BREEAM UK New Constr	uctio	n 201	8							BUROHAPPOL
roject Name	O2 Finchle	ey Road - F	Retail			BREEAM SCOR	E SUMMARY		1	
roject Type	Retail - Sh		tetan	м	INIMUM REQU		70.0%	Excellent		Pass Good Very Good Excellent Outstanding
RE Registration Reference	-			TA	RGETED - BAS	ELINE	80.4%	Excellent		80.4% 11.5% 15.2% 5.2
sessment Stage	Pre-assess			ADDIT	IONALS - MED	IUM RISK	91.9%	Outstanding		
ate acker Revision	11/07/202 01	22			UNLIKELY		107.2%	Outstanding	0% 10% 20%	30% 40% 50% 60% 70% 80% 90% 100% 110
		Available	% Score	Not	Targeted -	Additionals -				
REEAM Credits	RIBA Stage	Credits	Value	Applicable	Baseline	Medium Risk	Unlikely	Not Targeted	Ownership	Comments
MANAGEMENT										
Ian 01 Project Brief and Design	Credit Aim: F	Encouraging ar	n integrated d	esign process and	considering BREE	AM performance targ	ets early to influe	nce decision-maki	ng and optimise buildir	g performance, while avoiding unnecessary costs.
roject delivery planning	Stage 2	1	0.80%		1				Project Manager	Collate information from project delivery stakeholder consultations (e.g. minutes, responsibility matrix) and demonstrate the impact on the design
takeholder consultation (interested parties)	Stage 2	1	0.80%		1				Project Manager	Collate information from third party stakeholder consultations with compl
rerequisite - BREEAM AP (Concept and Developed Design)	Stage 4	Achie			No					content and demonstrating the impact on the design brief.
	Stage 1				NO				Project Manager	Stage 1 BREEAM AP appointment. Project team, including the client, formally agree strategic performance ta
REEAM AP (Concept Design)	Stage 2 Stage 2	1	0.80%			1			Project Manager	
REEAM AP (Developed Design)	Stage 3 Stage 4	1	0.80%			1			BH S&P	Monitor progress against the performance targets Provide feedback to the project team as appropriate during the design stages
Aan 02 Life Cycle Cost and Service Life Planning		Promoting the	business case	for sustainable bu	ildings through th	e enhanced understa	nding of capital c	ost and improving	design, specification, n	naintenance and operation, by encouraging the use of life cycle costing.
emental LCC	Stage 2	2	1.60%			2			G&T	Elemental life cycle cost assessment carried out in stage 2, in line with PD
omponent level LCC options appraisal	Stage 4	1	0.80%						G&T	156865: 2008 Component life cycle cost assessment in line with PD 156865: 2008
	Juge									Report predicted capital cost for the building in pounds per square metre
apital cost reporting		1	0.80%		1				G&T	gross internal floor area (£k/ m²)
an 03 Responsible Construction Practices	Credit Aim: E	Encouraging co	onstruction site	es to be managed	in an environmen	tally and socially con	siderate and respo	onsible manner and	d monitoring to encour	age continuous improvements and utility consumption reduction.
erequisite - Legally harvested and traded timber		Achie	eved ?		Yes				Principal Contractor	All timber and timber based products used on the project is "Legally harv and traded timber"
rerequisite - Healthcare NHS buildings only		Achie	eved ?	No					n/a	Only applicable to healthcare buildings
vironmental management		1	0.80%		1				Principal Contractor	Contractor's ISO 14001 PPGG - Best Practice Policies
erequisite - BREEAM AP (site)		Achie	eved ?		Yes				Principal Contractor	Sustainability Champion appointed to
	Stage 5									monitor progress against the agreed BREEAM performance targets at
REEAM AP (site)	Stage 6	1	0.80%		1				Principal Contractor	Stages 5-6
esponsible construction management		2	1.60%		2				Principal Contractor	Achieve and implement all responsible construction management measur
erequisite - Monitoring of construction site impacts		Achie	eved ?		Yes				Principal Contractor	Appointment of the responsible person for on site monitoring
ility consumption (energy and water)		1	0.80%		1				Principal Contractor	Energy and water monitoring data will be collected throughout developm
ansport of construction materials and waste		1	0.80%		1				Principal Contractor	Transport fuel consumption of construction materials and waste data will collected throughout the development.
xemplary - Responsible construction management		1	1.00%			•	1		n/a	Achieve and implement all responsible construction management measur
Aan 04 Commissioning and Handover	Credit Aim: F	Encouraging a	well-managed	d handover and co	mmissioning proc	ess, which will ensure	building services	and fabric defects	are identified and recti	fied and ensuring that the building responds to the needs of the occupants
ommissioning - testing schedule and responsibilities		1	0.80%	1					n/a	Schedule is in place for commissioning and recommissioning to appropria standards, a team member is appointed responsible for monitoring this, contractor responsible for allowing budget and time in th program to complete this
ommissioning - design and preparation	Stage 3 Stage 4	1	0.80%	1					n/a	Specialist commissioning manager appointed (Likely to be confirmed at St to contribute to design reviews, giving advice on commission ability of ser
esting and inspecting building fabric		1	0.80%		1				Principal Contractor	Air tightness testing and thermographic survey with subsequent remediat
andover		1	0.80%	1					n/a	works. Development of technical and non technical Building User Guides (BUG) a
lan 05 Aftercare	Canadia Alama			at during the first.			a sha huildina aa			training schedule for users or facilities managers.
	Credit Alm: C			in during the first y	lear of the buildin	g operation, to ensur	e the building op	erates in accordance		nt and in response to the building occupants' needs.
ftercare Support		1	0.80%	1					Project Manager	
ommissioning - implementation		1	0.80%	1					Project Manager	
ost-Occupancy Evaluation (POE)		1	0.80%	1					Project Manager	
HEALTH & WELLBEING										
ea 01 Visual comfort										ight factors and having an adequate view out and designing internal and e low for occupant control.
ontrol of glare from sunlight		1	0.70%	1	Ī			•	n/a	
aylighting		2	1.40%				2		n/a	Daylighting analysis to confirm compliance
ew Out		1	0.70%			1			AHMM	If facade glazing is > 35% depth of internal space can be > 14m Need to review N5-D and N4-B units
										External lighting illuminance levels to be designed in accordance with refe
		1	0.70%		1				Lighting Designer / Hoare Lea	CIBSE and BS standards for retail
ternal lighting levels		1	0.70%		1			1		
temal lighting levels xemplary - Daylighting xemplary - Internal and external lighting levels, zoning and		1	1.00%	_1	1			1	Hoare Lea n/a	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Lighting in each zone can be manually dimmed by occupants down to 20
temal lighting levels emplary - Daylighting emplary - Internal and external lighting levels, zoning and ntrol		1	1.00%	1 Mality by consider	1	ution early in the d	ion process on the	1	Hoare Lea n/a Hoare Lea	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Lighting in each zone can be manually dimmed by occupants down to 20 the maximum light output.
temal lighting levels emplary - Daylighting emplary - Internal and external lighting levels, zoning and ntrol	Credit Aim: F	1 1 Facilitating good	1.00% 1.00%						Hoare Lea n/a Hoare Lea	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Liphting in each zone can be manually dimmed by occupants down to 20 the maximum light output. e. managing hamful emissions from construction products by spectrying
temal lighting levels templary - Daylighting templary - Internal and external lighting levels, zoning and ntrol	Credit Aim: F	1 1 Facilitating good	1.00% 1.00% od indoor air o n tested in acc						Hoare Lea n/a Hoare Lea tegy can be put in plac	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Liphting in each zone can be manually dimmed by occupants down to 20 the maximum light output. e. managing hamful emissions from construction products by spectrying
temal lighting levels emplary - Daylighting emplary - Internal and external lighting levels, zoning and ntrol ea O2 Indoor air quality erequisite - Indoor air quality	Credit Aim: F	1 1 Facilitating goo	1.00% 1.00% od indoor air o n tested in acc	cordance with the					Hoare Lea n/a Hoare Lea tegy can be put in plac tat maintains good ind	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Liphting in each zone can be manually dimmed by occupants down to 20 the maximum light output. e, managing harmful emissions from construction products by specifying f oor air quality. Site-specific indoor air quality plan Air intakes and erhausts at least 10m of horizontal distance apart Carbon dioxide (CO) or air quality sensors specified
temal lighting levels cemplary - Daylighting cemplary - Internal and external lighting levels, zoning and ntrol ea 02 Indoor air quality erequisite - Indoor air quality ertilation	Credit Aim: F	1 1 Facilitating goo that have bee Achie	1.00% 1.00% od indoor air o n tested in acc eved ?	cordance with the					Hoare Lea n/a Hoare Lea tegy can be put in plac tat maintains good indi n/a	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Lighting in each zone can be manually dimmed by occupants down to 20 the maximum light output e. managing hamful emissions from construction products by specifying f sor air quality. Site-specific indoor air quality plan Air intakes and exhausts at least 10m of horizontal distance apart
temal lighting levels emplary - Daylighting emplary - Internal and external lighting levels, zoning and ntrol es 02 Indoor air quality erequisite - Indoor air quality intilation nissions from construction products	Credit Aim: F	1 1 Facilitating goo that have bee Achie	1.00% 1.00% od indoor air o n tested in acc eved ? 0.70%	No					Hoare Lea n/a Hoare Lea tegy can be put in plac tat maintains good ind n/a Hoare Lea	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Liphting in each zone can be manually dimmed by occupants down to 20 the maximum light output. e, managing harmful emissions from construction products by specifying f oor air quality. Site-specific indoor air quality plan Air intakes and erhausts at least 10m of horizontal distance apart Carbon dioxide (CO) or air quality sensors specified
temal lighting levels emplary - Daylighting emplary - Internal and external lighting levels, zoning and introl as 02 Indoor air quality erequisite - Indoor air quality intilation insisions from construction products st-construction indoor air quality measurement	Credit Aim: F	1 1 Facilitating good that have bee Achie 1 2	1.00% 1.00% ad indoor air o n tested in acc eved ? 0.70% 1.40%	No					Hoare Lea n/a Hoare Lea tegy can be put in plac tegy c	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Liphting in each zone can be manually dimmed by occupants down to 20 the maximum light output. e, managing harmful emissions from construction products by specifying f oor air quality. Site-specific indoor air quality plan Air intakes and erhausts at least 10m of horizontal distance apart Carbon dioxide (CO) or air quality sensors specified
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temal lighting levels emplary - Daylighting emplary - Internal and external lighting levels, zoning and ntrol es 02 Indoor air quality erequisite - Indoor air quality entilation insions from construction products sst-construction indoor air quality measurement emplary - Emissions from construction products as 03 Safe Containment in Laboratories	Credit Aim: F and products N/A to BREE. Credit Aim: T	1 1 Facilitating goo that have bee 1 2 1 1 AM New Con Chermal model	1.00% 1.00% 2d indoor air o n tested in acc eved ? 0.70% 1.40% 0.70% 1.00% struction 201 ling informs t	cordance with the a	appropriate stand	fortable thermal envi	n appropriate ver	ntilation strategy th	Hoare Lea n/a Hoare Lea tegy can be put in plac tegy can be put in	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Lighting in each zone can be manually dimmed by occupants down to 20 the maximum light output enanaging hamful emissions from construction products by specifying to cor air quality. Site-specific indoor air quality plan Air intakes and exhausts at least 10m of horizontal distance apart Carbon dioxide (CO ₄) or air quality sensors specified HVAC systems incorporate suitable filtration in line with BS EN 16798-32 N/A - no laboratories present
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ternal lighting levels teremplary - Daylighting teremplary - Internal and external lighting levels, zoning and ontrol ea 02 Indoor air quality erequisite - Indoor air quality entilation missions from construction products ost-construction indoor air quality measurement teremplary - Emissions from construction products ea 03 Safe Containment in Laboratories ea 04 Thermal Comfort mermal modelling	Credit Aim: F and products N/A to BREE. Credit Aim: T	1 1 1 facilitating good, that have been Achie 1 2 1 1 1 AM New Con Thermal model not from through a 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.00% 1.00% od indoor air o n tested in acc wed ? 0.70% 1.40% 0.70% 1.00% struction 201 ling informs ti appropriate te 0.70%	cordance with the a	appropriate stand	fortable thermal envi	n appropriate ver	ntilation strategy th	Hoare Lea n/a Hoare Lea tegy can be put in placat tegy can be put in placat tegy can be put in placat tegy can be put in placat n/a n/a n/a n/a n/a tegy control of the put of the placat tegy can be put in placat n/a n/a tegy can be put in placat tegy can be put in placat n/a n/a tegy can be put in placat tegy can be put in placat tegy can be put in placat n/a tegy can be put in placat tegy can be put in placat n/a tegy can be put in placat tegy can be put in placat n/a tegy can be put in placat tegy can be put in placat teg	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Liphting in sach zone can be manually dimmed by occupants down to 20 the maximum lipht output. e, managing hamful emissions from construction products by specifying 1 oor air quality. Site-specific indoor air quality plan Air intakes and enhausts at least 10m of horizontal distance apart Carbon dioxide (Cr) or air quality species specified HVAC systems incorporate suitable fittration in line with BS EN 16798-32 with the specific distance specified effect dimate change scenario conditions and giving occupants control or Thermal confirm modelling (compliance to CIBSE Guide A for mechanical for natural).
temal lighting levels templary - Daylighting templary - Internal and external lighting levels, zoning and introl ea 02 Indoor air quality erequisite - Indoor air quality entilation ensisions from construction products ext-construction indoor air quality measurement emplary - Emissions from construction products ea 03 Safe Containment in Laboratories ea 04 Thermal Comfort ermal modeling	Credit Aim: F and products N/A to BREE. Credit Aim: T	1 1 Facilitating goo that have bee Achie 1 2 1 1 5 AM New Con Chermal model ment through a	1.00% 1.00% od indoor air o nested in acc wed ? 0.70% 1.40% 0.70% 1.00% struction 201 ling informs tt appropriate te	cordance with the a	appropriate stand	fortable thermal envi	n appropriate ver	ntilation strategy th	Hoare Lea n/a Hoare Lea tegy can be put in placat tegy can be put in placat tegy can be put in placat tegy can be put in placat n/a n/a n/a n/a a n/a a	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Lipting in sach zone can be manually dimmed by occupants down to 20 the maximum lipit output. e, managing hamful emissions from construction products by specifying f or air quality. Site-specific indoor air quality plan Air intakes and enhausts at least 10m of horizontal distance apart Carbon dioxide (C) or air quality and horizontal distance apart Carbon dioxide (C) or air quality able fittration in line with BS EN 16798-3.2 HVAC systems incorporate suitable fittration in line with BS EN 16798-3.2 N/A - no laboratories present jetted climate change scenario conditions and giving occupants control or Thermal confort modelling (compliance to CIBSE Guide A for mechanical for natural).
ternal lighting levels templary - Daylighting templary - Internal and external lighting levels, zoning and introl ese 02 Indoor air quality erequisite - Indoor air quality entilation insisions from construction products ost-construction indoor air quality measurement templary - Emissions from construction products ese 03 Safe Containment in Laboratories ese 04 Thermal Comfort	Credit Aim: F and products N/A to BREE. Credit Aim: T	1 1 1 facilitating good, that have been Achie 1 2 1 1 1 AM New Con Thermal model not from through a 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.00% 1.00% od indoor air o n tested in acc wed ? 0.70% 1.40% 0.70% 1.00% struction 201 ling informs ti appropriate te 0.70%	cordance with the a	appropriate stand	fortable thermal envi	n appropriate ver	ntilation strategy th	Hoare Lea n/a Hoare Lea tegy can be put in placat tegy can be put in placat tegy can be put in placat tegy can be put in placat n/a n/a n/a n/a n/a tegy control of the put of the placat tegy can be put in placat n/a n/a tegy can be put in placat tegy can be put in placat n/a n/a tegy can be put in placat tegy can be put in placat tegy can be put in placat n/a tegy can be put in placat tegy can be put in placat n/a tegy can be put in placat tegy can be put in placat n/a tegy can be put in placat tegy can be put in placat teg	CIBSE and BS standards for retail Credit not targeted. Daylighting analysis to confirm compliance Lighting in each zone can be manually dimmed by occupants down to 20 the maximum light output e, managing harmful emissions from construction products by specifying f oor air quality. Site-specific indoor air quality plan Air intakes and exhausts at least 10m of horizontal distance apart Carbon dioxide (CO ₄) or air quality sensors specified HVAC systems incorporate suitable filtration in line with BS EN 16798-32 N/A - no laboratories present Jected climate change scenario conditions and giving occupants control or memal confort modelling (compliance to CIBSE Guide A for mechanical for natural).

BREEAM Credits		Available	% Score	Not	Targeted -	Additionals -				
	RIBA Stage	Credits	Value	Applicable	Baseline	Medium Risk		t Targeted	Ownership	Comments
Hea 06 Security	Credit Aim:	Designing the l	building to co	nsider and take in	to account security	r needs to ensure oc	cupants safety and well	being.		
Security of site and building	Stage 2	1	0.70%		1				Hoare Lea	Confirm appointment of security specialist. Security Needs Assessment required at Stage 2. Can be achieved through Secured by Design compliance.
Exemplary - Security of site and building		1	1.00%				1		Security Specialist	SABRE security assessment and certification scheme is followed on site
Hea 07 Safe and healthy surroundings	Credit Aim:	Providing exter	mal site areas	that are safe for o	ccupant use and e	nhancing the wellbe	ing of building users by	giving access	to an outdoor space.	
Safe access		1	0.70%		1				АНММ	Dedicated pedestrian and cyclist paths and delivery access routes.
Outside space		1	0.70%		1				АНММ	Provision of outside amenity area (landscape, seating etc.)
ENERGY										
Ene 01 Reduction of energy and CO ₂ emissions	Credit Aim:	Encouraging th	ie design of ei	nergy efficient buil	dings with energy	performance above	national building regul	ations and en	couraging the accurate	modelling of operational energy consumption
Energy performance		9	6.58%		4	2	2	1	Hoare Lea	Part L compliance energy modelling Minimum to achieve 6 credits for outstanding. 4 for Excellent, with an Energy Performance Ratio of at least 0.6/0.4 (combined improvement over notional for:
Prediction of operational energy consumption		4	2.92%	4					Hoare Lea	Heating and cooling demand, Primary energy and Total emissions) Operational energy modelling required
Exemplary - Energy performance		3	3.00%	3					n/a	Post-occupancy stage report on the actual energy consumption
Ene 02 Energy monitoring	Credit Aim:	Helping to ide	ntify and redu	ce high energy de	mands where poss	ible by accurate mea	asurement of the energ	y consumption	n of the building by en	d use.
Sub-metering of end-use categories		1	0.73%	1					n/a	Install energy metering systems so that at least 90% of the estimated annual
										energy consumption of each fuel is assigned to the end-use categories
Sub-metering of high energy load and tenancy areas		1	0.73%	1	1.4 75		ient external lighting.		n/a	Tenanted areas metered
Ene 03 External lighting	Credit Aim:	Keducing the b	iuilaing s ener	gy consumption ti	nrougn the specific	ation of energy effic	sent external lighting.			Average initial luminous efficacy of not less than 70 luminaire lumens per circuit
External lighting specification		1	0.73%		1				Hoare Lea	We age initial idminious encacy of not less than 70 iuminaire iumens per circuit. Watt and Automatic controls
Ene 04 Low Carbon Design	Credit Aim:	Reducing the b	uilding's ener	gy consumption th	nrough the adoption	on of passive design	solutions, free cooling	and low or ze	ro carbon (LZC) energy	sources.
Passive design analysis	Stage 2	1	0.73%		1				Hoare Lea	Passive design analysis received for Stage 2.
Free cooling		1	0.73%				1		Hoare Lea	Credit not targeted.
Low and zero carbon technologies	Stage 2	1	0.73%			1			Hoare Lea	LZC feasibility study received for Stage 2.
Ene 05 Energy efficient cold storage		Credit Aim	Reducing the	e building's operat	ional greenhouse	gas emissions (CO ₂ -	eq) through the design,	installation a	nd commissioning of e	nergy efficient refrigeration systems.
Refrigeration energy consumption		1	0.73%	1					N/A	No cold storage.
Indirect greenhouse gas emissions		1	0.73%	1					N/A	No cold storage.
Ene 06 Energy efficient transportation systems	Credit Aim:	Reducing the b	uilding's ener	gy consumption b	y specifying the op	otimum number and	size of energy efficient	transportatio	n systems.	
Energy consumption		1	0.73%	1					n/a	Transportation analysis and lift/escalator energy consumption analysis.
Energy efficient features		1	0.73%	1					n/a	Lift/escalator energy efficient features.
Ene 07 Energy efficient laboratory systems	Credit Aim:	Reducing the b	uilding's oper	ational greenhous	e gas emissions (C	:O2-eq) by specifying	g best practice energy e	fficient labora	tory equipment.	
Design specification	Stage 1	1	0.73%	1					Hoare Lea	RIBA stage 1 requirement
Best practice energy efficient measures		4	2.92%	4					N/A	N/A
Ene 08 Energy efficient equipment	Credit Aim:	Demonstrating	a meaningful	reduction in the t	otal unregulated e	nergy demand of th	e building by using ene	rgy efficient e	quipment.	
Energy efficient equipment		2	1.46%	2					Project Manager	
TRANSPORT										
Tra 01 Transport assessment and travel plan	Credit Aim:	Recognising de	velopments i	n proximity to goo	d public transport	networks, thereby h	elping to reduce transp	ort-related po	ollution and congestion	L.
Travel plan		2	2.42%		2				Arup	Travel plan and site-specific travel assessment/statement required during the feasibility and design stages.
Tra 02 Sustainable transport measures	Credit Aim:	Recognising de	welcoments i	close provimity o	of and accessible t	o local amenities wi	nich are likely to be freq	wently require	rd and used by building	
Prerequisite - Achieve Tra 01		Achieved ?			Yes		,,		Arup	
Transport options implementation		10	12.08%		10				Arup	
WATER										
Wat 01 Water Consumption	Credit Aim:	Reducing the d	lemand for po	table water throu	gh the provision of	f efficient sanitary fit	tings, rainwater collecti	on and water	recycling systems.	
Water consumption		5	3.33%	5					/ n/a	Use of water efficient components and Greywater/Rainwater systems
Exemplary - Water consumption		1	1.00%	1					Hoare Lea	Greywater/Rainwater meeting 75% of WC or urinal flushing demand required to
Wat 02 Water Monitoring	Credit Aim:			to allow for man	agement and mon	itoring of water use	in the building. This en	ourages redu		achieve maximum credits dentifying areas of high usage and investigating potential causes.
		1	0.67%							Metering of mains water supply with pulsed or other open protocol
Water monitoring									Hoare Lea	communication output and connected to a utility monitoring and management system.
Wat 03 Water Leak Detection	Credit Aim:	Reducing the u		ter consumption o	lue to leaks by inst	talling leak detection	systems and flow cont	rol devices.		
Leak detection system		1	0.67%		1				Hoare Lea	Leak detection system to be specified. Flow control devices to be specified to the water supply to the WCs (even if
Flow control devices		1	0.67%	1					n/a	sanitary fittings are not specified).
Wat 04 Water Efficient Equipment	Credit Aim:	Reducing wate	r consumptior	n for non-domesti	c scale, non-sanita	ry water uses by spe	cifying efficient systems	and improvir	ng the design efficiency	of any water-using processes.
Water efficient equipment		1	0.67%		1				East / Hoare Lea	Unregulated water demands to be identified and reduced.
MATERIALS										
MATERIALS Mat 01 Building Life Cycle Assessment (LCA)	Credit Aim	Reducina huild	ings' environ	nental life cycle in	pacts through con	iducting Life Cycle A	ssessment and integrat	ing its outcom	nes in the design decisi	on-making process.
	and a state of the	ing bolid				Jane Gran		9	, actign accisi	LCA analysis for the environmental impact of superstructure materials required.
Concentration .			10.000						Deep 11	
Superstructure	Stage 2	6	10.15%		6				BuroHappold	deadline.
Superstructure Substructure and hard landscaping options appraisal	Stage 2 Stage 2	6	10.15%		6				BuroHappold BuroHappold	LCA analysis for the environmental impact of substructure and landscaping materials required. Has to be completed and uploaded onto the BREEAM portal
			10.15%	1	6					deadline. LCA analysis for the environmental impact of substructure and landscaping
Substructure and hard landscaping options appraisal		1		1	6		1		BuroHappold	deadline. LCA analysis for the environmental impact of substructure and landscaping materials required. Has to be completed and uploaded onto the BREEAM portal before the Stage 2 deadline.
Substructure and hard landscaping options appraisal Exemplary - Core building services		1	1.00%	1	6		1		BuroHappold n/a	deadline. LCA marks for the environmental impact of substructure and landscaping materials required. Has to be completed and uploaded onto the BREEAM portal before the Stage 2 deadline. Credit not targeted unless all credits above required to be achieved first. Alignment of the design options within the LCA analyses with LCC analyses in

BREEAM Credits	RIBA Stage	Available Credits	% Score Value	Not	Targeted - Baseline	Additionals - Medium Risk	Unlikely	Not Targeted	Ownership	Comments
Mat 02 Environment Product Declarations (EPD)	Credit Aim: 1						on products by rev	warding the specif	ication of products with	environmental products declarations.
Specification of products with a recognised environmental		1	1.69%				1		n/a	Materials with EPDs to be specified, achieving at least 20 EPD points using the
product declaration (EPD)										BREEAM tool.
Mat 03 Responsible sourcing of materials	Credit Aim: F	Recognising an	d encouraging	g responsible sour	cing of construction	on products. This incl	udes the source of	products and the	intermediary companie	is processing and transporting the product to site.
Prerequisite - Legally harvested and traded timber		Achie	wed ?		Yes				Principal Contractor	To be included in contractor requirements.
Enabling sustainable procurement	Stage 2	1	1.69%		1				Project Manager	Sustainable procurement plan required at Stage 2 and required to be used by the design team in specifying materials
									AHMM / Landsec /	Design team/contractor to specify and source materials with responsible
Measuring responsible sourcing		3	5.08%		2		1		Principle Contractor	sourcing certification (i.e. BES 6001, FSC) for the Superstructure, Internal finishes, Substructure and hard landscaping
Exemplary - Measuring responsible sourcing		1	1.69%	1					n/a	Credit not targeted. Requires all core building services to be BES 6001 or equivalent
Mat 04 Insulation	N/A to BREE	AM New Con	struction 201	8						
Mat 05 Designing for durability and resilience	Credit Aim:	ncreasing the l	ifespan of the	building through	designing for dur	ability and protection	from degradation	n and specifying a	ppropriate construction	products.
Protecting vulnerable parts of the building from damage		1	1.69%		1				АНММ	Protection measures within the design to reduce damage to the building's fabric or materials
Protecting exposed parts of the building from material degradation			1.09%						АНММ	Elements designed to limit degradation due to environmental factors.
Mat 06 Material Efficiency	Credit Aim: E	Encouraging th	e reduction of	environmental in	npacts through op	timising the use of m	aterials during all	stages of the proj	ect.	
Material Efficiency	Stages 1-6	1	1.69%		1				ALL	Report on opportunities and methods to optimise the use of materials
WASTE										
Wst 01 Construction waste management	Credit Aim:	mproving reso	urce efficiency	through develop	ing a pre-demolit	on audit and a Resou	irce Management	Plan, maximising	the recovery of material	during demolition and diverting non-hazardous waste from landfill.
Pre-demolition audit	Stage 2	1	0.80%			1			n/a	Pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition
Construction resource efficiency		3	2.40%		1	1		1	Principal Contractor	Waste reduction to be included in contractor requirements. ≤ 11.1 - 6.5 Tonnes of waste generated per 100m ² GIA
Diversion of resources from landfill		1	0.80%		1				Principal Contractor	Diversion from landfill to be included in contractor requirements.
Exemplary - Construction resource efficiency and diversion from landfill		1	1.00%					1	n/a	Credit not targeted. ≤ 1.9 Tonnes of waste generated per 100m² GIA
Simple Buildings - Pre-demolition audit	Stage 2	1		1					N/A	N/A - not a simple building
Simple buildings - Construction resource efficiency		1		1						
Simple Buildings - RMP Measurements and Reporting		2		2					N/A	N/A - not a simple building
Simple buildings - Diversion from landfill		1		1						
Simple Buildings - Exemplary Level Criteria		1		1					N/A	N/A - not a simple building
Wst 02 Recycled and sustainably sourced aggregates	Credit Aim: E	Encouraging th	e use of recycl	led or secondary a	aggregate or aggr	egate types with low	er environmental i	mpact to reduce v	vaste and optimise mat	erial efficiency.
Prerequisite - Pre-demolition audit		Achie	wed ?				No		n/a	as above for Wst 01
Project sustainable aggregate points		1	0.80%				1		Pell Frischmann	Evaluation of aggregate types/suppliers to determine travel distances and number of points achievable Sourcing aggregates from recycled/secondary and local sources, to achieve
Exemplary - Project sustainable aggregate points		1	1.00%				1		Pell Frischmann	Project Sustainable Aggregate Points score meets or exceeds the exemplary level Performa (6)
Wst 03 Operational waste	Credit Aim: E	Encouraging th	e diversion of	operational waste	e form landfill thro	ugh the provision of	space and facilitie	s allowing the seg	regation and storage o	f recyclable waste.
Operational Waste		1	0.80%		1				АНММ	Operational recyclable and general waste requirements of building to be provided by waste consultant and included in design by Architect.
Wst 04 Speculative finishes	Credit Aim: 1	lo encourage t	he specificatio	n and fitting of fl	oor and ceiling fin	shes selected by the	building occupant	and therefore ave	oid unnecessary waste o	of materials.
Speculative floor and ceiling finishes		1	0.80%	1					Project Manager / F+P	TBC if finishes are provided and for what area
Wst 05 Adaptation to climate change	Credit Aim: 1	lo encourage t	he specificatio	in and fitting of fl	oor and ceiling fin	shes selected by the	building occupant	and therefore av	oid unnecessary waste o	f materials.
Resilience of structure, fabric, building services and renewables									AHMM / Hoare Lea	Conduct a climate change adaptation strategy appraisal, develop
installation	Stage 2	1	0.80%		1					recommendations and implement into the design
Exemplary - Responding to climate change		1	1.00%	1					n/a	Dependant of Hea04, Ene01 (6 credits), Ene04, Wat01 (3 credits), Mat05, Pol03 (3 credits).
Wst 06 Design for disassembly and adaptability	Credit Aim: 1	lo encourage t	he specificatio	n and fitting of fl	oor and ceiling fin	shes selected by the	building occupant	and therefore av	oid unnecessary waste o	of materials.
Design for disassembly and functional adaptability - recommendations	Stage 2	1	0.80%		1				AHMM / Hoare Lea / Pell Frischmann	Functional adaptability strategy required at Stage 2 looking at feasibility, accessibility, versatility, adaptability, convertibility, expandability, refurbishment
Design for disassembly and functional adaptability -										potential Adaptability and disassembly guide communicating the implementation of the
implementation	Stage 4	1	0.80%		1					strategy required at Stage 4
LAND USE AND ECOLOGY										
LE 01 Site selection	Credit Aim: F	Recognising th	e reuse of prev	viously developed	and contaminate	d land where approp	iate remediation I	nas taken place.		
Previously occupied land		1	1.46%		1				АНММ	Evidence (drawings and reports) showing at least 75% of the site is on previously occupied land.
Contaminated land		1	1.46%				1		Landsec	Site investigation report for land contamination required along with remediation measures for the principal contractor.
LE 02 Identifying and understanding the risks and opportunities for the project	Credit Aim:	dentifying and	understandin	g the ecological ri	isks and opportun	ties associated with t	he site to inform t	he determination	of the strategic outcom	
Prerequisite - Assessment route selection		Achie	ved ?		Yes					Assuming route 2 for assessment (more detailed) as assumed that there will be
Survey and evaluation	Sharen a		1.46%						Principal Contractor Pell Frischmann	some statutory requirements and regulations for the site ecology Survey and evaluation by ecologist required at Stage 1 but could happen later it
Survey and evaluation	Stage 1	1	1.46%		<u> </u>				Pell Frischmann	credit aim is met.
Determining the ecological outcomes for the site		1	1.46%		1				Pell Frischmann	Project team liaison with stakeholders (local government, local community groups at Stage 2 to identify and consider the ecological outcome of the site
Exemplary - Determining ecological outcomes for the site		1	1.46%			1			n/a	Credit not targeted.
LE 03 Managing negative impacts on ecology	Credit Aim: F	Recognition of	steps taken to	avoid impacts or	n existing site ecol	ogy as far as possible				
Prerequisite – Identification and understanding the risks and opportunities for the site		Achie	wed ?		Yes				Pell Frischmann / Principal Contractor	Contractor to confirm compliance is monitoring against relevant UK and EU legislation
Planning, liaison, implementation and data	Stage 2	1	1.46%		1				Pell Frischmann / EAST / Principal	Define and allocate roles and responsibilities at Stage 2 to support and
	-Stage 2								Contractor	implement measures Impacts from site preparation and construction:
Managing negative impacts of the project		2	2.92%		2				Pell Frischmann / Principal Contractor	2 credits if no ecological loss 1 credit if loss has been limited as far as possible
LE 04 Change and enhancement of ecological value	Credit Aim: F	Recognition of	steps taken to	enhance site eco	logy.					

BREEAM Credits	RIBA Stage	Available Credits	% Score Value	Not Applicable	Targeted - Baseline	Additionals - Medium Risk	Unlikely	Not Targeted	Ownership	Comments
Prerequisite - Identifying and understanding the risks and opportunities for the project		Achie	wed ?		Yes				Ecologist / East	Contractor confirms compliance is monitoring against relevant UK and EU legislation and achieve LE 03 credit 1
Liaison, implementation and data collation		1	1.46%		1				Ecologist / East	Implementation of measures for ecological enhancement, first on site and then if not possible, off site.
Enhancement of ecology		3	4.38%		3				Ecologist / East	Credits awarded based on the calculation of the change in ecological value
Exemplary - Change in ecological value		1	1.46%						n/a	Credit not targeted. Significant net gain of ecological value (percentage score of 110 or above
LE 05 Long term ecology management and maintenance	Credit Aim: I	Encouraging th	e long term m	aintenance and m	anagement of eco	ology on site to ensu	e both new and e	xisting ecological	features continue to th	rive.
Prerequisite - Roles and responsibilities, implementation, statutory obligations		Achie	wed ?		Yes				Pell Frischmann	Contractor confirms compliance is monitoring against relevant UK and EU legislation and achieve LE 04 credit 1
Planning, liaison, data, monitoring and review management and maintenance		1	1.46%		1				Pell Frischmann	Project team liaison with stakeholder for monitoring. Reviewing and maintenance of measures and inclusion of Ecology and Biodiversity in the building owner information supplied
Landscape and ecology management plan (or similar) development		1	1.46%		1				East / Pell Frischmann	Provision of a compliant landscape and ecology management plan.
POLLUTION										
Pol 01 Impact of refrigerants	Credit Aim:	Rewarding buil	dings that red	uce the impact of	refrigerant gas en	nissions.				
Prerequisite - Ammonia refrigerants		Achie	wed ?	Yes					n/a	Prerequisite electric compressors meet BS EN 378:2016 and if ammonia refrigerants are present they comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice
Impact of refrigerant		2	2.00%	2					n/a	Feasibility of direct effect life cycle CO2 emissions from refrigerants to be assessed by MEP
Leak detection		1	1.00%	1					n/a	Compliant refrigerant leak detection system to be specified.
Pol 02 Local air quality	Credit Aim: I	Recognising bu	ildings which l	imit their impact (on local air quality	, by consideration of	the combustion p	plant and fuel used	l on site.	
Local air quality		2	2.00%	2					n/a	MEP to assess feasibility based on local systems NOX and PM emission rates (based on the worst performing system).
Pol 03 Flood and surface water management	Credit Aim:	Rewarding buil	dings and thei	r sites that limit o	n-site and off-site	local flooding and h	ence the damage	this can cause.		
Prerequisite - Appropriate consultant		Achie	ved ?		Yes				Pell Frischmann	Appointment of a suitably qualified professional to carry out a flood risk assessment
Flood Resilience		2	2.00%		2				Pell Frischmann	
Prerequisite - Surface water run-off		Achie	wed ?		Yes				Pell Frischmann	Appointment of a suitably qualified professional to carry out drainage and surface water runoff calculations
Surface water run-off - Rate		1	1.00%		1				Pell Frischmann	30% improvement in peak rate runoff post-development
Surface water run-off - Volume		1	1.00%			1			Pell Frischmann	No increase in volume runoff post-development or limiting peak rate runoff to 1- year rate, Qbar or 2l/s/ha
Minimising watercourse pollution		1	1.00%				1		SuDS/Runoff Consultant	Credit not targeted. No discharge for rainfall up to 5mm and design of SuDS for watercourse pollution prevention
Simple Buildings - Surface water run-off (credit 1)		1	1.00%	1					n/a	N/A - not a simple building
Simple Buildings - Surface water run-off (credit 2)		1	1.00%	1					n/a	N/A - not a simple building
Pol 04 Reduction of night time light pollution	Credit Aim:	Avoiding or rec	ucing the imp	act of night time l	ignt pollution, thr	ough careful design a	ind specification (or light sources.		Sutremal Enhine sutrematically quiteb of 2200 200 and more U.D.
Reduction of night time light pollution		1	1.00%		1				Hoare Lea	External lighting automatically switch off 23:00-7:00 and meets ILP guidance requirements.
Pol 05 Reduction of noise pollution	Credit Aim:	Avoiding or rec	lucing the imp	act of external no	ise from the buildi	ng.				
Reduction of noise pollution		1	1.00%						n/a / n/a	Testing pre and post-completion. Noise levels at sensitive receptors within 800m to be at least 5dB lower than background noise through day and night.
INNOVATION										
Inn 01 Innovation		Credit Aim:	To support in	novation within th	e construction inc	lustry through the re	cognition of susta	inability related b	enefits which are not re	warded by standard BREEAM issues.
Exemplary level of performance in existing BREEAM issues		10	10.00%	7		2	5	3	See Relevant Issues Above	Methodology section of the relevant BREEAM issues above.
Approved Innovations									Assessor	Innovation applications can be submitted to BRE Global by a licensed BREEAM Assessor using the formal Approved Innovation Application Form