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Accommodation for the Elderly (class C2) BREEAM Pre-Assessment



Exmouth Junction, Exeter

AECOM

April 2019



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DARLING ASSOCIATES
ARCHITECTS

Quality information

Prepared by



Hazel Weston
Principal Consultant

Checked by



Dominic Desay
Consultant

Approved by

Gill Smith
Associate Director

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Prepared for:

Eutopia Homes (Exeter) Ltd

Prepared by:

Hazel Weston
Principal Consultant
T: 0161 237 6074
E: hazel.weston@aecom.com

AECOM Limited
4th Floor, Bridgewater House
Whitworth Street
Manchester M1 6LT
United Kingdom

T: +44 (161) 907 3500
aecom.com

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1. Introduction

The principles of “Sustainable Development” are addressed by legislation and policy at all levels of government, and are widely recognised as a fundamental consideration for all current and future development. The National Planning Policy Framework (NPPF) came into effect on 27th March 2012 and was introduced as a key part of the reforms to make the planning system better able to protect the environment and promote sustainable growth. Within the framework there is “The presumption in favour of sustainable development” (National Planning Policy Framework, February 2019). Therefore, Local planning authorities (LPAs) should make decisions on development proposals using the full range of planning tools available and work with applicants to secure developments that will improve the economic, social and environmental conditions of the area.

The relevant local Planning Authority for this project is Exeter City Council. Their Core Strategy was adopted in 2011, and “sets out the vision, objectives and strategy for spatial development of the city up to 2026”. Within this core strategy are a number of specific policies – policy CP15 states that:

“All non-domestic development will be required to achieve BREEAM ‘Very Good’ standards increasing to ‘Excellent’ standards from 2013”.

Eutopia Homes (Exeter) Limited are seeking to redevelop a 6.5 ha brown field site on an area of land known as Exmouth Junction in Exeter for the purposes of domestic dwellings and accommodation for the elderly (class C2). This report relates to the Accommodation for the elderly (class C2) only.

The 4 story accommodation for the elderly (class C2) will contain 55 apartments. These are designed to suit a variety of needs by containing 1, 2 or 3 bedrooms. Each apartment will have a kitchen and living space. The 2 and 3 bedroom apartments will have 1 ensuite bathroom¹. There will be some landscaping around the building, with a large shared community garden with access for the residents².

AECOM have been appointed by Eutopia Homes (Exeter) Ltd to provide RIBA stage 1 and 2 BREEAM advice and guidance to the client and their design team. Eutopia Homes Exeter (Ltd) have confirmed that they will not be the operators of the building, and development of the Accommodation for the elderly (class C2) is to be passed on post-planning. Therefore this assessment will take the form of a BREEAM New Construction 2018 Multi-Residential Shell and Core assessment.

This RIBA stage 1 work has culminated in the production of this BREEAM pre-assessment report. The report comprises an Introduction, information about the BREEAM process, including how BREEAM is scored and the BREEAM pre-assessment.

2. BREEAM Process

2.1 BREEAM Pre-Assessment

The Building Research Establishment Environmental Assessment Method (BREEAM) UK 2018 New Construction Shell and Core Multi-Residential Scheme, has been used to guide and inform the design of the Accommodation for the elderly (class C2). This is the current version of BREEAM, and the multi-residential criteria are applicable to residential accommodation for the elderly (class C2).

This AECOM Assessors BREEAM work has culminated in the production of BREEAM Pre-Assessment for the proposed Exeter Junction Way Accommodation for the elderly (class C2), a copy of which is contained in Appendix 1. The Pre-Assessment comprises:

- BREEAM Credit reference;
- Credit Name;
- Credits available,
- Targeted credits,
- Summary Aim of Credit ;
- Responsibility;
- Comments as relating to why the credit(s) are or are not targeted;

2.2 Design Stage

The Design Stage (DS) Assessment will represent the BREEAM performance of the accommodation for the elderly (class C2) at the technical design stage. This is typically undertaken post planning but prior to commencement on site.

2.3 Construction Stage

The Construction Stage (CS) Assessment represents the final 'as built' performance of the accommodation for the elderly (class C2). This assessment is typically undertaken during the construction phase of the development.

2.4 BREEAM Scoring System

BREEAM comprises a number of 'credits', each of which is weighted depending on the scope of the assessment and the criteria set by the BRE. This converts the credits to percentage points. When combined the percentage point(s) for the targeted credits relate to a specific BREEAM rating as set out in Table 1.

Table 1. BREEAM 2018 New Construction Scores

BREEAM Rating	Percentage (%) Score
Unclassified	<30%
Pass	>30%
Good	>45%
Very Good	>55%
Excellent	>70%
Outstanding	>80%

Source: SD5078: BREEAM UK New Construction 2018 2.0

In addition to a % point score there are mandatory requirements which have to be achieved for specific ratings, as shown in Table 2:

Table 2. Minimum Standards for a Very Good or Excellent rating

BREEAM Issue	Minimum requirement for Very Good	Minimum requirement for Excellent
Man 03 Responsible Construction Practices	None	One credit (responsible construction management)
Man 04 Commissioning and Handover	One credit (commissioning test schedule and responsibilities)	One credit (commissioning test schedule and responsibilities)
Man 04 Commissioning and Handover	Criterion 11 (building user guide)	Criterion 11 (building user guide)
Man 05 Aftercare	None	One credit (commissioning – implementation)
Ene 01 Reduction of energy use and carbon emissions	None	Four credits (energy performance)
Ene 02 Energy Monitoring	One credit (first sub-metering credit)	One credit (first sub-metering credit)
Wat 01 Water Consumption	One credit (12.5% improvement over baseline)	One credit (12.5% improvement over baseline)
Wat 02 Water Monitoring	Criterion 1 only (water meter on mains water supply)	Criterion 1 only (water meter on mains water supply)
Mat 03 Responsible Sourcing of Construction Products	Criterion 1 only (use of legally harvested and traded timber as per the UK Government's Timber Procurement Policy)	Criterion 1 only (use of legally harvested and traded timber as per the UK Government's Timber Procurement Policy)
Wst 03 Operational Waste	None	One credit (Provide space for storage of recyclable waste)

Source: SD5078: BREEAM UK New Construction 2018 2.0

3. Results

The BREEAM 2018 New Construction targeted credits contained in the Pre-Assessment have been entered into a calculator tool which has applied the BRE weightings. It has also taken account of the mandatory requirements for a specific rating.

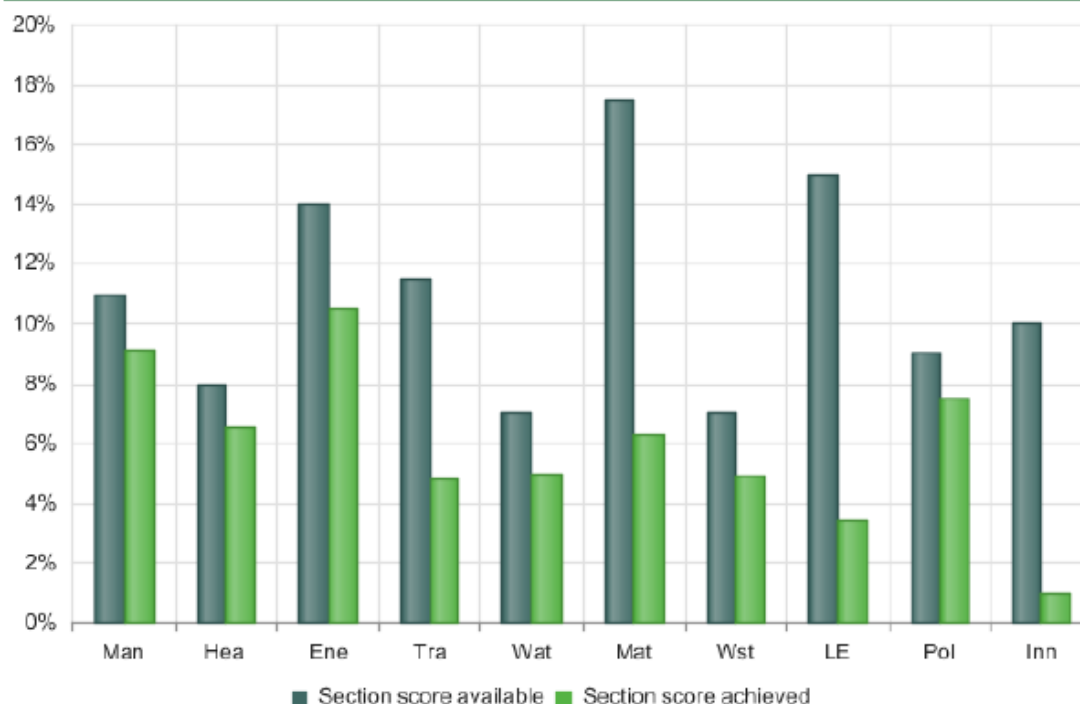
The resulting targeted ratings for the Exmouth Junction accommodation for the elderly (class C2) are shown in Table 4. As explained in the pre-assessment, appendix 1, it is not possible to determine if credits LE02-LE05 are able to be targeted until the results of the recommended further survey work are known. If those credits are subsequently able to be targeted it may be possible for the targeted rating to increase from Very Good to Excellent.

Table 4: Targeted Results for the Accommodation for the elderly (class C2)

BREEAM rating

BREEAM Rating					
	Credits available	Credits achieved	% Credits achieved	Weighting	Category score
Man	18.0	15.0	83.33%	11.00%	9.16%
Hea	11.0	9.0	81.82%	8.00%	6.54%
Ene	20.0	15.0	75.00%	14.00%	10.50%
Tra	12.0	5.0	41.67%	11.50%	4.79%
Wat	7.0	5.0	71.43%	7.00%	5.00%
Mat	14.0	5.0	35.71%	17.50%	6.25%
Wst	10.0	7.0	70.00%	7.00%	4.89%
LE	13.0	3.0	23.08%	15.00%	3.46%
Pol	12.0	10.0	83.33%	9.00%	7.50%
Inn	10.0	1.0	10.00%	10.00%	1.00%
Total	127.0	75.0	59.08%	-	59.11%
Rating	-	-	-	-	Very Good

Performance by environmental category



Appendix A - BREEAM Pre-Assessment

BREEAM New Construction 2018 England (v2.0) Design Stage Pre-assessment_Multi Residential

Eutopia Homes (Exeter) Ltd Exeter		
Targeted	Very Good	59.11
Total		
		59.11

Project Scope: Shell & Core
Building Type: Multi Residential - accommodation for the elderly (class C2)
Assessment Name: Eutopia Homes (Exeter) Ltd
Project Number: 60594954
Prepared by: Hazel Weston
Date: March - April 2019

Credit Reference	Credit Name	Available Credits	Targeted credits	Summary Aim of Credit	Comments
Management					
Each Credit is worth 0.61%					
Man 01	Project Brief and Design				
	Part A: Project Delivery Planning	1	1	To optimise final building design through recognising and encouraging an integrated design process and robust stakeholder engagement.	Eutopia Homes (Exeter) Ltd confirmed (in an email received 28.03.19 @10.29am) that the project team and stakeholders will meet to agree all roles, responsibilities and contributions, and all elements in the criteria will be considered prior to completion of RIBA stage 2. This credit will be targeted.
Part B: Stakeholder Consultation (interested parties)	1	1	Eutopia Homes (Exeter) Ltd confirmed (in an email received 28.03.19 @10.29am) that this credit will be targeted as a large amount of consulta has been taking place with stakeholders (and more consultation will follow) including the local residents, community groups, businesses in line with the BREEAM criteria. Example consultation material has been provided in support of this credit, which include reference to functionality, impacts on the local community, shared areas within the development, and sustainability measures. Further consultation will be carried out by Exeter Council who will undertake their own consultation exercise (this is confirmed in the 'next steps' on the Public Consultation Boards, provided by Eutopia Homes (Exeter) Ltd, April 2019). This has been checked by the BREEAM Assessor against the credit criteria and along with the commitment to consultation at RIBA stage 3 onwards, it enables the credit to be targeted.		
Man 02	Life Cycle Cost & Service Life Planning				
	Part A: Elemental Life Cycle Cost (LCC)	2	2	To promote the business case for sustainable buildings and to deliver whole life value by encouraging the use of life cycle costing to improve design, specification, through-life maintenance and operation.	Eutopia Homes (Exeter) Ltd confirmed (in an attachment to an email received 28.03.19 @10.29am) that these credits will be targeted and a competent person (as defined by BREEAM) will be appointed to carry out the LCC before the end of RIBA stage 2.
	Part B: Component Level LCC Options Appraisal	1	1		There is no technical reason why the Developer from RIBA stage 3 onwards, cannot appoint a suitable specialist to provide a component level LCC appraisal at technical design stage (RIBA stage 4). The credit can be targeted at this stage.
Part C: Capital Cost Reporting	1	1	Confirmation received from Eutopia Homes (Exeter) Ltd (in an email received 21.03.19 @10.35am), that if the fit out operator is known at RIBA stage 3, they will require them to target this credit, and the Capital Cost will be provided as part of the submission to BRE.		
Man 03	Responsible Construction Practices				
	Prerequisite - Legally Harvested and Traded Timber		-	-	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am), that the appointed Principal Contractor will be required within their contract to target this credit, and source sustainable timber.
	Part A: Environmental Management	1	1	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am), that the appointed Principal Contractor will be required within their contract to provide a compliant Environmental Management System such as ISO14001.	
	Part B: BREEAM Advisory Professional (AP) (Site)	1	1	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am), that the appointed Principal Contractor will be required within their contract to appoint a BREEAM AP during the Construction stage.	
	Part C: Responsible Construction Management	2	2	To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am) that the appointed Principal Contractor will be required within their contract to: Manage the construction site to minimise impacts of vehicles, air, land and water pollution, maintain a safety, clean and organised at all times, ensure clear and safe access around site, provide medical equipment, establish management practices that encourage equality, fair treatment and respect of site operatives, provide ongoing training all personnel and site visitors and ensures all operatives are training for their tasks, all accidents/incidents and near misses are recorded. The appointed Principal Contractor can also be required to target an additional 6 items from the BREEAM criteria. Therefore this credit can be targeted at this stage.
	Part D: Monitoring of Construction Site Impacts - Utility Consumption (Energy Consumption and Water Consumption)	1	1	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am) that the appointed Principal Contractor will be required within their contract to appoint a suitable individual with the responsibility for monitoring, recording and reporting energy use and water consumption from all on site construction processes. Therefore this credit can be targeted at this stage.	
Part D: Monitoring of Construction Site Impacts - Transportation of Construction Materials and Waste	1	1	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am), that the appointed Principal Contractor will be required within their contract to set targets for and collate data for transportation movements and impacts from delivery of construction materials. Therefore this credit can be targeted at this stage.		
Man 04	Commissioning and Handover				
	Part A: Commissioning - Testing Schedule and Responsibilities	1	1	To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	AECOM M&E have reviewed the BREEAM requirements and confirmed (in an email dated 07.03.19 @05.51) there is no technical reason why an appropriate member of the project team from RIBA stage 3 onwards cannot be appointed to monitor and programme pre-commissioning, commissioning and testing, and for the Fit-Out Contractor to account for the commissioning and testing programme, responsibilities and criteria within their budget. The credit is therefore available at this stage to be targeted.
	Part B: Commissioning - Design and Preparation	1	1		AECOM M&E have reviewed the BREEAM requirements and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the Fit-Out Contractor cannot appoint a suitable team member (not involved with the installation works) to undertake design reviews, provide commissioning management input, and manage the commissioning, performance testing and handover stage. The credit is therefore available at this stage to be targeted.
	Part D: Handover	1	1		AECOM M&E have reviewed the BREEAM requirements and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the project team from RIBA stage 3 onwards cannot provide a Building User Guide and 2 training schedules timed for around the handover in order to target the credit.
Health & Wellbeing					
Each Credit is worth 0.73%					
Hea 01	Visual Comfort				
	Part C: View Out	1	1	To encourage best practice in visual performance and comfort by ensuring daylighting, artificial lighting and occupant controls are considered.	The current floor layouts provided by Darling Associates (link provided in an email 13.03.19 @13.07, drawings (03)-p-001.dwg and (03)-P-004.dwg) have been reviewed by the BREEAM Assessor against the criteria for the credit, and confirms that the current design enables this credit to be targeted.
Part D: Internal and External Lighting Levels, Zoning and Control	1	1	An AECOM Lighting Engineer has reviewed the criteria and confirmed (in an email issued 04.03.19 @11.44am) that there is no technical reason why the Fit-Out contractor from RIBA stage 3 cannot ensure that the lighting design is in compliance with the relevant external lighting levels, and control requirements. Provided this lighting design is implemented, the credit is available to be targeted.		
Hea 02	Indoor Air Quality				
	Prerequisite - Indoor Air Quality (IAQ) Plan		-	-	There is no technical reason at this stage why the Fit-Out Contractor cannot appoint a suitable mechanical engineer to produce and implement an IAQ plan at RIBA stage 3 or beyond (there are no specific time constraints to provide this).
	Part A: Ventilation	1	1	AECOM M&E Consultants have reviewed the BREEAM requirements and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the Fit-Out operator at RIBA stage 3 to RIBA stage 5 cannot ensure the building minimises indoor concentration and recirculation of pollutants so that this credit can be targeted.	
Hea 04	Thermal Comfort				
	Part A: Thermal Modelling	1	1	To ensure the building is capable of providing an appropriate level thermal comfort.	AECOM M&E Consultants have reviewed the BREEAM requirements and confirmed (in an email dated 07.03.19 @05.51), that there is no technical reason this credit cannot be targeted as a suitable thermal model can be produced by the fit-Out Operator and the building can be compliant with CISSE AM11. Credit available to target.
	Part B: Design for Future Thermal Comfort	1	1	AECOM M&E Consultants confirmed (in an email dated 07.03.19 @05.51), there is no technical reason why the appointed modelling specialist Part A of the credit, cannot ensure that the thermal model includes an allowance for climate change. The credit is available to target.	
Hea 05	Acoustic Performance				
	Acoustic Performance	1	1	To ensure the building is capable of providing an appropriate acoustic environment to provide comfort for building users.	There is no technical reason why the Fit-Out Contractor cannot appoint an acoustician at RIBA stage 3-4, to provide compliant calculations and a report as evidence in support of this credit.
Hea 06	Security				
	Security of Site and Building	1	1	To encourage the planning and implementation of effective measures that provide an appropriate level of security to the building and site.	Eutopia Homes (Exeter) Ltd confirmed (in an email received 21.03.19 @10.35am) that the credit will be targeted, as the whole site will be designed to be secure and will seek advice from a Suitably Qualified Security Specialist (SOSS) prior to the completion of RIBA stage 2.
Hea 07	Safe and Healthy Surroundings				
	Part A: Safe Access	1	1	To encourage the provision of safe access around the site and outdoor space that enhances the wellbeing of building users.	Site wide plans have been provided (Drawing number (03)-P-C03) Darling Associates, provided 27.02.19) and the plans have been reviewed by the BREEAM Assessor who confirms they meet the requirements of the BREEAM credit. Provided these designs are implemented by the appointed Fit-Out Operator from RIBA stage 3 onwards, this credit can be targeted.
	Part B: Outside Space	1	1	A Softworks plan has been provided (drawing number 6736_SK_001_LDA Design, March 2019, provided 05.03.19) and reviewed by the BREEAM assessor against the requirements of the credit. The drawing shows the presence of a communal garden adjacent to the building for use by the residents. There are no specific size requirements for the space, and the AECOM BREEAM assessor considers it to be of an appropriate size for the number of residents in the building. The credit can be targeted.	

Credit Reference	Credit Name	Available Credits	Targeted credits	Summary Aim of Credit	Comments
Energy					
Each Credit is worth 0.7%					
Reduction of Energy Use and Carbon Emissions					
Ene 01	Part A: Energy Performance	9	4	To minimise operational energy demand, primary energy consumption and CO ₂ emissions.	AECOM M&E have worked with Darling Architects. A Typical Heating Distribution schematic and drawing (03)-Z3-P-0G0 show a centralised heating and hot water system for the accommodation for the elderly (class C2). Details of this and the PV that is being provided on the accommodation for the elderly (C2) roof are contained within the Energy Assessment (AECOM April 2019) which accompanies the planning application. As is standard practice the fit out operator / contractor will appoint appropriate consultants at RIBA stage 3 to produce the 'as designed' SBEM model for the building. This must show that the mandatory BREEAM Excellent requirements of 4 credits are being achieved. If not they must take action to improve the performance so that they are in order to target an Excellent rating and these credits.
	Part B: Prediction of Operational Energy Consumption	4	4		AECOM M&E Consultants confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the prediction of Operational Energy Consumption cannot be carried out, and these credits can be targeted. There is no technical reason why the appointed Fit-Out Contractor at RIBA stage 3 cannot include the design team in an energy workshop focussing on the building operational performance and then appoint an energy specialist to carry out additional energy modelling and report the predicted energy consumption targets by end use. This means the credits are available to be targeted at this stage.
Energy Monitoring					
Ene 02	Part A: Sub-metering of End-use Categories	1	1	To encourage the installation of energy sub-metering to facilitate the monitoring of operational energy consumption. To enable managers and consultants post-handover to compare actual performance with targets in order to inform ongoing management and help in reducing the performance gap.	AECOM M&E Consultants have reviewed the BREEAM criteria and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason energy cannot be metered and sub-metered in line with the criteria, and the credit can be targeted. There is no technical reason why the appointed M&E designers from RIBA stage 3 cannot include this in the detailed design, and achieve these credits.
External Lighting					
Ene 03	External Lighting	1	1	To reduce energy consumption through the specification of energy efficient light fittings for external areas of the development.	AECOM M&E Consultants have reviewed the BREEAM criteria and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why compliance with this credit cannot be achieved, that the average luminous efficacy could be no less than 70 luminaire lumens, the lighting can have automatic controls and presence detection - the credit can be targeted. There is no technical reason why the appointed Fit-Out Contractor from RIBA stage 3 cannot include this in the detailed design, and achieve these credits.
Low Carbon Designs					
Ene 04	Part A: Passive Design	2	2	To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.	AECOM M&E Consultants have reviewed the BREEAM criteria and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why these credits cannot be targeted. There is no technical reason why the appointed design team from RIBA stage 3 cannot include passive measures in the detailed design, and achieve the credits.
	Part B: Low or Zero Carbon Technologies	1	1		AECOM Energy Specialists have provided an Energy Assessment (April 2019) which reviews the feasibility of various types of LZC technology across the site. It confirms that PVs are the most suitable technology for the accommodation for the elderly (class C2) (along with centralised energy distribution), and contains drawings showing the locations of these on the roof. The results of these measures will reduce the site wide CO ₂ levels by 10.5%. There is no technical reason why these credits cannot be targeted by the appointed Fit-Out Contractor at RIBA stage 3, and the findings of the Energy Assessment implemented.
Energy efficient transportation systems					
Ene 06	Energy efficient transportation systems	2	2	To encourage the specification of energy efficient transport systems within buildings.	AECOM M&E Consultants confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the appointed M&E designer at RIBA stage 3 cannot carry out a suitable transport assessment and specify a BREEAM compliant lift in order to target this credit at the detailed design stage.
Transport					
Each Credit is worth 0.96%					
Sustainable Transport Measures					
Tra 02	Transport Options Implementation	10	5	To maximise the potential for local public, private and active transport through provision of sustainable transport measures appropriate to the site.	The BREEAM assessor has reviewed the site plans from Darling Associates (03)-P-001, (03)-P-002, (03)-P-003, (03)-P-004, (March 2019) or the Exmouth Junction Transport Assessment (AECOM, received 03.04.19), against the BREEAM criteria, and can confirm the following sustainable transport measures are included: - Site wide approximately 1000 cycle storage spaces will be provided at numerous accessible locations around the site, including the accommodation for the elderly (class C2). - There will be dedicated cycle routes running past the accommodation for the elderly (class C2). - Car parking restricted to residents only (elsewhere on the site there will be a Co-Car Car Club, and provision for electric vehicles) - Existing site has an accessibility index of 11.78 (calcs carried out by AECOM BREEAM Assessor, Feb 2019) - Local amenities (food outlet, cash point within Morrisons to the east of the accommodation for the elderly (class C2), and the large green space at the centre of the residential element of the wider scheme. Eutopia Homes (Exeter) Ltd confirmed (in an email received 21.03.19 @10.35am) that these features would be implemented. 5 credits can be targeted.
Water					
Each Credit is worth 1%					
Water Consumption					
Wat 01	Water Consumption	5	3	To reduce the consumption of potable water for sanitary use in new buildings through the use of water efficient components and water recycling systems.	AECOM M&E Consultants have reviewed the criteria and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the appointed Fit-Out Contractor at RIBA stage 3 cannot specify suitable sanitary fittings in order to target these credits in order to achieve a 40% improvement over the baseline building water consumption. Therefore 3 credits can be targeted at this stage.
Water Monitoring					
Wat 02	Water Monitoring	1	1	To reduce the consumption of potable water in new buildings through the effective management and monitoring of water consumption.	AECOM M&E Consultants have reviewed the criteria and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why the appointed Fit-Out contractor at RIBA stage 3 cannot target this credit and include compliant water metering in line with the BREEAM criteria. The credit can be targeted at this stage.
Water Leak Detection					
Wat 03	Part A: Leak Detection System	1	1	To reduce the consumption of potable water in new buildings through minimising wastage due to water leaks.	AECOM M&E Consultants have reviewed the criteria and confirmed (in an email dated 07.03.19 @05.51) that there is no technical reason why appointed Fit-Out contractor at RIBA stage 3 cannot target this credit and include a leak detection system. The credit can be targeted
Materials					
Each Credit is worth 1.25%					
Environmental Impacts from Construction Products - Environmental Product Declarations (EPD)					
Mat 02	Specification of Products with a Recognised Environmental Product Declaration (EPD)	1	1	To encourage availability of robust and comparable data on the impacts of construction products through the provision of EPD.	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am) that these credits should be targeted, and there is no technical reason why the appointed architectural design team from RIBA stage 3 onwards cannot achieve this credit and specify products with a recognised environmental product declaration (EPD). The credit will be targeted.
Responsible Sourcing of Construction Products					
Mat 03	Prerequisite	-	-	To facilitate the selection of products that involve lower levels of negative environmental, economic and social impact across their supply chain including extraction, processing and manufacture.	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am) that the appointed Principal Contractor at RIBA stage 3 will be required to comply with this pre-requisite and use sustainably sourced timber on site.
	Part B: Responsible Sourcing of Materials	3	3		Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am) that the appointed Principal Contractor at RIBA stage 3 will ensure that at least 10% of the superstructure and 30% of the internal finishes, substructure and hard standing responsibly sourced. 3 credits will be targeted at this stage.
Designing for Durability and Resilience					
Mat 05	Designing for Durability and Resilience	1	1	To reduce the need to repair and replace materials resulting from damage to exposed elements of the building and landscape.	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed (in an email received 21.03.19 @10.35am) they will be required to do so for the external elements such as raised kerbs or bollards to protect the building from vehicular movement. There is no technical reason why the fit out operator / contractor cannot provide the internal measures such as hard wearing flooring, protection rails along corridors where trolleys are used. This means that the credit is available to be targeted.
Waste					

Credit Reference	Credit Name	Available Credits	Targeted credits	Summary Aim of Credit	Comments
Each Credit is worth 0.7%					
Wst 01	Construction Waste Management				
	Part A: Pre-demolition Audit	1	1		The Construction Resource Management Plan (AECOM issued 14.04.19) confirms that there will be demolition on site. An email from Eutopia Homes (Exeter) Ltd (received 28.03.19 @ 10.23am) confirms that a pre-demolition audit will be carried out prior to completion of RIBA Stage 2 and will guide the design and consider materials for reuse, and set targets for waste management. The credit can be targeted.
	Part B: Construction Resource Efficiency	3	3	To reduce construction waste by encouraging reuse, recovery and best practice waste management practices to minimise waste going to landfill.	The Construction Resource Management Plan for the whole site (AECOM, issued 14.04.19) includes the construction of the accommodation for the elderly (class C2) and include the following waste reduction target: * Reduce the amount of non-hazardous waste generated to less than 1.6. m3 or 1.9 tonnes per 100m2 gross internal floor area The plan also covers non-hazardous waste materials and accurate data records on the predicted waste arisings and waste management routes. The BREEM Assessor has reviewed this against the BREEM criteria and confirms this enables 3 credits to be targeted.
	Part C: Diversion of Resources from Landfill	1	1		The Construction Resource Management Plan for the whole site (AECOM, issued 07.04.19) includes construction of the accommodation for the elderly (class C2), and includes the following waste diversion targets: * Achieve Waste Recovery (diversion from landfill) of 95% for all non-hazardous excavation waste * Recover (through waste reuse or recycling) at least 80% of demolition materials (by volume), and aim to exceed 85%; * Recover (through waste reuse or recycling) at least 85% of waste construction materials (by volume), and aim to exceed 90%; The AECOM BREEM Assessor has reviewed this against the BREEM criteria and confirms this enables 1 credit to be targeted.
Wst 02	Use of Recycled and Sustainably Sourced Aggregates				
	Prerequisite	-	-		The Construction Resource Management Plan for the whole site (AECOM, issued 14.04.19) confirms that there will be demolition and at least 80% of demolition materials (by volume) be recovered (with an aim to exceed 85%). The pre-requisite is achieved.
	Project Sustainable Aggregate Points	1	1	To encourage the use of more sustainably sourced aggregates, encourage reuse where appropriate and avoid waste and pollution arising from disposal of demolition and other forms of waste.	The Construction Resource Management Plan for the whole site (AECOM, issued 14.04.19), encourages the reuse of materials such as soils, concrete from any current hardstanding areas. It also states that locally sourced construction materials derived from reused and recycled materials should be used where possible. The likely waste types and amounts for the whole site have been provided, and 100% of Asphalt, bricks, concrete, soils being reused or recycled. There is no technical reason why the appointed Principal Contractor cannot ensure that sustainably sourced aggregates are used on site so that the project achieves a 'Sustainable Aggregate point' of at least 3.5. Eutopia Homes (Exeter) Ltd have confirmed in an email (21.03.19), that this credit can be targeted.
Wst 03	Operational Waste				
	Operational Waste	1	1	To encourage the recycling of operational waste through the provision of dedicated storage facilities and space.	Eutopia Homes (Exeter) Ltd have reviewed the criteria and confirmed in an email (in an email received 21.03.19 @ 10.35am), that there will be a site wide strategy for dealing with recyclable waste and suitable storage facilities will be provided for the accommodation for the elderly (class C2). This credit can be targeted.
Land Use & Ecology					
Each Credit is worth 1.15%					
LE 01	Site Selection				
	Part A: Previously Occupied Land	1	1	To encourage the use of previously occupied or contaminated land and avoid land which has not been previously disturbed.	Figure 1 within the Preliminary Ecological Appraisal (PEA) (issued by AECOM, March 2019) shows that over 70% of the area of the site that is proposed to be used for the accommodation for the elderly (class C2) is currently occupied by hardstanding. Credit will be targeted.
	Part B: Contaminated Land	1	1		Eutopia Homes (Exeter) Ltd have confirmed (in an email received 21.03.19 @ 10.35am) that a contaminated land professional will be appointed and the site will be investigated fully in line with the requirements. There are no time constraints to achieving this credit. The credit will be targeted.
LE 02	Identifying and Understanding the Risks and Opportunities for the Project				
	Prerequisite - Assessment Route Selection	-	-		The Preliminary Ecological Appraisal (PEA) (issued by AECOM, March 2019), covers the whole site, and confirms that a Phase 1 survey has taken place and that all RIBA stage 1 applicable legislation has been adhered to. Eutopia Homes (Exeter) Ltd confirmed (in an email received 21.02.19 @ 10.35am) that the appointed Principal Contractor at RIBA stages 3, 4, 5 and 6 will be required to meet the relevant legislative requirements.
	Survey and Evaluation	2	1	To determine the ecological baseline and zone of influence of the site and identify risks and opportunities for achieving optimum outcomes.	The Preliminary Ecological Appraisal (PEA) (issued by AECOM, March 2019) has determined there are some notable features on the wider site e.g. a large active main badger set was found in the north-western corner of the site, mature oak trees, a mammal run, and there is the potential for bats, birds and reptiles. Figure 1 within the report shows the accommodation for the elderly (class C2) area of the site does not contain a badger set and mature oak trees and information relating to them, therefore does not need to be taken into account within this accommodation for the elderly (class C2) BREEM pre-assessment. Figure 1 shows the area of the site to be occupied by the accommodation for the elderly (class C2) does contain 8 tall Scattered Tall Ruderal and Ephemeral/Short Perennial Vegetation within the area of hardstanding and an area of Scattered Tall Ruderal and Ephemeral/Short Perennial Vegetation outside of the area of hardstanding and primarily along the current fence line. The Ecologist (AECOM in an email 03.04.19 @ 5.08pm) advised that reptiles had been observed in this area in the past and it is their professional opinion that the area currently has the potential to support reptiles. Further survey work is therefore recommended.
	Determining the Ecological Outcomes for the Site (Routes 1 and 2)				The risks and opportunities of the site and zone of influence, in terms of ecology, can only be determined once the results of the recommended survey work are known. As this is a pre-requisite requirement for BREEM 2018 LE2 (2nd credit), LE3 and LE4 these credits cannot currently be targeted until the results of the survey work are known.
LE 03	Managing Negative Impacts on Ecology				
	Prerequisite - Identification and Understanding the Risks and Opportunities for the Site - achievement of LE02	-	-		The pre-requisite is dependent on LE02 being achieved. Until further survey work is carried out, the risks and opportunities on the site and zone of influence can not be fully understood. Therefore this pre-requisite is not targeted at present.
	Part A: Planning, Liaison, Implementation and Data	1	0	To avoid, or limit as far as possible, negative impacts on the ecology of the site and its zone of influence arising as a result of the project.	The risks and opportunities of the site and zone of influence, in terms of ecology, can only be determined once the results of the recommended survey work are known. As this is a pre-requisite requirement for BREEM 2018 LE2 (2nd credit), LE3 and LE4 these credits cannot currently be targeted.
	Part B: Managing Negative Impacts of the Project	2	0		
LE 04	Change and Enhancement of Ecological Value				
	Prerequisite - Identifying and Understanding the Risks and Opportunities for the Site - achievement of LE02	-	-		The pre-requisite is dependent on LE02 being achieved. Until further survey work is carried out, the risks and opportunities on the site and zone of influence can not be fully understood. Therefore this pre-requisite is not targeted at present.
	Part A: Planning, Liaison, Implementation and Data Collation	1	0	To enhance the ecological value of the site and areas within its zone of influence in support of local, regional and national priorities.	The risks and opportunities of the site and zone of influence, in terms of ecology, can only be determined once the results of the recommended survey work are known. As this is a pre-requisite requirement for BREEM 2018 LE2 (2nd credit), LE3 and LE4 these credits cannot currently be targeted.
	Part B: Enhancement of Ecology	3	0		
LE 05	Long Term Ecology Management and Maintenance				
	Prerequisite - Roles and Responsibilities, Implementation and Statutory Obligations	-	-		The pre-requisite is dependent on LE02 being achieved. Until further survey work is carried out, the risks and opportunities on the site and zone of influence can not be fully understood. Therefore this pre-requisite is not targeted at present.
	Part A: Planning, Liaison, Data, Monitoring and Review Management and Maintenance	1	0	To secure ongoing monitoring, management and maintenance of the site and, its habitats ecological features to ensure intended outcomes are realised for the long term.	Until the pre-requisite is targeted, this credit is not targeted.
	Part B: Landscape and Ecology Management Plan (or similar) Development	1	0		Until the pre-requisite is targeted, this credit is not targeted.

Credit Reference	Credit Name	Available Credits	Targeted credits	Summary Aim of Credit	Comments
Pollution					
Each Credit is worth 0.75%					
Impact of Refrigerants					
Pol 01	Prerequisite	-	-	To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.	AECOM M&E Consultants have reviewed the BREEAM criteria and confirmed (07.03.19 @05.51am), that there is no technical reason why this pre-requisite cannot be targeted by the Fit-Out Contractor at RIBA stage 3 onwards, and all systems can comply with BS EN 378:2016
	Impact of Refrigerants	3	1		
Local Air Quality					
Pol 02	Local Air Quality	2	2	To contribute to a reduction in local air pollution through the use of low emission combustion appliances in the building.	A Typical Heating Distribution schematic and drawing (03)-Z3-P-0G0 show a centralised heating with gas boilers and hot water system for the accommodation for the elderly (class C2). Details of this and the PV that is being provided on the accommodation for the elderly (class C2) roof are contained within the Energy Assessment (provided by AECOM April 2019). There is no technical reason why the M&E designer at RIBA stage 3 onwards cannot include this within the design. Therefore credits are available to be targeted at this stage.
Flood and Surface Water Management					
Pol 03	Prerequisite	-	-	To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on-site and off-site, watercourse pollution and other environmental damage.	AECOM have been appointed to provide consultancy advice for RIBA stages 1-2. Flood resilience, surface water run-off and watercourse pollution have been looked at on a site wide basis, and include the accommodation for the elderly (Class C2). This site wide approach is acceptable for BREEAM assessments of a building forming part of a wider site.
	Part A: Flood Resilience	2	2		The Flood Risk Assessment (AECOM 10.04.19) confirms that the whole site is within Flood Zone 1, and therefore 2 credits can be achieved.
	Prerequisite for Surface Water Run-off Credits	-	-		The Flood Risk Assessment (AECOM 10.04.19) confirms that a bespoke solution to drainage and flood defence has been provided for the whole site, including the accommodation for the elderly (class C2) (FRA, March 2019). The pre-requisite is targeted.
	Part B: Surface Water Run-off	1	1		The Flood Risk Assessment (AECOM 10.04.19) has been reviewed by the BREEAM Assessor, and confirms compliance with the BREEAM criteria as follows: the proposed site is a brownfield site; the run-off rate will be balanced to greenfield runoff rates; there will be an allowance for climate change within all calculations and modelling. Information on the maintenance for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) is provided within the FRA and this can be passed onto the building occupiers as maintenance agreements by the appointed Developer. The credit available to be targeted.
		1	1		AECOM Water and Drainage Engineers have confirmed (in an email received 10.04.19 @16.07) that drainage measures have been considered so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This will be for the 100-year 6-hour event, including a 40% allowance for climate change. The BREEAM Assessor has reviewed this against the BREEAM criteria and the calculations are compliant.
Part C: Minimising Watercourse Pollution	1	1	Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are included in the FRA, and can be passed onto the building occupiers as maintenance agreements by the appointed Developer. The credit is available to be targeted.		
Reduction of Night Time Light Pollution					
Pol 04	Reduction of Night Time Light Pollution	1	1	To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, thereby reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.	A Lighting Assessment (AECOM April 2019) has been reviewed by the AECOM BREEAM Assessor against the BREEAM criteria, and confirms that this credit can be targeted, and all external lighting can be designed to minimise light pollution. Provided the appointed Fit-Out Contractor at RIBA stage 3 onwards implements the principals of this report, the credit can be targeted.
Reduction of Noise Pollution					
Pol 05	Reduction of Noise Pollution	1	1	To reduce the likelihood of noise arising from fixed installations on the new development affecting nearby noise sensitive buildings.	A Noise and Vibration study has been completed (received 20.03.19, AECOM, dated 19.03.19) and has been reviewed by the BREEAM Assessor against the BREEAM criteria and confirms that there are noise sensitive receptors close to the development. The study confirms that a noise impact assessment has been carried out in line with the requirements of BS4142, at the proposed location of the accommodation for the elderly (class C2). Section 5 confirms the predicted highest day and night time noise levels (63 daytime, 58 night time). An email from the AECOM Acoustician (received 28.03.19 @14.48pm) confirms that the report is updated to include the BREEAM criteria, and the accommodation for the elderly (class C2) can comply. The credit can be targeted, provided the Developer complies with the principals of the report.

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Studies have not been undertaken, except where specifically referenced, to support this report. This includes but is not limited to ecology assessments, flood risk assessments, noise assessments, transport assessments, and a construction waste resources plan.

Where assessments of works or costs identified in this Report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

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