stage 2 was undertaken and identified opportunities for passive design solutions have been implemented and reduced total energy demand has been	Implement passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the			Achieve Hea 04- Thermal				
quantified.	passive design analysis findings.	2	CGP MEP	Comfort	-	0.67	Targeted	0.67
quantified. BREFEAN issue 04 Thermal Comfort has to have been achieved. See Accentix C3. The building utilises a free cooling strategy and the first credit within the BREEAN issue Ene 04 Low Carbon Design (passive design analysis) has been achieved	passive design analysis findings.	2	CGP MEP CGP MEP	Comfort	-	0.67	Targeted Not Targeted	0.67
BREEAM issue Hea 04 Thermal Comfort has to have been achieved. See Accendix C3. The building utilises a free cooling strategy and the first credit within the BREEAM issue "Ene 04 Low Carbon Design"		2 - 2		Comfort LCZ Feasibility Study	-			
BEEEMI issue Hea 0L Thermal Confront has to have been achieved. See Accentuls C3. The building utilises a free occing strategy and the first credit within the BEEEMI issue Eree 04 Low Carbon Design" (passive design available) has been achieved Feasibility study is carried out and implemented, covering points listed in Appendix C3. The reduction in mid-accet regulated CO ₂ shown by the feasibility study is quantified and the requirements of Appendix C3 can be achieved.		-	CGP MEP		-	0.67	Not Targeted	0.00
BEFEM issue Hea 01 Thermal Confront has to have been achieved. See Accentic C3. The buildry utilises a free cooling strategy and the first credit within the BREEAM issue Tene 04 Low Carbon Design' (gashed esign available) has been achieved. Feasibility study is carried out and implemented, covering points listed in Appendix C3. The reduction in reduced regulated CO, shown by the lessibility study is quantified and the requirements of Appendix C3 can be achieved. Eno 06 Energy Endowr Transportation Systems Endowr The transportation demand and usage patterns for the building has been	The development will not utilise a free cooling strategy. An analysis of the transportation demand and usage patterns for the building will be carried out in order to appropriately specify lifts. The fit manufacture will be asked to undertake energy calculations and specify the features that make the most savings.	-	CGP MEP CGP MEP	LCZ Feasibility Study Energy Efficient Study & comparison between 2 lift	-	0.67	Not Targeted	0.00

Transport								
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Minimum Standard for Rating	Points Available	Status	Points Targeted
Tra 01 Transport Assessment and Travel Plan	<u>P</u>							
During the feasibility and design stages, a travel plan is developed based on a site-specific travel assessment or statement. See Appendix D1 for full requirements.	The achievement of these credits will depend on the timing of transport statement or travel plan documentation.	1 and 2	RHDHV	Travel Plan	-	0.96	Targeted Targeted	0.96
Tra 02 Sustainable Transport Measures		1		1				-
Achieve the Tra 01 Transport assessment and travel plan credits	A travel plan is being produced for this project				-	Prerequisite	Targeted	Prerequisite
Credits are awarded for Tra 02 according to the existing Accessible Index (AI) of the project, and the total number of points achieved for the options implemented, based on the table in Appendix D2. Please select in the exist exist will building has < 25 points (Option A), \geq 25 & < 40 (urban centre) points (Option B), or \geq 40 points (Option C).	Option A (<25 points)					9.58	Targeted	1.92
The existing AI calculated in Tra 01 achieves the following: ≥ 4 for prison or MOD sites, rural location sensitive buildings, and other building group 3 ≥ 8 for all other building types	This credit will not be targeted						Not Targeted	
Demonstrate an increase over the existing Accessibility index through negotiation with local bus, train or tram companies to increase the frequency of the local service provision for the development;	This credit will not be targeted						Not Targeted	
OR Demonstrate an increase over the existing Accessibility Index. This could be through provision of a diverted bus route, a new or enhanced bus stop, or other similar solutions.							Not Targeted	
OR Provide a dedicated service, such as a bus route or service.							Not Targeted	
Provide a public transport information system in a publicly accessible area, to allow building users access to up-to-date information on the available public transport and transport infrastructure. This may include signposting to public transport, cycling, walking infrastructure or local amenities.	This credit will not be targeted						Not Targeted	
Provide electric recharging stations of a minimum of 3kW for at least 10% of the total car parking capacity for the development.	14 Blackburn is a car free scheme. Therefore this is not feasible to target.						Not Targeted	
Set up a car thanking group on facility to facilitate and encourage building users to car share. AND Raise awareness of the sharing scheme with marketing and communication materials. AND Provide priority spaces for car sharers for at least 5% of the total car parking capacity for the development. AND Locate priority parking spaces nearest the development entrance used by the sharing scheme participants.	This credit will not be targeted as it not feasible.						Not Targeted	
During preparation of the tord, the design heam consults with the local authority (JA) on the state of the local cyclic wherever, and public accessible predestrian notices, to focus on whichever the LA deems most relevant to the project, and how to improve it. AND Agree and implement one proposition chosen with the local authority. The proposition supported by the development is additional to example Januar and has a significant impact on the local cycling network or on podestrian notate open	This credit wil not be targeted						Not Targeted	
Install compliant cycle storage spaces to meet the minimum levels set out in Appendix D2a.	BREEAM requirements. Install 1 cycle space per 10 Staff. 6 cycle spaces would be provided for the commercial space.			As built drawings confirming cycle storage spaces			Targeted	
Provide at least two completer cyclists' facilities for the building users, including pupils where appropriate to the building you, J see Appendix Conformation on compliance for the following: – Browers – Changing Building – Origing Building – Drying spaces.	This credit will not be targeted as it not feasible due to design.						Not Targeted	
Existing amenities: At least three existing accessible amenities are present, see Appendix D2b, where relevant for a Building Group.	Local amenities have been identified in the area			External Amenities Report			Targeted	
Enhanced ementions: Ensure a minimum of one new accessible amenity, in accordance with Appendix D2b, for the relevant Building Group, is provided.	An external amenity will not be developed.						Not Targeted	
OR Ensure more than one new accessible amenity, in accordance with Appendix D2b for the relevant Building Group, is arrowided.							Not Targeted	

Water								
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Minimum Standard for Rating	Points Available	Status	Points Targeted
Wat 01 Water Consumption			1				-	1
Improvement over notional baseline of 12.5% (based on BREEAM calculation taking into account flow rates (consumption of sanitary ware & appliances)	The following flow rates will be used as guidance to achieve more than a 40% improvement:			Completed Wat 01 calculator	Good	0.88	Targeted	0.88
Improvement over notional baseline of 25%					Outstanding	0.88	Targeted	0.88
Improvement over notional baseline of 40%	WC - 3.75 litre effective flush volume Urinal - 1.5 litre/bowl/hour					0.88	Targeted	0.88
Improvement over notional baseline of 50%	WHB taps - 5 l/min		HTA / CGP MEP			0.88	Not Targeted	0.00
Improvement over national baseline of 55%	Showers - 6 limin Bartis - 140 limes to overflow Michen taps - 7.3 limin Michenette taps - 6 limin Domestic sized distwashers - 12 l/cycle			Sanitaryware Schedule.		0.88	Not Targeted	0.00
Wat 02 Water Monitoring								
The specification of a water meter on the mains water supply to each building. AbD Water-comuning plant or building arease, consuming 10% or more of the building's total water demand, are either fitted with sub-meters or have water monitoring explained integration to building to stall water demand, are either fitted with sub-meters or have water monitoring patient integrat to the plant of ansa Each meter (main and sub) has a plated output to enable connection to a Building Management System (BMS) and if there as an existing BMS are need build must be connected to the subring BMS.	Sub-meters will be specified for the building and plant or area that consumes more than 10% of the building's water demand.	-	CGP	As-deeign and as-built showing: Water Meter Location Connection to BMS Water Meter Specification Water Schematics	÷	0.88	Targeted	0.88
Wat 03 Water Leak Detection								
A leak detection system capable of detecting major leaks on the water supply has been installed. The system must cover all mains water supply between and within the building and the site boundary. See Appendix E1 for details of requirements	Leak detection will be specified.	-	CGP	Water Leak Detection	-	0.88	Targeted	0.88
Flow control devices are fitted in WC areas or sanitary facilities to ensure water is supplied only when needed (and therefore prevent minor water leaks). See Appendix E1 for details of compliant systems	Flow control devices (e.g. linked to a PIR) will be provided in the WC areas of the new building.	-	CGP	Flow Control Specification	-	0.88	Targeted	0.88
Materials								
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Minimum Standard for Rating	Points Available	Status	Points Targeted
					raung			
Mat 01 Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)			1		raung			
Met (01 Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA) Offices, Industrial and Retail buildings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RIBA Stace 2 and 4), Refer to Appendix F1.					raung	1.25	Targeted	1.25
Offices, industrial and Retail buildings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RIBA Stage 2 and 4), Refer to Appendix F1.					raung	1.25	Targeted	1.25
Offices, Industrial and Retail buildings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RIBA Stage 2 and 4), Refer to Appendix F1. During concept design (RIBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA					raung	1.25	Targeted Targeted	1.25
Offices, Industrial and Retail buildings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RIBA Stage 2 and 4), Refer to Appendix F1.	It is expected that the project can achieve all of the available credits for the LCA.				raus	1.25 1.25 1.25	Targeted	1.25 1.25 1.25
Offices, Industrial and Real Rulatings must complete a comparison with IMEEAM benchmark during Concept Design and Technical Design (RBA Stage 2 of the Netro In Agenchi F. Netro In Agenchi F. Netro In Agenchi F. During concept design (RBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA options approximation of 2 to 4 significantly different substructure design options using an appropriate LCA Tool in line with reguments in Argonolic F.		2 and 4	JAW		raung	1.25	Targeted Targeted	1.25
Offices, Industrial and Retail buildings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RBA Stage 2 and 4), Refer to Appendix F1, During concept design (RBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA options appraisal 2 C 4 significantly different substructure design options using an appropriate LCATool in Ine with	It is expected that the project can achieve all of the available credits for the LCA.	2 and 4	JAW		-	1.25 1.25 1.25	Targeted Targeted Targeted	1.25 1.25 1.25
Offices, Industrial and Relia Nations, must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RBA Stage 2 and 4). Refer to Appendix F1. Joing concert driver, RBA Stage 2 (directly opportunities for reducing environmental impacts by carrying out a LCA options approximate of to 4 significantly different substructure design options using an appropriate LCA Tool in line with requirements in Appendix F1. During the Technical Design stage (RBA Stage 4) carry out a LCA options appraisal of 2 to 3 significantly different	It is expected that the project can achieve all of the available credits for the LCA. Heavily weighted / lots of credits available	2 and 4	JAW		-	1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25
Offices, truductiviti and Real Taularings mast complete a comparison with IBEEAM benchmark during Concept Design and Technical Design (RBA Stage 2 and 4). Refer to Appendix F1. During concept design (RBA Stage 2) divertify opportunities for reducing environmental impacts by carrying out a LCA options approximate JC to 4 significantly different substructure design options using an appropriate LCA Tool in fine with requirements in Appendix F1. During the Technical Design stage (RBA Stage 4) carry out a LCA options appreciated /2 to 3 significantly different superstructure design options using an appropriate LCA Tool in the with requirements in Appendix F1. During Concept Design (RBA Stage 2) carry out a LCA options appraisal of a combined total of at least six applicantly different substructure of rand backcaping design options.	It is expected that the project can achieve all of the available oredits for the LCA. Heavily weighted / lots of oredits available EVIdence: LCA	2 and 4	WAL		-	1.25 1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25 1.25
Offices, Industrial and Real Dublings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RBA Stage 2 and 4), Refer to Appoints' Refer to Appoints' Technical genvironmental impacts by carrying out a LCA options approach to a synchromy different substratute design options using an appropriate LCA Tool in line with requirements in Appointal F. During the Technical Design stage, RIBA Stage 4 (carry out a LCA options approach 2 to 3 significantly different superstructure design reports using an appropriate LCA Tool in line with requirements in Appointal F.1 During the Technical Design stage, a) carry out a LCA options approach 2 to 3 significantly different superstructure design reports using an appropriate LCA Tool in line with requirements in Appointal F.1 During the substructure of the indicest options. THEOP UNITIONE Technical Design stage , a) carry out a LCA options approach total of at least site significantly different substructure of the indicesting disponse. THEOP UNITIONE Technical Design stage , a) carry outs a LCA options approach 2 total of all denses that approach different substructure of the indicesting disponse.	It is expected that the project can achieve all of the available oredits for the LCA. Heavily weighted / lots of oredits available EVIdence: LCA	2 and 4	JAW HTA / CGP MEP	EPD Cartificates where evaluate		1.25 1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25 1.25
Offices, Industrial and Real Rularings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (BBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA options approach of 2 to 4 significantly different substitute design options using an appropriate LCA Tool in line with requirements in Appendix F1. During the Technical Design stage (RIBA Stage 4) carry out a LCA options appraisal of 2 to 3 significantly different superstitute(true design options using an appropriate LCA Tool in line with requirements in Appendix F1. During the Technical Design stage an appropriate LCA Tool in line with requirements in Appendix F1. During Concept Design (RIBA Stage 2) carry out a LCA options appraisal of 2 to 3 significantly different superstitute(true design options using an appropriate LCA Tool in line with requirements in Appendix F1. During Concept Design (RIBA Stage 2) carry out a LCA options appraisal of a combined total of at least sis applicantly different banchic targe carry out a LCA options. Vision Concept Design (RIBA Stage 2) carry out a LCA options appraisal of a combined total of at least sis applicantly different banchic targe carries options.	It is expected that the project can achieve all of the available oredits for the LCA. Heavily weighted / lots of oredits available EVIdence: LCA	2 and 4		EPD Certificates where evaluable		1.25 1.25 1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25 1.25 1.25
Offices, Fudurated and Relat Dublings must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (RBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA righting concept design (RBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA righting concept design (RBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA righting concept design (RBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA page of the Centrical Design stage of a supercent of the Centre of the Centre of the Centre environmental Angel (RBA Stage 4) is any out a LCA options appressial of 2 to 3 significantly different superstructure design options using an appropriate LCA Tool in line with requirements in Appendix regulational different existence on an able options appressial of a combined total of at least ski applicantly different beaking stage (Centre of Centre) and Centre (Centre) in the centre of the Centre Office of the Centre Office of the Centre Office of the Cent	It is expected that the project can achieve all of the available oredits for the LCA. Heavily weighted / lots of oredits available EVIdence: LCA	2 and 4		EPD Certificates where available	Pass	1.25 1.25 1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25 1.25 1.25
Offices, Industrial and Real Rularings mast complete as comparison with BREEAM benchmark during Concept Design and Technical Design (REA Stage 2 and 4), Refer to Appendix F1. During concept design (REA Stage 2) design opportunities for reducing environmental impacts by carrying out a LCA options approach 2 to 4 applicatingly different substructure design options using an appropriate LCA Tool In line with requirements in Appendix F1. During the Technical Design stage (REA Stage 4) carry out a LCA options approach 2 to 3 significantly different superstructure design reptors using an appropriate LCA Tool In line with requirements in Appendix F1. During the Technical Design stage 0 appropriate LCA Tool In line with requirements in Appendix F1. During Concept Design, REA Stage 2) carry out a LCA options appreciated a combined total of at least six significantly different autonucluum of their value value approximate Constructions. Mat 02 Mid 104 Environmental Imp VIS Incon Construction products — Environmental Product Dedict Design stage requirements in Appendix F2. Constructions foods that a EPD which will achieve a total EPD points acces of at least 20 in compliance with requirements in Appendix F2. Terrs the design of carb, EPD in the Mid 101/2 Bench Construction of at least 20 in compliance with requirements in Appendix F2.	It is expected that the project can achieve all of the available oredits for the LCA. Heavily weighted / lots of oredits available EVidence: LCA Products will be specified with EPDs in order to achieve the credit requirements The design team will develop a sustainable procurement plan.	2 and 4		EPD Certificates where available	-	1.25 1.25 1.25 1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25 1.25 1.25 1.25
Offices, Industrial and Real Rulariang must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (REA Stage 2 and 4), Refer to Appendix F1. During concept design (REA Stage 2) design yoportunities for reducing environmental impacts by carrying out a LCA options approach 2 to 4 applicatingly different substructure design options using an appropriate LCA Tool In line with requirements in Appendix F1. During the Technical Design stage (REA Stage 4) carry out a LCA options approach 2 to 3 significantly different superstructure design reports using an appropriate LCA Tool In line with requirements in Appendix F1. During the Technical Design stage 2 carry out a LCA options approach at contained total of at least six significantly different autotucture on the Indexianger design options. Line 2 Mit 104 Emfortamental ling total from Construction products — Emfortamental autotics because with inspirements in Appendix F2. Constructions for Board 105 Mit Mark 106 Mit Mark 106 Mit Mark 106 Mit	It is expected that the project can achieve all of the available credits for the LCA. Heavily weighted / lots of credits available Evidence: LCA Products will be specified with EPDs in order to achieve the credit requirements. The design team will develop a sustainable procurement plan. The constractor will be required to ensure that materials for maps building elements are responsibly sourced to achieve at least 3 credits.	2 and 4		Completed PC Mat 03 Calculator with Materials Delivery Notes	-	1.25 1.25 1.25 1.25 1.25 1.25 1.25	Targeted Targeted Targeted Targeted Targeted Targeted Targeted	1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.25
Offices, Fuduratie and Real Rulariang must complete a comparison with BREEAM benchmark during Concept Design and Technical Design (BBA Stage 2) identify opportunities for reducing environmental impacts by carrying out a LCA options approach of 20 is significantly different substitute design options using an appropriate LCA Tool In fire with requirements. Approach 51. During the Technical Design stage 2 international different substitute design options using an appropriate LCA Tool In fire with requirements. Approach 51. During the Technical Design stage 3 in appropriate LCA Tool In line with requirements. In Appendix 5 LCA Tool In fire with requirements in Appendix 5 . During Concept Design (RBA Stage 2) carry out a LCA options appressial of 2 to 3 significantly different superstructure design (RBA Stage 2) carry out a LCA options appressial of a combined total of at least six applicantly different substitutions of the Markadorum Generg optical. BMI COL ME COL Functional Impacts from Construction Products — Environmental Product Destination (CEC Construction products Gener with a FEO burb while at least as a tool and the BP ports score of at least 20 in compliance with requirements in Appendix 7. All theor and Interview BP CP into the MM 01002 Results Score of at least 20 in compliance with All theorement Interview Beard product used are Beagly Namested and traded All interviews for the provide and the Stage 4 interviews the approach 4 is a Construction produce are regionally accored in the With requirements in Appendix 7.	Is expected that the project can achieve all of the available credits for the LCA. Heavily weighted / bits of credits available Evidence: LCA Products will be specified with EPDs in order to achieve the credit requirements The design team will develop a sustainable procurement plan. The contractor will be required to ensure that materials for major building	-	HTA / CGP MEP	Completed PC Met 03 Calculator	-	1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.25	Targeted	1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.25



Mat 05 Designing for Durability and Resilience								
The design incorporates suitable durability and protection measures into building design and construction to prevent			1					
damage to the building fabric or materials in case of accidental or malicious damage to provide protection against								
criteria detailed in Appendix F4.				Completed Mat 05 template				
AND	The building will incorporate suitable durability and robustness features.	-	HTA / Contractor	evidencing material durability	-	1.25	Targeted	1.25
The relevant building elements incorporate design and specification measures to limit material degradation due to				meeting the design intent				
environmental factors. See Appendix F4 for methodology of assessment.								
Mat 06 Material Efficiency	•				ł			
During RIBA Stages 1 and 2 targets have been set and opportunities and methods have been reported which	It is considered that this credit is time consuming and complex and therefore will							
optimise the use of materials for RIBA Stages 1-5.	not be targeted.							
AND		1-5	Architect /		-	1.25	Not Targeted	0.00
The development of the implementation of material efficiency has been recorded for RIBA Stages 3-5. Refer to Appendix F5 for methodology.			Contractor				-	
Waste					Minimum			
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Standard for	Points Available	Status	Points Targeted
Wat 01 Construction Waste Management					Rating	7.10.000		100,0000
A pre-demolition audit (during RIBA Stage 2) has been completed for existing buildings/structures being considered for	1	(1			-
demolition to determine if refurbishment/reuse is feasible and to maximise material recovery in line with Appendix G1.	A pre-demolition audit will be carried out to maximise the recovery of material	2		Pre-demo audit report		0.70	Targeted	0.70
······································	from the demolition.	-					Turgeteu	
A Resource Management Plan (RMP) is developed including accurate data records on waste arising and waste	A compliant RMP will be developed and the main contractor will be expected to		1		1			
management routes.	ensure construction waste does not exceed 13.3m3 / 11.1 tonnes per 100m2			Copies of final waste report and		0.70	Targeted	0.70
Amount of waste generated per 100m ² = 13.3m ³ / 11.1 tonnes	floor space.		Contractor	Waste Transfer Notes	Outstanding			
Amount of waste generated per 100m ² = 7.5 m ³ / 6.5 tonnes			Cunicación		Custanang	0.70	Targeted	0.70
	At least 80% of non-demolition waste and 90% of demolition by weight will be	-			{		Targeteu	
Amount of waste generated per 100m ² = 3.4m ³ / 3.2 tonnes	diverted from landfill following the waste hierarchy.					0.70	Not Targeted	0.00
Waste diverted from landfill: Volume (%) / Tonnage (%): Non-demolition 70% / 80% or Demolition 80% / 90%	Evidence: A copy of the SWMP summary datasheets or equivalent monitoring records/report. Waste notes required during construction phase.			SWMP		0.70	Targeted	0.70
Wst 03 Operational Waste	Tecardarieson, waste notes requires carris considerationales.			1				
Provision of labelled, dedicated storage facilities for a building's operational recyclable waste of capacity appropriate to	At least an 2m ² space will be provided for the storage of recyclable waste.							
the building type, size and number of units (if relevant) and predicted volumes of waste. Sized either to meet known				As-design and As-built drawings				
waste or 2m ² (4m ² if catering provided) for every 1000m ² of floor area	Evidence: Please provide size details (m2) of the operation waste area.		HTA / Contractor	showing operation waste area	Excellent	0.70	Targeted	0.70
Where significant food waste is produced or in multi-residential buildings, composting facilities are provided and where				All bins labelled appropriately				
significant packaging waste is produced or in multi-residential buildings, composing facilities are provided and where significant packaging waste, a compactor/baler is provided				All bins labelled appropriately				
Wat 05 Adaptation to Climate Change								
A Climate Change Adaptation Strategy Appraisal (structural and fabric resilience specific) has been conducted using a	Evidence: An assessment will be carried out to assess and mitigate the effects		1					T
systematic risk assessment evaluating the impact on the building over its projected life cycle from expected extreme	of climate change on the building.							
weather due to climate change and, where feasible, mitigating against these impacts. Review mitigation methods during								
RIBA Stage 4.		284	HTA	Completed Adaptation to		0.70	Targeted	0.70
-		244	11174	Climate Change Report	-	0.10	raigeteu	0.10
Develop recommendations or solutions based on Climate Change Adaptation Strategy Appraisal, and provide updates								
during Technical Design demonstrating how recommendations made at Concept Design have been implemented.								
Wat 06 Design for Disassembly and Adaptability								
A study has been undertaken, and recommendations developed during the concept design, to explore ease of	A functional adaptation strategy will be developed. This will include							
disassembly and the functional adaption potential of different design scenarios.	recommendations for measures to be incorporated to facilitate future adaptation.	2	HTA	Completed compliant Functional Adaptation Strategy Report	-	0.70	Targeted	0.70
Updates have been provided during the Technical Design covering:	The strategy will be updated for implementation at Stage 4.		i	İ	İ			
- How recommendations (made during RIBA stage 2) have been implemented.	-		1	Updated Completed Compliant				
 Changes to recommendations and solutions during the development of RIBA Stage 4. 		384	1	Functional Adaptation Strategy	-	0.70	Targeted	0.70
A building adaptability and disassembly guide has been developed to communicate the characteristics allowing			1	Report				
functional adaptability and disassembly to prospective tenants.			1	1				

Land Use & Ecology		_				_	_	
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Minimum Standard for Rating	Points Available	Status	Points Targeted
LE 01 Site Selection At least 75% of the proposed development's footprint is on an area of land which has previously been occupied	At least 75% of the proposed development's footprint is on land with was previously developed.	-	HTA	GA / Site Plan Drawings	-	1.15	Targeted	1.15
LE 02 Identifying and Understanding the Risks and Opportunities for the Project			-					
An assessment route has been determined and the client or contractor has confirmed it is compliant with all relevant UK and EU international legislation relating to the ecology of the site.		-			-	Prerequisite	Targeted	Prerequisite
Route 2 has been adopted (Refer to Appendix H1 for details)	The achievement of these credits will depend on timing of ecology reporting.	-	Ecologist	Ecologist must be appointed at early stages to undertake EIA	_	1.15	Targeted	1.15
				and Ecology Assessment.		1.15	Targeted	1.15
LE 03 Managing Negative Impacts on Ecology		1		r		1		
LE 02 has been achieved. The client or contractor has confirmed that compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	The achievement of the credits will depend on timing of the ecology report					Prerequisite	Targeted	Prerequisite
Planning, Iaison, implementation and data: - Roles and responsibilities have been defined - impact of site proparation and construction works on ecology are identified to optimise benefits and outputs				Ecologist must be appointed at early stages to undertake EIA and Ecology Assessment.				
 Index to size preparation and construction works on ecology are deminied to optimise behaviors and outputs - Project team collaborate with representative stakeholders to select measures to be implemented during site preparation and construction works 		1				1.15	Targeted	1.15
Route 2: Negative impacts from site preparation and construction works have been managed according to the hierarchy and ETHER:	An ecologist will be appointed to provide recommendations for achieving this.				-	1.15	Targeted	1.15
a. The loss of ecological value has been minimised (one credit) OR			Ecologist					
 b. No overal loss of ecological value has occurred (two credits) (Refer to Appendix H2 for full details) 						1.15	Targeted	1.15
LE 04 Change and Enhancement of Ecological Value								
LE 03 has been achieved. The client or contractor has confirmed that compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	The achievement of the credits will depend on timing of the ecology report	-				Prerequisite	Targeted	Prerequisite
OR	An ecologist will be appointed to provide recommendations for achieving this.							
Route 2: The project team, collaborating with representative stakeholders, have implemented solutions and measures to enhance ecological value in the following order: - on site, and where this is not feasible, - of site with the same of influence.		-		Implement enhancements recommended by the ecologist		1.15	Targeted	1.15
Data collated is provided to the local environmental records centres nearest to the site.					-			
AND Route 2: Credits are awarded on a scate of 1 to 3, based on the calculation of the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in QN 36 - BREEAM, CEEQUAL, HOM Ecology Calculation Methodobay. Peake 2. Credits are awarded as follows:		-	Ecologist	Net gain calculations from ecologist		1.15	Targeted	1.15
1. Minimising loss of ecological value (one credit - percentage score of 75-94)								
2. No net loss of ecological value (two credits - percentage score of 95-104)		-		Net gain calculations from ecologist		1.15	Targeted	1.15
3. Net gain of ecological value (three credits - percentage score of 105-109)		-		Net gain calculations from ecologist		1.15	Targeted	1.15
LE 05 Long Term Ecology Management and Maintenance The client or contractor has confirmed that compliance is monitored against all relevant UK and EU or international	The achievement of the credits will depend on timing of the ecology report	1				-		
legislation relating to the ecology of the site. "LE 03 - Planning, liaison, implementation and data' credit has been achieved. (At least one credit has been awarded under LE 04 for Route 2).	The autreventions of the creatis will depend on unting of the ecology report	-		Confirmation compliance has been monitored relating to ecology of the site	-	Prerequisite	Targeted	Prerequisite
Raute 1 and 2: The project team have collaborated with stakeholders on solutions and measures implemented to monitor, review and develop management solutions. Monitor and regroup on ecological automations from the design and constituction stages and overall project, and maintain ecological value of the stein in line with its zone of influence and any sustainability linked activities. Includes a section about Ecology and Blockversity as part of the tenant or building owner information. (Refer to Appendix H 4 for methodology)		-	Ecologist / Contractor		-	1.15	Targeted	1.15



Route 2: Lundscage and ecology management plan, or similar, is developed in accordance with BS 42020-2013(206) covering as a minimum the first file years after project completion (See Appendix H4 for management plan requirements). Poliution	A landscape and ecology management plan will be developed	-	Ecologist / Contractor	Biodiversity management and maintenance plan for 5 years	-	1.15	Targeted	1.15
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Minimum Standard for Rating	Points Available	Status	Points Targeted
Pol 01 Impact of Refrequents All systems (with electric compressors) must comply with the requirements set out in BS EN 378:2016 (Parts 2 and 3)	The system will be specified so that the refrigerants have a DELC CO2e of less than 1000 kgCO2e/kW.			As-designed and as-installed Refrigerant Specification		Prerequisite	Targeted	Prerequisite
Systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of \leq 100 kgCO2e/kW cooling and heating capacity OR	It is unlikely that refrigerants will have a GWP of ≤ 10 .		M&F			1.50	Not Targeted	0.00
Refrigerants used have a Global Warming Potential (GWP) ≤10 Systems using refrigerants have DELC CO ₂ e of ≤1000 kgCO ₂ e/kW cooling and heating capacity	This credit is achievable.		WOL.	Completed Pol 01 Calculator	-	0.75	Targeted	0.75
All systems are hermetically sealed or only use environmentally benign refrigerants. Refer to Appendix J1 for full details	Systems are unlikely to be hermetically sealed	-				0.75	Not Targeted	0.00
Pol 02 Local Air Quality						I		
All heating and hot water is supplied by non-combustion systems. OR	Space and hot water heating is via electrical systems		ļ			0.75	Targeted	0.75
Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in Annendix. I2						0.75	Targeted	0.75
Pol 03 Flood and Surface Water Management		1				1		
An appropriate SuDS consultant is appointed	A consultant will be appointed to advise on SUDs.	-	Infrastructure	Appointment of a SUDs consultant and FRA completed	-	Prerequisite	Targeted	Prerequisite
A site specific Flood Risk Assessment (FRA) confirms there is a LOW annual probability of flooding	A flood risk assessment will be produced. Using the Government Website showing Flood Risk Zoning, the site of development is located in Flood Zone 2 (low probability of flooding)	-	Infrastructure	Flood Risk Assessment / Report	-	1.50	Targeted	1.50
A site specific Flood Risk Assessment (FRA) confirms there is a MEDIUM or HIGH annual probability of flooding AND The development is accomplicable flood resilient and resistent from all enumes of flooding (datalari in Annuarity 13)	The site is not in Flood Zone 2 or 3	-	Infrastructure	Flood Risk Assessment / Report	-	0.75	Not Targeted	0.00
The development is appropriate, both resists an destruction that a charge of both in appendix is a property is Surface water run-off design solutions must be bespoke, i.e. they take account of the specific site requirements and natural or man-made environment of and surrounding the site.	Site specific solutions will be developed as the design progresses.	-	Infrastructure		-	Prerequisite	Targeted	Prerequisite
Drainage messures are specified to ensure peak non-off raises from the site shows 30% improvement over the pre- weekoged site (provincide site) ron in crusses in run of rates cost the pre-developed lice (provinded site). This should compty at the 1 year and 100 year neturn period events. Calculations should include an allowance for climate change. See Appendix JS for full details.	It is expected that the peak run-off rate for the site can be mantained to be less than for the pre-developed site. There is no change in impermeable area.	-	Infrastructure	Calculations within the report must state site improvements for surface run-off and include allowance for climate change.	-	0.75	Targeted	0.75
Packing of property will not occur in the event of local drainage system failure AND For the 100 year 6 hour event, the post development num of volume, over the development lifetime, is no greater than it would have been proto the assessed site development. Any additional prediction will not one of num off for this event must be prevented from leaving the site by using infiltration or other SuDS techniques. See Appendix J3 for full details.	It is expected that the peak run-off there for the site can be maritained to be less than for the pre-developed site. There is no change in impermeable area.	-	Infrastructure	Calculations within the report must state site improvements for surface run-off and include allowance for climate change.	-	0.75	Targeted	0.75
Pol 04 Reduction of Night Time Light Pollution External lighting pollution has been eliminated through effective design removing the need for external lighting	All external lighting will be designed in compliance with ILP guidance and can be	r		F . 4	[1		
OP OP Is designed in a concordance with LP Guidance and provided with a time switch to allow lighting to be switched off between 23:00 and 07:00	n automatically switched off between 23:00 hr and 07:00 hr.	-	CGP MEP	External lighting specifications - Time clock PIR Drawings displaying external lighting locations	-	0.75	Targeted	0.75
Pol 05 Reduction of Noise Poliution								
Where the development does have noise-service areas or buildings within 800m, a noise impact assessment in compliance with 55 412-2014 has been carried out by an acoustician, and the following noise levels measure/distemment: - Existing balagoand noise levels - Noise nating level from the assessed building The noise level from the proposed stability must be at least 5dB lower than the background noise throughout the day and night. Attaction must be used in feature.	An acoustician will be appointed to ensure compliance with this criteria.	-	Acoustician	Confirmation that an acoustician will be appointed.	-	0.75	Targeted	0.75
	1							

Innovation									
Credit Summary	BREEAM Assessor Comments	Action at RIBA Stage	DT Responsibility		Minimum Standard?	Points Available	Status	Points Targeted	
Man 03 Responsible Construction Practices									
Achieve all responsible construction management checklist items detailed in Appendix A3.	This credit may be targeted once a contractor has been appointed and has registered to CCS	-			-	1.00	Potential	0.00	
Hea 06 Security A compliant risk based security rating scheme has been used	Independent assessment and verification confirming performance against the	1	1			1.00	Not Targeted	0.00	
Ene 01 Reduction of Energy Use and Carbon Emissions	lenheme								
The building achieves an EPR _{NC} \ge 0.9 and zero net regulated CO ₂ -eq emissions (up to two credits)	This credit is not being targeted.	1	1			1.00	Not Targeted	0.00	
					-	1.00	Not Targeted	0.00	
The building is deemed carbon negative where >100% of carbon emissions from unregulated (and regulated) energy	This credit is not being targeted.					1.00	Not Targeted	0.00	
use are offset by energy generated from on-site and near-site LZC sources (up to three credits)		-			-	1.00	Not Targeted	0.00	
						1.00	Not Targeted	0.00	
Achieve maximum available credits in Ene 02 Energy monitoring, some buildings must meet the requirements of the second credit for sub-metering of high energy load and tenancy areas. The client or building occupier must commit	This credit is not being targeted.					1.00	Not Targeted	0.00	
funds to pay for the post-occupancy stage. The energy model must be submitted to BRE and retained by the building	This credit is not being targeted.				-			0.00	
owner	The creates have being targeted.					1.00	Not Targeted	0.00	
Wat 01 Water Consumption		T	1						
65% improvement over notional baseline	This credit is not being targeted.	-			-	1.00	Not Targeted	0.00	
Met 01 Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)									
During Concent Design identify opportunities for reducing environmental impacts Achieve Elemental LCC plan and Component Level LCC options appraisal credits (Man 02 Life cycle cost and service	Development of external amenity area	4				1.00	Not Taroeted	0.00	
Achieve Elemental LCC plan and Component Level LCC options appraisal credits (Man U2 Life cycle cost and service life planning)									
AND									
Include design options appraised during Concept Design (Man 02 Life cycle cost and service life planning)		-			-	1.00	Not Targeted	0.00	
AND Include the design options appraised during Technical Design (Man 02 Life cycle cost and service life planning)									
Include the design options appraised during rechnical besign (wan 02 bile cycle cost and service life planning) AND									
Integrate the aligned LCA and LCC options appraisal activity within the wider design decision-making process									
A suitably qualified third party carries out the building LCA work, or produces a report verifying it, with each LCA option itemised in the report and details of the suitably qualified third party and a declaration of their independence						1.00	Not Targeted	0.00	
Met 03 Responsible Sourcing of Construction Products									
Achieved Mat 03 credits	This credit is not being targeted.	1							
AND		-			-	1.00	Not Targeted	0.00	
Benerative countries & of autiliable points achieved SERM									
Amount of waste generated per 100m ² - 1.6m ³ / 1.9 tonnes	This credit is not being targeted.	1							
AND		-			-	1.00	Not Targeted	0.00	
Waste diverted from landfill: Volume (%) / Tonnage (%): Non-demolition 85% / 90% or Demolition 85% / 95% or							-		
Achieve the construction resource efficiency credits	This credit is not being targeted.								
Allocate waste generated to specific projects								0.00	
Meet or better BREEAM exemplary level benchmark for diversion from landfill of non-hazardous construction and demolition waste						1.00	Not Targeted	0.00	
Wet 02 Use of Recycled and Sustainably Sourced Aggregates				-					
The Project Sustainable Aggregate Points score will be 6 or above	This credit is not being targeted.				-	1.00	Not Targeted	0.00	
Wat 05 Adaptation to Climate Change									
Meet Wst 05 - Resilience of structure, fabric, building services and renewables installation' credit	This credit is not being targeted.					1.00	Not Targeted	0.00	
LE 02 Identifying and understanding the risks and opportunities for the project					-	1.00	Not rargeteu	0.00	
LE 02 Identifying and understanding the hexts and opportunities for the project During Concept Design, wider site sustainability-related activities and the potential for ecosystem service related	This credit is not being targeted.	T	1						
buring Concept Design, where site sustainability-related activities and the potential for ecosystem service related benefits are considered.	ma areas a nas ading targeteu.	1							
Achieve the following credits:	This credit is not being targeted.								
- Hea 07 Safe and healthy surroundings	This creak is not being largered.	1				1.00	Not Targeted	0.00	
 Pol 03 Flood and surface water management: 'Surface water run-off credit 	This credit is not being targeted.								
- 'Minimising watercourse pollution' credit	ma areas a nas ading targeteu.	1							
- Pol 05 Reduction of noise pollution		L	L						
LE 04 Change and Enhancement of Ecological Value		1	1						
Achieve significant net gain of ecological value (≥110%), calculated in accordance with process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2.	This credit is not being targeted.	1				1.00	Not Targeted	0.00	
precaw, ceequal and nuw ecology calculation wethodology – Route 2.	1	1	1			1.00		5.00	



7. Conclusion

This pre assessment report demonstrates that the development has the potential to achieve an Excellent rating with a target score of 75.87%, which incorporates a buffer should credits be lost as the design progresses. The minimum mandatory standards can all be achieved.

The design team must adhere to the credit criteria through the design and post construction stages to ensure that the targeted credits are achieved. Contact should be maintained with the BREEAM Assessor throughout the project to ensure that the requirements are met. Should some credits become unachievable due to site changes or other unforeseen reasons, additional targets may be required. These are marked as potential within the report, and should be reviewed by the design team for inclusion if required.

Design Stage and Post Construction Stage assessments will be required. The BREEAM Assessor will be required to collate compliant evidence from the design team and submit their reports to the BRE for certification.



Appendices

Appendix A - Management A1: Man 01 - Project Brief and Design A2: Man 02 - Life Cycle Cost and Service Life Planning A3: Man 03 - Responsible Construction Practices A4: Man 04 - Commissioning and Handover A5: Man 05 - Aftercare

Appendix B - Health & Wellbeing B1: Hea 01 - Visual Comfort B2: Hea 02 - Indoor Air Quality B3: Hea 04 - Thermal Comfort B4: Hea 06 - Security B5: Hea 07 - Safe and Healthy Surroundings

Appendix C - Energy

C1: Ene 02 - Energy Monitoring
C2: Ene 03 - External Lighting
C3: Ene 04 - Low Carbon Design
C4: Ene 06 - Energy Efficient Transportation Systems
C5: Ene 07 - Energy Efficient Laboratory Systems
C6: Ene 08 - Energy Efficient Equipment

Appendix D - Transport D1: Tra 03 - Cyclist Facilities D2: Tra 05 - Travel Plan

Appendix E - Water E1: Wat 03 - Water Leak Detection and Prevention E2: Wat 04 - Water Efficient Equipment Appendix F - Materials F1: Mat 03 - Responsible Sourcing of Materials F2: Mat 05 - Design for Durability and Resilience F3: Mat 06 – Material Efficiency

Appendix G - Waste G1: Wst 02 - Recycled Aggregates G2: Wst 05 - Adaptation to Climate Change G3: Wst 06 - Functional Adaptability

Appendix H - Land Use & Ecology H1: LE05 - Long Term Impact on Biodiversity

Appendix J - Pollution J1: Pol 01 - Impact of Refrigerants J2: Pol 03 - Surface Water Runoff J3: Pol 05 - Reduction of Noise Pollution