

BREEAM NC 2018 ASSESSMENT TRACKER

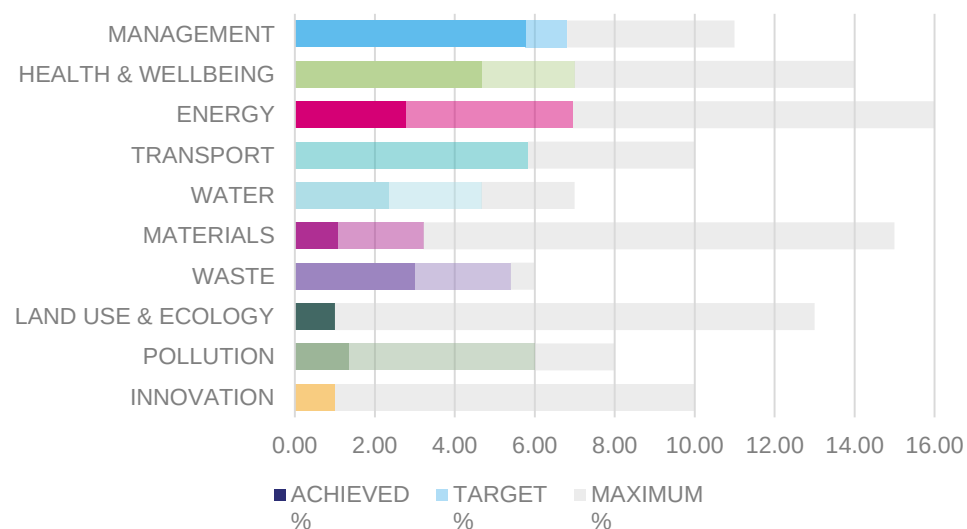
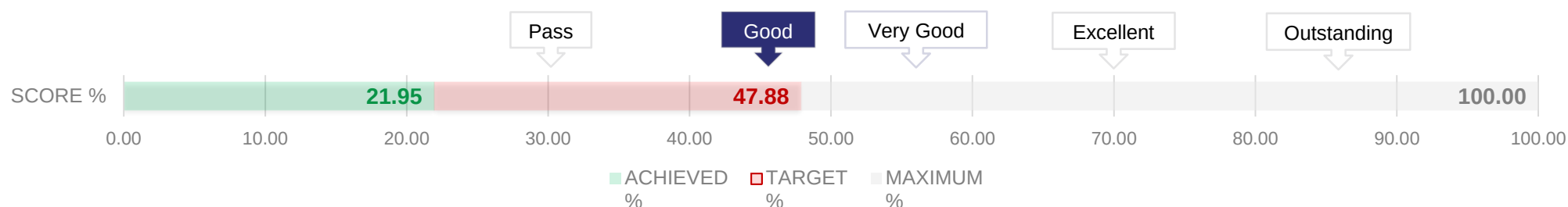
KENDRICK SCHOOL

AUG 2020 REV H

This report tracks the development's progress toward achieving a BREEAM 2018 New Construction rating of **Good**.

This requires an overall score of **45%** to be achieved in addition to the mandatory criteria.

The development is being assessed under **Education - Fully Fitted**.



BREEAM NC 2018 ASSESSMENT SUMMARY

MANAGEMENT		AVAILABLE	TARGET	ACHIEVED
Man 01	Project Brief & Design	4	0	0
Man 02	Life Cycle Cost & Service Life Planning	4	1	1
Man 03	Responsible Construction Practices	6	5	4
Man 04	Commissioning & Handover	4	4	4
Man 05	Aftercare	3	3	2
Section Total		21	13	11
Section Score %		11.00	6.81	5.76
Single Credit Value %			0.52	

HEALTH AND WELLBEING		AVAILABLE	TARGET	ACHIEVED
Hea 01	Visual Comfort	5	2	0
Hea 02	Indoor Air Quality	4	2	2
Hea 04	Thermal Comfort	3	3	2
Hea 05	Acoustic Performance	3	0	0
Hea 06	Security	1	0	0
Hea 07	Safe & Healthy Surroundings	2	2	2
Section Total		18	9	6
Section Score %		14.00	7.00	4.67
Single Credit Value %			0.78	

ENERGY		AVAILABLE	TARGET	ACHIEVED
Ene 01	Reduction of Energy Use & Carbon Emissions	13	2	2
Ene 02	Energy Monitoring	2	1	0
Ene 03	External Lighting	1	1	0
Ene 04	Low Carbon Design	3	2	2
Ene 06	Energy Efficient Transportation Systems	2	2	0
Ene 08	Energy Efficient Equipment	2	2	0
Section Total		23	10	4
Section Score %		16.00	6.96	2.78
Single Credit Value %			0.70	

TRANSPORT		AVAILABLE	TARGET	ACHIEVED
Tra 01	Transport Assessment & Travel Plan	2	2	0
Tra 02	Sustainable Transport Measures	10	5	0
Section Total		12	7	0
Section Score %		10.00	5.83	0.00
Single Credit Value %			0.83	

WATER		AVAILABLE	TARGET	ACHIEVED
Wat 01	Water Consumption	5	3	0
Wat 02	Water Monitoring	1	1	1
Wat 03	Water Leak Detection & Prevention	2	1	1
Wat 04	Water Efficient Equipment	1	1	1
Section Total		9	6	3
Section Score %		7.00	4.67	2.33
Single Credit Value %			0.78	

MATERIALS		AVAILABLE	TARGET	ACHIEVED
Mat 01	Building Life Cycle Assessment	7	0	0
Mat 02	Environmental Product Declarations	1	0	0
Mat 03	Responsible Sourcing of Construction Products	4	2	1
Mat 05	Designing for Durability & Resilience	1	1	0
Mat 06	Material Efficiency	1	0	0
Section Total		14	3	1
Section Score %		15.00	3.21	1.07
Single Credit Value %			1.07	

WASTE		AVAILABLE	TARGET	ACHIEVED
Wst 01	Construction Waste Management	5	5	4
Wst 02	Use of Recycled & Sustainably Sourced Aggregates	1	0	0
Wst 03	Operational Waste	1	1	1
Wst 05	Adaptation to Climate Change	1	1	0
Wst 06	Functional Adaptability	2	2	0
Section Total		10	9	5
Section Score %		6.00	5.40	3.00
Single Credit Value %			0.60	

LAND USE AND ECOLOGY		AVAILABLE	TARGET	ACHIEVED
Le 01	Site Selection	2	1	1
Le 02	Identifying & Understanding the Risks & Opportunities for the Project	2	0	0
Le 03	Managing Negative Impacts on Ecology	3	0	0
Le 04	Change & Enhancement of Ecological Value	4	0	0
Le 05	Long Term Ecology Management & Maintenance	2	0	0
Section Total		13	1	1
Section Score %		13.00	1.00	1.00
Single Credit Value %			1.00	

POLLUTION		AVAILABLE	TARGET	ACHIEVED
Pol 01	Impact of Refrigerants	3	1	0
Pol 02	Local Air Quality	2	2	2
Pol 03	Flood & Surface Water Management	5	4	0
Pol 04	Reduction of Night Time Light Pollution	1	1	0
Pol 05	Reduction of Noise Pollution	1	1	0
Section Total		12	9	2
Section Score %		8.00	6.00	1.33
Single Credit Value %			0.67	

INNOVATION		AVAILABLE	TARGET	ACHIEVED
Exemplary Performance		10	1	0
Section Total		10	1	0
Section Score %		10.00	1.00	0.00
Single Credit Value %			1.00	

TARGET SCORE %		47.88
TARGET RATING		GOOD

ACHIEVED SCORE %		21.95
ACHIEVED RATING		UNCLASSIFIED

Mandatory credits required are written in red.

P indicates pre-requisite criteria, required to achieve other credits.

There are several credits which have time limitations. The optimum timeframe for each credit is demarked using the RIBA Plan of Work 2013.



MANAGEMENT				🕒 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Man 01	Project Brief & Design	Project Delivery Planning Define key roles, responsibilities & contributions for each key phase of the project.		Design Team	1	0	0	Performance spec received from DG. Credit not achievable.
		Stakeholder Consultation (Interested Parties) Consult all interested parties & demonstrate their contributions including how their feedback has influenced the design.		Design Team	1	0	0	
		Formally Agree Strategic Performance Targets		Design Team	P	0	0	
		BREEAM Advisory Professional (Concept Design) Appoint a BREEAM AP to work with the design team to establish targets, monitor progress & identify project risks.		Design Team	1	0	0	
		BREEAM Advisory Professional (Developed Design) The BREEAM AP should review progress and assist in maximising the project's overall performance.		Design Team	1	0	0	
Man 02	Life Cycle Cost & Service Life Planning	Elemental Life Cycle Cost Undertake an entire asset LCC plan.		Specialist	2	0	0	
		Component Level LCC Options Appraisal Undertake a component level LCC options appraisal.		Specialist	1	0	0	
		Capital Cost Reporting Report the project cost in £ per square meter of gross internal area.		Darwin Group	1	1	1	Letter received.
Man 03	Responsible Construction Practices	Legally Harvested & Traded Timber All site timber & timber-based products are legally harvested & traded timber.		Darwin Group	P	P	P	Letter received.
		Environmental Management All parties who manage the construction site operate an Environmental Management System.		Darwin Group	1	1	0	ISO 14001 cert received.
		Formally Agree Strategic Performance Targets		Darwin Group	P	P	0	
		BREEAM Advisory Professional (Site) Appoint a BREEAM AP to work with the project team to establish targets, monitor progress & identify project risks.		Darwin Group	1	1	1	Letter received.
		Responsible Construction Management The principal contractor evaluates the risks (on-site & off site), plans & implements actions to minimise the identified risks.		Darwin Group	2	2	2	Letter received. Marked up GN33 received.
		Utility Consumption Set targets for site energy & water consumption, monitor & record data.		Darwin Group	1	1	1	Targets received.
		Transportation of Construction Materials & Waste Set targets for transportation of materials to site & waste from site, monitor & record data.		Darwin Group	1	0	0	
Man 04	Commissioning & Handover	Commissioning – Testing Schedule & Responsibilities Commission all building services.		M&E- Contractors	1	1	1	Commissioning programme received.
		Commissioning – Design & Preparation Appoint a commissioning manager for building services.		Darwin Group	1	1	1	Mechanical & electrical commissioning schedules received from McConnells.
		Testing & Inspection Building Fabric Undertake an air tightness test & thermographic survey & rectify any defects.		Darwin Group	1	1	1	Letter received.
		Handover Produce a technical & a non-technical building user guide & training schedule.		Darwin Group	1	1	1	Letter received.
Man 05	Aftercare	Aftercare Support Provide aftercare support to the building occupiers.		Darwin Group	1	1	1	Letter received.
		Commissioning – Implementation Undertake seasonal commissioning over 12 months following occupation.		Darwin Group	1	1	1	Letter received.
		Post-Occupancy Evaluation Undertake building satisfaction surveys & performance analysis.		Kendrick School / Darwin Group	1	1	0	
Section Total					21	13	11	
Section Score %					11.00	6.81	5.76	

Single Credit Value % | 0.52 |

HEALTH AND WELLBEING				🕒 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Hea 01	Visual Comfort	Control of Glare from Sunlight Undertake a glare control assessment & specify suitable glare control measures.		Darwin Group Architect	1	1	0	
		Daylighting Undertake daylighting calculations.		Mechanical Contractor	2	0	0	Credit not achievable.
		View Out Maximise view out through layout and window design.		Darwin Group Architect	1	0	0	Credit not achievable.
		Internal & External Lighting Levels, Zoning & Controls Specify efficient lighting & design for occupant wellbeing using zones and controls.		Electrical Contractor	1	1	0	ESC drawings. ESC spec.
Hea 02	Indoor Air Quality	Indoor Air Quality Plan Produce a plan to establish measures to improve indoor air quality.		ESC	P	P	P	IAQP received.
		Ventilation Design the ventilation system to minimise the indoor concentration & recirculation of pollutants in the building.		Mechanical Contractor	1	0	0	Potential - ESC to review.
		Emissions from Construction Products Specify products with low contents of VOCs, formaldehyde & carcinogens.		Darwin Group Architect	2	2	2	Letter received.
		Post-Construction Indoor Air Quality Measurement Test the levels of VOCs, formaldehyde & carcinogens pre-occupation.		Main Contractor	1	0	0	
Hea 04	Thermal Comfort	Thermal Modelling Undertake a thermal comfort assessment to minimise the risk of overheating.		ESC	1	1	1	Thermal comfort report received.
		Design for Future Thermal Comfort Analyse the buildings thermal performance under a climate change scenario.		ESC	1	1	1	Thermal comfort report received.
		Thermal Zoning & Controls Design heating & cooling systems for occupant wellbeing using zones and controls.		Mechanical Contractor	1	1	0	ESC spec.
Hea 05	Acoustic Performance	Sound Insulation The building meets the appropriate acoustic performance standards & testing requirements.		Acoustician	1	0	0	
		Indoor Ambient Noise Level The building meets the appropriate acoustic performance standards & testing requirements.		Acoustician	1	0	0	
		Room Acoustics The building meets the appropriate acoustic performance standards & testing requirements.		Acoustician	1	0	0	
Hea 06	Security	Security of Site & Building Appoint a specialist to undertake a Security Needs Assessment & implement the recommended security measures.		Specialist	1	0	0	Potential - Consultation with SQSS required.
Hea 07	Safe & Healthy Surroundings	Safe Access Design the site to allow safe access for all building users.		Darwin Group Architect	1	1	1	Marked up drawing received.
		Outdoor Space Provide a suitable outdoor space for building users.		Darwin Group Architect	1	1	1	Marked up drawing received.
Section Total					18	9	6	
Section Score %					14.00	7.00	4.67	
Single Credit Value %					0.78			

ENERGY			 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Ene 01	Reduction of Energy Use & Carbon Emissions	Energy Performance Calculate an Energy Performance Ratio for New Construction (EPR-NC).	 McConnell's	9	2	2	BRUKL within McConnell's thermal comfort report achieves 2 credits.
			 Design Team	4	0	0	
Ene 02	Energy Monitoring	Sub-Metering of End-Use Categories Sub-meter 90% of end energy uses & install an energy monitoring & management system.	 M&E Contractors	1	1	0	ESC drawings. ESC spec.
		Sub-Metering of High Energy Load & Tenancy Areas Sub-meter different function areas or tenancy areas.	 M&E Contractors	1	0	0	Credit not achievable.
Ene 03	External Lighting	External Lighting Install energy efficient external light fittings & controls.	 Electrical Contractor	1	1	0	Letter received from McConnell's.
Ene 04	Low Carbon Design	Passive Design Analysis Undertake an analysis of passive design measures to reduce energy use.	 ESC	1	1	1	Thermal comfort report received. PDA received.
		Free Cooling Undertake a free cooling analysis & implement a free cooling solution.	 ESC	1	0	0	
		Low & Zero Carbon Technologies Undertake a review of all available LZC technologies & achieve a significant reduction in carbon emissions.	 ESC	1	1	1	LZC received.
Ene 06	Energy Efficient Transportation Systems	Energy Consumption Analyse the transportation demand & usage patterns for the building & calculate the energy consumption.	 Darwin Group	1	1	0	
		Energy Efficient Features - Lifts Specify a lift with energy efficient features.	 Darwin Group	1	1	0	
Ene 08	Energy Efficient Equipment	Unregulated Energy Reduction Demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building.	 Kendrick School	2	2	0	
Section Total				23	10	4	
Section Score %				16.00	6.96	2.78	
Single Credit Value %				0.70			

TRANSPORT				RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Tra 01	Transport Assessment & Travel Plan	Travel Plan Undertake a site-specific travel assessment & travel plan.		Transport Consultant	2	2	0	Transport Assessment received.
Tra 02	Sustainable Transport Measures	Transport Options Implementation Implement sustainable transport measures.		Design Team	10	5	0	Amenities, cycle storage, cyclist facilities (exisitng), car share, outdoor space, EVC
Section Total					12	7	0	
Section Score %					10.00	5.83	0.00	
Single Credit Value %					0.83			

WATER				RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Wat 01	Water Consumption	Reduction in Potable Water Use Assess the efficiency of the domestic water-consuming components & demonstrate a reduction in potable water use.		Mechanical Contractor	5	3	0	ESC spec. Domestic water drawing received from McConnells. Letter received from McConnells.
Wat 02	Water Monitoring	Water Monitoring Specify a pulsed output water meter on the mains water supply to each building.		Mechanical Contractor	1	1	1	ESC spec. Domestic water drawing & domestic water services schematic received from McConnells.
Wat 03	Water Leak Detection & Prevention	Leak Detection System Install a leak detection system capable of detecting a major water leak within the building & between the building & utilities meter.		Mechanical Contractor	1	0	0	Credit not achievable.
		Flow Control Devices Install flow control devices that regulate the water supply to each sanitary facility to reduce water wastage from leaks.		Mechanical Contractor	1	1	1	ESC spec. Domestic water drawing & domestic water services schematic received from McConnells.
Wat 04	Water Efficient Equipment	Unregulated Water Reduction Implement systems or processes to reduce the unregulated water demand.		Mechanical Contractor	1	1	1	ESC spec.
Section Total					9	6	3	
Section Score %					7.00	4.67	2.33	
Single Credit Value %					0.78			

MATERIALS			 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Mat 01	Building Life Cycle Assessment	Superstructure Carry out an LCA on the building's superstructure & an options appraisal.	 Design Team	6	0	0	
		Substructure & Hard Landscaping Options Appraisal Carry out a LCA options appraisal for the substructure & hard landscaping.	 Design Team	1	0	0	
Mat 02	Environmental Product Declarations	Specification of Products with a Recognised EPD Use materials certified with an Environmental Product Declaration.	 Darwin Group	1	0	0	
Mat 03	Responsible Sourcing of Construction Products	Legally Harvested & Traded Timber All construction timber & timber-based products are legally harvested & traded timber.	 Darwin Group	P	P	P	Letter & certificates received.
		Enabling Sustainable Procurement A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products.	 Design Team	1	1	0	Letter receivd. Plan received from Main Contractor. Early design team plan required.
		Measuring Responsible Sourcing Use materials with a certified supply chain process.	 Darwin Group	3	1	1	Letter received.
Mat 05	Designing for Durability & Resilience	Protect Vulnerable & Exposed Elements from Damage & Degradation Incorporate protection measures to reduce damage to the building's fabric or materials & design building elements to limit long and short term degradation due to environmental factors.	 Darwin Group Architect	1	1	0	Roof plan drawing received showing roof access. Letter received summarising roof design. Schedule received. Drawings received - statement required.
Mat 06	Material Efficiency	Minimise Environmental Impact of Materials Set targets and report on opportunities and methods to optimise the use of materials.	 Design Team	1	0	0	
Section Total				14	3	1	
Section Score %				15.00	3.21	1.07	
Single Credit Value %				1.07			

WASTE			 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS	
Wst 01	Construction Waste Management	Pre-Demolition Audit Produce a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.		Demolition Contractor	1	1	0	
		Construction Resource Efficiency Produce a compliant Resource Management Plan & meet the waste benchmarks.		Darwin Group	3	3	3	Letter received.
		Diversion of Resources from Landfill Meet the diversion from landfill benchmarks & sort waste into key waste groups.		Darwin Group	1	1	1	
Wst 02	Use of Recycled & Sustainably Sourced Aggregates	Project Sustainable Aggregate Points Identify all aggregate uses & types on the project & use sustainable aggregate.		Darwin Group	1	0	0	
Wst 03	Operational Waste	Operational Waste Provide a dedicated space for the segregation and storage of operational recyclable waste generated.		Darwin Group- Architect	1	1	1	Letter received. Bin store location drawing received. Bin store size drawing recieved & email confirming area.
Wst 05	Adaptation to Climate Change	Resilience of Structure, Fabric, Building Services & Renewables Installation Conduct a climate change adaptation strategy appraisal.		Design Team	1	1	0	
Wst 06	Functional Adaptability	Design for Disassembly & Functional Adaptability - Recommendations Conduct a study to explore the ease of disassembly & the functional adaptation potential of different design scenarios.		Design Team	1	1	0	
		Design for Disassembly & Functional Adaptability - Implementation Implement solutions where practical & justify any omissions.		Design Team	1	1	0	
Section Total					10	9	5	
Section Score %					6.00	5.40	3.00	
Single Credit Value %					0.60			

LAND USE AND ECOLOGY			 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS		
Le 01	Site Selection	Previously Occupied Land At least 75% of the proposed development's footprint is on an area of land which has previously been occupied.		Darwin Group Architect	1	1	1	Marked up drawing received.	
		Contaminated Land Where contaminated, land is remediated.		Specialist	1	0	0		
Le 02	Identifying & Understanding the Risks & Opportunities for the Project	Assessment Route Selection Appoint an Ecologist where required & comply with all relevant UK & EU legislation.		Design Team	P	0	0		
		Survey & Evaluation An SQE undertakes a survey & evaluation to determine the ecological baseline.		Ecologist	1	0	0		
		Determining the Ecological Outcomes for the Site The optimal ecological outcome for the site is selected using the hierarchy of action.		Ecologist	1	0	0		
		Le 02 - Identification & Understanding the Risks & Opportunities of the Site		Design Team	P	0	0		
Le 03	Managing Negative Impacts on Ecology	Planning, Liaison, Implementation & Data The potential impact of site preparation & construction works on ecology are identified.		Design Team	1	0	0		
		Managing Negative Impacts of the Project Negative impacts are managed to reduce loss of ecological value.		Ecologist	2	0	0		
		Le 03 - Managing Negative Impacts on Ecology		Design Team	P	0	0		
Le 04	Change & Enhancement of Ecological Value	Liaison, Implementation & Data Collection Implement ecological enhancement measures either on or off site.		Design Team	1	0	0		
		Enhancement of Ecology Calculation of the site's final ecological value.		Ecologist	3	0	0		
		Roles & Responsibilities, Implementation, Statutory Obligations Le 03 is achieved & at least one Le 04 Enhancement of Ecology credit is achieved.		Design Team	P	0	0		
Le 05	Long Term Ecology Management & Maintenance	Planning, Liaison, Data, Monitoring & Review Management & Maintenance Develop & review management & maintenance solutions, actions or measures.		Design Team	1	0	0		
		Landscape & Ecology Management Plan Development Produce a landscape & ecology management plan.		Ecologist	1	0	0		
		Section Total			13	1	1		
			Section Score %			13.00	1.00	1.00	
			Single Credit Value %			1.00			

POLLUTION			🕒 RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Pol 01	Impact of Refrigerants	Pre-Requisite - BS EN 378:2018 All systems with electric compressors comply with the requirements of BS EN 378:2016.	🟢 Mechanical Contractor	P	P	P	ESC spec.
		Impact of Refrigerants Specify a refrigerant-free system or calculate the direct effect life cycle CO ₂ equivalent emissions for refrigerant-using systems.	🟢 Mechanical Contractor	2	1	0	ESC drawings. ESC spec.
		Leak Detection Install a refrigerant leak detection system.	🟢 Mechanical Contractor	1	0	0	
Pol 02	Local Air Quality	NOx, PPM, VOC Emissions All heating & hot water is supplied by non-combustion systems or low pollutant systems.	🟢 Mechanical Contractor	2	2	2	ESC drawings - electric panel and water heaters. ESC spec. Letter received.
Pol 03	Flood & Surface Water Management	Appropriate Consultant	🟡 Civil Engineer	P	P	0	
		Flood Resilience Produce a flood risk assessment that considers all sources of flooding.	🟡 Civil Engineer	2	2	0	
		Bespoke Surface Water Run-Off Design Solutions	🟢 Civil Engineer	P	P	0	
		Surface Water Run-Off - Rate Reduce the peak rate of run-off from the site.	🟢 Civil Engineer	1	1	0	
		Surface Water Run-Off - Volume Reduce the volume of run-off from the site.	🟢 Civil Engineer	1	1	0	
		Minimise Watercourse Pollution Prevent discharge leaving the site & minimise pollution risk using SuDS.	🟢 Civil Engineer	1	0	0	
Pol 04	Reduction of Night Time Light Pollution	Reduction of Night Time Light Pollution Control external lighting and light spill.	🟢 Electrical Contractor	1	1	0	Letter received from McConnells.
Pol 05	Reduction of Noise Pollution	Reduction of Noise Pollution Mitigate external background noise levels.	🟡 Acoustician	1	1	0	Survey to be updated to account for VRF.
Section Total				12	9	2	
Section Score %				8.00	6.00	1.33	
Single Credit Value %				0.67			

INNOVATION				RESPONSIBILITY	AVAILABLE	TARGET	ACHIEVED	COMMENTS
Exemplary Performance	Man 03	Responsible Construction Practices - All Criteria		Darwin Group	1	1	0	
	Hea 01	Visual Comfort - Daylighting		Mech. Con.	1	0	0	
	Hea 01	Visual Comfort - Dimmer Switches		Elec. Con.	1	0	0	Credit not achievable.
	Hea 02	Indoor Air Quality - Emission Levels		Darwin Group	2	0	0	
	Hea 06	Security - SABRE		Darwin Group Architect	1	0	0	
	Ene 01	Reduction of Energy Use & Carbon Emissions		Mech. Con.	5	0	0	
	Wat 01	Water Consumption		Mech. Con.	1	0	0	
	Mat 01	Building Life Cycle Assessment		Design Team	3	0	0	
	Mat 03	Responsible Sourcing of Construction Products		Darwin Group	1	0	0	
	Wst 01	Construction Waste Management		Darwin Group	1	0	0	
	Wst 02	Use of Recycled & Sustainably Sourced Aggregate		Darwin Group	1	0	0	
	Wst 05	Adaptation to Climate Change		Design Team	1	0	0	
	Le 02	Identifying & Understanding the Risks & Opportunities for the Project		Design Team	1	0	0	
	Le 04	Change & Enhancement of Ecological Value		Design Team	1	0	0	
	Inn	BRE Approved Innovations		Design Team	1	0	0	
Section Total					10	1	0	
Section Score %					10.00	1.00	0.00	
Single Credit Value %					1.00			