

Sustainability Statement and BREEAM Predictive Assessment (FINAL DRAFT)

New Century Place 3, East Street

Prepared for Studious Developments (Reading) Ltd
17th October 2018



envision

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EXECUTIVE SUMMARY

This Sustainability Statement and BREEAM Predictive Assessment has been prepared in support of the planning application made by Studios Development (Reading) Ltd for New Century Place 3, purpose-built student accommodation, comprising 135 bedrooms and associated facilities, on land at East Street, Reading, to demonstrate compliance with the existing and emerging planning policies relevant to sustainable design and construction.

The report provides a positive response to the questions set out in Reading Borough Council's Sustainable Design Checklist and explains how the proposed development has been designed to incorporate measures to adapt to climate change, demonstrating compliance with Policy DM1, with cross reference to relevant information including within other supporting documents to the planning application, including the Design and Access Statement, the Flood Risk Assessment and the Energy Statement.

In line with the existing and emerging planning policies for BREEAM, the recognised standard for assessing good sustainable design and construction, a review has been undertaken to confirm what the highest possible rating is for a development of this type and design. This review, undertaken by Envision, an independent licensed BREEAM assessor organisation, demonstrates that, where feasible, the minimum requirements for a BREEAM Excellent rating could be met (e.g. for the energy and water requirements) but that other minimum requirements (e.g. for individual recycling bins to be provided in each studio) and an overall score of above 70% (the required score for a BREEAM Excellent rating), would be particularly onerous for a development of this type, and would add significant cost to the proposals. The BREEAM predictive assessment confirms that the development could achieve a score of **60.5%**. Achieving a score higher than this is not considered possible for this development, and therefore, in line with both the existing planning policy and the emerging planning policy, it is demonstrated that a **BREEAM Very Good** rating should be targeted.

The principles of Reading Borough Council's sustainable design and construction policy, *"designing buildings which use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change"*, are considered to be met by incorporating the proposed high energy and water efficient requirements within the design, and achieving this overall BREEAM Very Good rating.

1 INTRODUCTION

- 1.1 The report has been prepared in support of the planning application made by Studios Development (Reading) Ltd for New Century Place 3, purpose-built student accommodation, comprising 135 bedrooms and associated facilities, on land at East Street, Reading, to demonstrate compliance with the existing and emerging planning policies relevant to sustainable design and construction.
- 1.2 Following the guidance set out in Reading Borough Council's revised Sustainable Design and Construction SPD (July 2011) and the Planning Application Validation Information Requirements (Reading Borough Council, December 2016), the Sustainability Statement for this type of development should be prepared in response to the questions set out in Table A5.2 BREEAM – Sustainable Design Checklist and include a section on how the application meets the requirements of policy DM1.
- 1.3 Section 2 of this report presents the completed version of the Sustainable Design Checklist for the proposed development. Section 3 demonstrates how the application meets the requirements of policy DM1. The final section of the report, Section 4, presents the results of the BREEAM predictive assessment, with further detail provided in Appendix 1, demonstrating compliance to the existing and emerging local planning policy requirements for high standards of sustainable design and construction.

2 COMPLETED SUSTAINABLE DESIGN CHECKLIST

READING BOROUGH COUNCIL Sustainable Design Checklist		NEW CENTURY PLACE 3, EAST STREET
Checklist Questions		Design and Commitments
Management Aim: To recognise and encourage environmentally and socially considerate development		
1	Will guidance for the non technical building user be provided so they can understand and operate the building efficiently and understand how the design reduces the overall environmental impact of the building and raise environmental awareness?	<i>A Building User Guide, for building staff and residents, will be prepared in line with BREEAM guidance and issued prior to occupation.</i>
2	What consideration has been given to resource use, energy consumption and pollution in terms of the construction site impacts?	<i>Commitment has been made to ensuring all construction site environmental impacts are minimised and managed in accordance with best practice guidance.</i>
3	Will site investigation and appropriate remedial action be undertaken?	<i>A site investigation report has already been completed which recommends that a watch is kept for any unforeseen contamination. Should any contamination be found, a suitable remediation strategy will be developed.</i>
4	Will the community and stakeholders be involved in the design process encouraging flexibly designed buildings which cater for shared use with the local community?	<i>The type of development proposed is not suitable for the provision of shared use with the local community. Where feasible, flexibility will be considered within the design to allow for future changes to the internal layout whilst delivering the required building functions.</i>
5	How has the building been designed to reduce the opportunity for and the fear of crime?	<i>Appropriate security measures have been included within the design, based on the residents' needs.</i>
6	What consideration has been given to the maintenance of the building?	<i>Materials and finishes will be specified with appropriate consideration to future maintenance requirements, with the aim of minimising the frequency of replacement. The design team will identify parts of the development that could be vulnerable to high levels of pedestrian movement and specify appropriate durability and/or protection measures.</i>

READING BOROUGH COUNCIL Sustainable Design Checklist		NEW CENTURY PLACE 3, EAST STREET
Checklist Questions		Design and Commitments
Health and Well-being		
Aim: To ensure a good quality amenity level is afforded to occupants of buildings		
7	How has the development been designed to ensure users have sufficient daylight, an external view, adequate and appropriate lighting, ventilation, air quality and drinking	<i>The proposed development will provide good levels of daylight in the living spaces, and lighting will be specified in accordance with best practice guidance provided by CIBSE.</i> <i>Commitment has been made to preparing an indoor air quality plan, giving appropriate consideration to potential contamination sources, how these can be minimised through material specification and procedures for pre-occupancy flush out.</i> <i>A suitable ventilation strategy has been included in the design of the development, based on a natural ventilation strategy for bedrooms and other occupied areas along with mechanical ventilation and heat recovery which will operate in mixed mode.</i> <i>All water systems in the proposed development will be designed in compliance with the HSE Approved Code of Practice "Legionnaire's disease – The control of legionella bacteria in water systems".</i>
Energy		
Aim: To conserve energy and maximise the use of energy efficiency techniques		
8	How has the building been designed to minimise CO ₂ emissions associated with their operational energy consumption?	<i>Equipment which is likely to have a high energy demand during the proposed building's operation will be specified to meet best practice energy efficiency standards in order to maximise energy saving during operation.</i>
9	How has the development been designed to optimise the use of the energy from the sun, natural daylighting and controlled natural ventilation?	<i>It is proposed that the building will be designed based on a natural ventilation strategy for bedrooms and other occupied areas along with mechanical ventilation and heat recovery which will operate in mixed mode.</i> <i>The proposed design provides good levels of daylight, which whilst appropriate consideration will be given to thermal comfort levels, will optimise the use of the energy from the sun.</i>

READING BOROUGH COUNCIL Sustainable Design Checklist		NEW CENTURY PLACE 3, EAST STREET
Checklist Questions		Design and Commitments
10	How will the design of the building make efficient use of energy? (e.g. use of thermally massive materials, levels of insulation and use of green/brown roofs etc).	<i>The development has been designed based on following a 'fabric first' energy strategy, with specification of high levels of insulation and thermal mass to minimise the energy demand.</i>
11	Have renewable energy sources or decentralised energy been considered for this development and if so, how would they be incorporated within the development?	<i>Although the development is predominantly reducing its energy demand based on improvements in the building fabric, consideration has also been given to the potential use of low or zero carbon sources. The proposed strategy includes a CHP to provide some of the hot water and photovoltaic panels to generate electricity on site.</i>
Transport		
Aim: To reduce the need to travel through appropriately located development		
12	How has the design and layout incorporated measures to reduce the need to travel, especially by car, and promote alternative and sustainable modes of transport such as walking, cycling and the use of public transport?	<i>The proposed development is situated in the centre of Reading, with close proximity to the University and local amenities. There will be no carparking provided on site, and the design incorporates cycle storage facilities to encourage access by cycling.</i>
13	How have public transport networks been considered in terms of the location of the development and proximity to local amenities?	<i>As explained in the Transport Assessment, the site is located to the south of Reading town centre and has easy access to bus stops which provide good access to the public transport network. The site is also in close proximity to local amenities, including food retail outlets.</i>
14	How have deliveries and the manoeuvring of delivery vehicles been considered?	<i>All deliveries and collections will adhere to local loading restrictions. As this is not a retail or catering outlet, deliveries will be minimal. Specific 'Move In/Move Out' procedures are to be established to minimise disruption at the beginning and end of terms.</i>
Water		
Aim: To improve efficiency in the use of water, conserve water resources and minimise vulnerability to flooding		
15	How will the development incorporate the use of water saving devices to achieve a maximum consumption of 5.5 cubic	<i>Water efficient sanitary ware will be specified within the proposed development to achieve a 25% improvement in water consumption over the baseline as specified in the Water Supply (Water Fittings) Regulations.</i>

READING BOROUGH COUNCIL Sustainable Design Checklist		NEW CENTURY PLACE 3, EAST STREET
Checklist Questions		Design and Commitments
	metres per year per person for office developments? (Or the most appropriate benchmark for other types of development)	
16	Will the development and access to and from it, such as roads and paths be located away from areas of potential flooding?	<i>Detailed assessment of the site has confirmed the site, including access, is of low risk of flooding.</i>
17	How will the development incorporate harvesting and re-use of rainwater?	<i>The development will focus on minimising water consumption using water efficient appliances rather than incorporating rainwater harvesting.</i>
Materials		
Aim: To retain local character and promote the use of materials with a low environmental impact		
18	How will the selected materials help retain local character, ensure long life and ensure a low environmental impact?	<i>Materials will be selected based on a material palette that fits with the local character, are easily maintainable, and are considered to have a low environmental impact based on achieving A/A+ ratings in the BRE Green Guide to Material Specification.</i>
19	What consideration has been given to re-using materials in-situ, responsibly sourcing materials and re-using existing structures?	<i>There are no existing significant structures on the site. Construction materials will be procured from 'responsible sources' as specified by BRE, including suppliers certified to ISO14001/BES6001.</i>
Waste		
Aim: To minimise the production of waste and maximise re-use and recycling		
20	Has an audit of the materials present on the site been conducted with an assessment of the extent to which materials could be re-used?	<i>There are no existing significant structures on the site.</i>
21	How will the development make the maximum use of construction, demolition waste and recycled materials?	<i>A site waste management strategy will be prepared for the construction phase of the proposed development, which identifies measures to minimise construction waste, and maximise the use of demolition and construction waste. Targets have been set to generate no more than 13.3m³ of construction waste per 100m² GIFA, and to divert from landfill at least 70% (by volume) of the non-hazardous construction waste.</i>

READING BOROUGH COUNCIL Sustainable Design Checklist		NEW CENTURY PLACE 3, EAST STREET
Checklist Questions		Design and Commitments
22	How will provision be made for the storage and recycling of waste for all users of the site?	<i>A dedicated waste storage area has been designed within the ground floor of the development, of a suitable size to enable the storage and recycling of different types of waste.</i>
Land Use and Ecology		
Aim: To retain, protect and enhance wildlife habitats and natural features		
23	How have the wildlife habitats and natural features on and adjacent to the site been considered and how will they be retained, protected and enhanced?	<i>The existing site is considered to be of negligible ecological value. This has been confirmed in the ecology report, which also includes recommendations on how to minimise the impact on any existing features and enhance the site's ecology.</i>
24	What consideration has been given to not using previously undeveloped land?	<i>The site is previously developed land and therefore the proposed development will not use previously undeveloped land.</i>
25	What consideration has been given to the removal of contamination from the land?	<i>A site investigation report has already been completed which recommends that a watch is kept for any unforeseen contamination. Should any contamination be found, a suitable remediation strategy will be developed.</i>
Pollution		
Aim: To minimise damage to the environment through air, ground/surface water, land, noise or light pollution		
26	What measures have been incorporated to ensure that noise and light pollution plus pollution transported through surface water runoff will be minimised throughout the development?	<i>An external lighting layout has been designed in accordance with the ILE Guidance Note on reduction of obtrusive light, and appropriate daylight/automatic sensor functions. A noise impact assessment has been carried out to confirm that the noise levels of proposed site/building is no greater than +5db during the day and +3dB at night compared to background noise levels (or appropriate measures are installed to attenuate the noise). A sustainable drainage strategy has been developed for the site, including water pollution prevention measures where relevant.</i>

READING BOROUGH COUNCIL Sustainable Design Checklist		NEW CENTURY PLACE 3, EAST STREET
Checklist Questions		Design and Commitments
27	What measures have been incorporated to ensure that light pollution will be minimised throughout the development?	<i>An external lighting layout has been designed in accordance with the ILE Guidance Note on reduction of obtrusive light, and appropriate daylight/automatic sensor functions.</i>
28	What consideration has been given to reducing refrigerants and minimising nitrogen oxide emissions?	<i>Where refrigerants are specified, consideration will be given to specifying refrigerants with low GWP and ODP. The use of electric heaters prohibits minimising NOx emissions, but is considered the most appropriate strategy for this development.</i>
29	How has the development been sited to minimise the impact of flooding?	<i>Detailed assessment of the site has confirmed the site is of low risk of flooding.</i>
30	How has the design considered the use of sustainable drainage systems (SUDS) and how will they be incorporated within the development?	<i>Due to the existing use of the site, the proposed development will not increase the amount of impermeable area post development compared to pre development. A sustainable drainage strategy has been developed for the site.</i>
Innovation		
Aim: To recognise innovation in the field of sustainability		
31	What consideration has been given to innovative sustainability measures in terms of a procurement strategy, design feature, management process or technological development?	<i>The proposed development is in a sustainable location and consideration has been given to appropriate sustainable design features as explained above.</i>

3 MEETING THE REQUIREMENTS OF POLICY DM1

3.1 Policy DM1 requires that all developments should seek to demonstrate how they have been designed to incorporate measures to adapt to climate change. A short summary and reference to the relevant information included within the planning application documentation is set out below against each of the required measures in Policy DM1:-

- *New buildings shall be orientated to maximise the opportunities for both natural heating and ventilation and reducing exposure to wind and other elements*

The Design and Access Statement sets out the design strategy for the proposed development and its proposed orientation. The Energy Statement sets out the proposed heating and ventilation strategy for the development, and demonstrates how opportunities for natural heating and ventilation have been taken into consideration.

- *Proposals involving both new and existing buildings shall demonstrate how they have been designed to maximise resistance and resilience to climate change for example by including measures such as solar shading, heating and ventilation of the building and appropriately coloured materials in areas exposed to direct sunlight, green and brown roofs, etc*

The Design and Access Statement and External Materials Schedule sets out the design strategy for the proposed development and the proposed material palette. A thermal modelling exercise has been undertaken to confirm the building will not overheat.

- *Use of trees and other planting, where appropriate as part of a landscape scheme, to provide shading of amenity areas, buildings and streets, designed with plants that are carefully selected, managed and adaptable to meet the predicted changed climatic conditions*

The Landscape Proposals set out the proposed landscaping strategy for the development, including soft landscaping features that will provide shading of the private amenity space and the building.

- *All development shall minimise the impact of surface water runoff from the development in the design of the drainage system*

The Flood Risk Assessment and Drainage Strategy sets out how the proposed development shall minimise the impact of surface water runoff from the development in the design of the drainage system.

- *Demonstrate the extent to which the proposal has taken account of the need to minimise the consumption of energy and resources (including water), and maximise the use of sustainable or renewable resources*

The commitments set out in Section 2 and 4 of this report, and the energy strategy proposed for the development, as defined in the Energy Statement, demonstrate how the proposal has considered the need to minimise the consumption of energy and resources (including water) and maximise the use of sustainable or renewable resources.

4 BREEAM PREDICTIVE ASSESSMENT

- 4.1 This section of the report presents the results of the BREEAM predictive assessment for the proposed New Century Place 3, a student accommodation development on land at East Street, Reading.

Scope of Assessment

- 4.2 The proposed development was registered with BRE at the beginning of 2018, and is therefore eligible to be assessed under the BREEAM UK New Construction 2014 assessment methodology. The BREEAM assessment methodology evolves over time, similar to the evolution of Building Regulation requirements. It is understood that since the registration of this proposed development, BRE has launched a new version to the assessment methodology. However, as this development concept was established prior to this date and registered accordingly with BRE, the assessment methodology to be used is the 2014 version. The development is categorised under BREEAM as a Multi-Residential development.

Targeted BREEAM Rating

- 4.3 Reading Borough Council's Core Policy CS1 states that new developments should achieve a BREEAM Very Good rating. Reading Borough Council is in the final stages of updating its Local Plan. This emerging Local Plan includes an updated policy requirement for all major applications to achieve a BREEAM Excellent rating, where possible. The subtext to this policy includes a specific reference to non-C3 forms of accommodation, therefore it is assumed this would be applied to all major applications for student accommodation. The subtext also includes reference to the complexity of achieving BREEAM Excellent for some types of developments, stating *"...some types of development, such as industrial uses, warehouses and schools, might find it more difficult to meet these standards. In these cases, developments must demonstrate that the standard to be achieved is the highest possible for the development, and at a minimum meets the BREEAM 'Very Good' standard"*.
- 4.4 A review has been undertaken to confirm whether it is considered possible to achieve a BREEAM Excellent rating for this proposed development, or if not, in line with the above statement, as a minimum a BREEAM Very Good rating is achievable. This review has been undertaken by Envision, an independent licensed BREEAM assessor organisation, employing BREEAM Accredited Professionals who have been recognised by BRE as having suitable level of knowledge and experience to guide developers through the BREEAM process. Envision has significant experience of working with

developers on other student accommodation projects across the UK and is able to advise Studios Development (Reading) Ltd on the detailed requirements of the BREEAM standard.

BREEAM Review Results

- 4.5 The results of the BREEAM review are presented in detail in Appendix A of this report, identifying the relevant design features and commitments that are possible for this development. This demonstrates that, where feasible, the minimum requirements for a BREEAM Excellent rating could be met (e.g. for the energy and water requirements) but that other minimum requirements (e.g. for individual recycling bins to be provided in each studio) and to achieve sufficient credits to gain an overall score of above 70% (the required score for a BREEAM Excellent rating), would be particularly onerous for a development of this type, and would add significant cost to the proposals.
- 4.6 The BREEAM credits have been heavily scrutinised by the design team and the identified achievable credits are supported by robust assumptions, so that this review provides a high level of certainty of what is achievable for this development. Where credits are not considered possible to achieve, justification is provided based on experience of similar developments and in-depth discussions with the team.
- 4.7 The results confirm that the development could achieve a score of **60.5%**, providing a suitable buffer over the 55% required for a **BREEAM Very Good** rating, along with meeting the minimum requirements for this rating level. (As noted in RBC's Revised Sustainable Design and Construction SPD, a buffer is a contingency, designed in at the predictive assessment stage to ensure that if some aspects of the design cannot be achieved and credits are dropped once progression is made to later stages, the BREEAM rating thought to be achievable can actually be achieved.)
- 4.8 The results are illustrated in the graph overleaf, confirming credits achievable across the BREEAM categories. Achieving a score higher than this is not considered possible for this development, and therefore, in line with both the existing planning policy and the emerging planning policy, it is demonstrated that a **BREEAM Very Good** rating is the highest possible for this development. The principles of Reading Borough Council's sustainable design and construction policy - *"designing buildings which use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change"* - are considered to be met by incorporating the proposed high energy and water efficient requirements within the proposed design, and achieving this overall BREEAM Very Good rating.

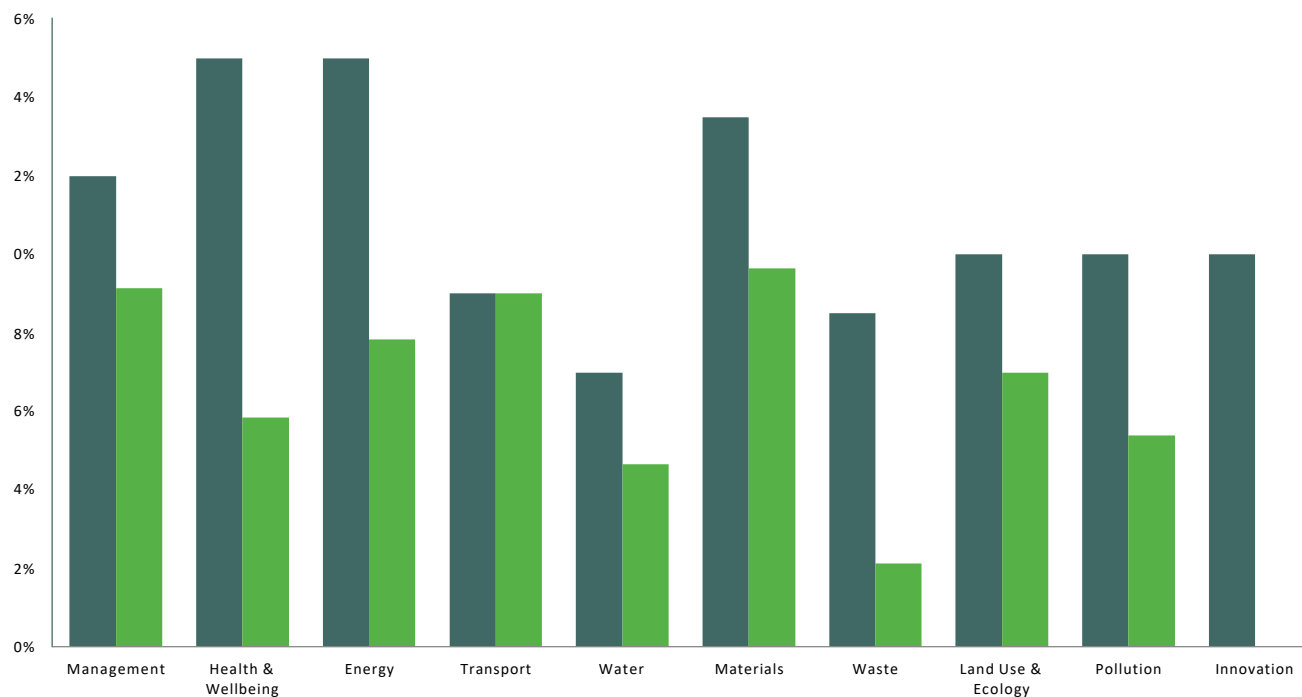
BREEAM UK New Construction 2014 Assessment Report: Rating & Key Performance Indicators



Overall Building Performance

Building name	New Century Place 3
BREEAM rating	Very Good
Total Score	60.5%
Min. standards level achieved	Very Good level

Building Performance by Environment Section



APPENDIX 1 – DETAILED BREEAM PREDICTIVE ASSESSMENT

		Available	Predicted Credits	Comments
Management (12% weighting)				
Man 01	Project brief and design	4	4	Credits achievable based on: - Consultation with local communities, heritage experts and consideration of similar buildings in developing the design - Design team, future building management team and construction experts involved from RIBA Stage 2 - BREEAM Accredited Professional involvement from RIBA Stage 1
Man 02	Life cycle cost and service life planning	4	1	Credit achievable based on commitment to report capital costs of project as part of BREEAM submission. No detailed Life Cycle Cost assessment carried out therefore further credits not achievable.
Man 03	Responsible construction practices	6	6	Credits achievable based on Principal Construction Contractor required to:- - Source all site timber in accordance with UK Gov's Timber Procurement Policy - Operates ISO 14001 EMS - Appoint a BREEAM Accredited Professional to monitor achievement of Very Good target through construction stage - Register with Considerate Constructors Scheme and achieving score of 35+ - Construction Contractor monitor energy and water consumption on site, and fuel consumption of transport of materials and waste to/from site
Man 04	Commissioning and handover	4	3	Credits achievable based on - Production of Building User Guide along with appropriate training is confirmed as standard within M&E Spec, - Programme and appointment of commissioning agent, including specialist commissioning manager where relevant The further credit to carry out post construction thermographic surveying is not feasible for this development due to the timing of completion and the imminent handover to students.

		Available	Predicted Credits	Comments
Man 05	Aftercare	3	2	Credits assumed for - Monitoring energy and water consumption data for first 12 months of occupation (see above) and providing aftercare support to building FM team. - Commitment to post occupancy evaluation. Further credit for seasonal commissioning not assumed. The potential impact on students and cost make this credit too onerous for this development.
Management Totals:		21	16	
Management score totals:			9.14	
Health & Wellbeing (15% weighting)				
Hea 01	Visual Comfort	4	2	Credits assumed based on information provided by design team confirming - occupant controlled blinds are specified in bedrooms - BREEAM defined internal and external lighting lux levels will be achieved, and internal lighting zoned to allow occupant control The daylighting analysis report confirms the average daylight factor for each room, and does not achieve the BREEAM requirements, therefore this is not achievable. Further credit for view out criteria (occupied space within 5m of wall with window, sized to be >20% of surrounding wall area) also not achievable.
Hea 02	Indoor Air Quality	5	2	Indoor Air Quality Plan to be produced for the proposed development, therefore 1st credit is achievable. 2nd credit also achievable based on NBS specification to include all paints/varnishes and finishes meeting minimum VOC and formaldehyde levels Further credits not possible to achieve:- - Carrying out post construction formaldehyde and VOC concentration level testing considered too costly - Openable window area provide adequate fresh air, based on BREEAM criteria on size of openable area compared to GIFA, and provision of two levels of user control – location of communal areas necessitates mechanical ventilation therefore not achievable

		Available	Predicted Credits	Comments
				- Based on size of building and proximity to the road, and specification of air source heat pumps, that it would not be feasible for the building intakes and exhausts to be over 10m apart and intakes over 20m from access roads/carparking areas
Hea 04	Thermal Comfort	3	2	One credit achievable based on the completed thermal model prepared in accordance with CISBE AM11 inc full dynamic thermal analysis, winter temp ranges in accordance with CIBSE Guide A, and building designed to limit risk of overheating. Further credit achievable for confirming heating zoning strategy informed by above thermal comfort analysis. Final credit not considered possible as would require additional thermal comfort modelling for a range of future climate scenarios.
Hea 05	Acoustic Performance	4	0	To achieve 1 credit, would require achievement of airborne sound insulation values at least 3dB higher and impact sound values at least 3dB lower than Building Regulations. Based on experience, this is considered too onerous for this type of development.
Hea 06	Safety and Security	2	1	Site plan and description of access in Design and Access Statement indicates the credit for 'Safe Access' is achievable. To achieve the second credit, an independent security assessment must be undertaken, with recommendations incorporated in the design. This has not taken place, therefore the credit is not achievable.
Health & Wellbeing Totals:		18	7	
Health & Wellbeing score totals:			5.83	
Energy (15% weighting)				
Ene 01	Reduction of energy use and carbon emissions	12	5	The Brukl Report confirms 5 credits are achievable, based on proposed energy strategy.
Ene 02	Energy Monitoring	1	1	Confirmed that all major energy consuming systems will be metered and monitored using a BMS (or with pulsed output to enable connection to future BMS) therefore credit achievable

		Available	Predicted Credits	Comments
Ene 03	External Lighting	1	1	Specification of energy-efficient light fittings and relevant daylight controls for external lighting confirmed therefore credit achievable
Ene 04	Low carbon design	3	2	Credits are achievable for carrying out a passive design analysis and a low and zero carbon feasibility study for the proposed development. The credit for free cooling is not achievable, as the requirements are considered too onerous for this type of development.
Ene 06	Energy Efficient Transportation Systems	3	3	A lift strategy has been developed based on appropriate transportation demand/usage and energy consumption analysis, and the lift will be specified with relevant energy efficient features, therefore credits achievable.
Ene 08	Energy Efficient Equipment	2	0	Whilst the intention is to specify energy efficient equipment, the requirements placed on the commercial laundry are too onerous and therefore it is not possible to achieve these credits.
Ene 09	Drying Space	1	0	It is not possible to provide drying lines either internally or externally and therefore this credit is not achievable.
Energy Totals:		23	12	
Energy score totals:			7.82	
Transport (9% weighting)				
Tra 01	Public Transport Accessibility	3	3	Public transport information in Travel Plan confirms 3 credits are achievable
Tra 02	Proximity to amenities	2	2	Design and Access Statement, Travel Plan and Transport Statement and review of location confirms site is - Onsite access to open space - Less than 500m from food outlet, cash machine and - Less than 1000m from a pharmacy, GP surgery and a post office. Therefore 2 credits are achievable.
Tra 03	Cyclist facilities	1	1	Planning drawings indicate 40 cycle storage spaces are to be provided. To achieve credit, would require cycle storage spaces for 1 in 4 student residents (based on 135 units – 33 spaces) plus for 1 in 20 staff (assumed 1 space). Therefore credit is achievable.

		Available	Predicted Credits	Comments
Tra 04	Maximum Car Parking Capacity	2	2	No carparking therefore maximum credits achievable
Tra 05	Travel Plan	1	1	A site specific travel plan has been prepared therefore credit achievable.
Transport Totals:		9	9	
Transport score totals:			9	
Water (7% weighting)				
Wat 01	Water consumption	5	2	Based on the specification of sanitary ware in similar developments delivered by Studios, it is confirmed 2 credits are achievable based on a 25% improvement in water consumption compared to Building Regulations requirements.
Wat 02	Water Monitoring	1	1	1 credit assumed based on confirmation that the water meter will be specified with pulsed output on mains water supply and separate submetering of laundry
Wat 03	Leak Detection	2	2	Credits achievable based on - specification to include provision of leak detection system capable of detecting major water leak on mains water supply within building and between building and utilities water meter - flow control devices to be installed for staff WCs on ground and top floor.
Wat 04	Water Efficient Equipment	1	1	Landscape Management Plan indicates plants specified that will not need watering after initial establishment period therefore credit achievable.
Water Totals:		9	6	
Water score totals:			4.66	
Materials (13.5% weighting)				
Mat 01	Life Cycle Impacts	6	6	The Design and Access Statement confirms the material specification will adhere to the general principles of the BRE Green Guide. Assumed feasible to achieve the 6 credits for specifying construction materials for main building elements (external walls, windows, roof, upper floors, wall and floor finishes) that achieve A/A+ rating in BRE Green Guide.

		Available	Predicted Credits	Comments
Mat 02	Hard Landscaping and Boundary Protection	1	0	Credit not considered possible to achieve due to high quality specification of hard landscaping materials.
Mat 03	Responsible Sourcing of Materials	4	2	Credits achievable based on Principal Construction Contractor required to:- - Have a written sustainable procurement plan - Procure a proportion of construction materials from 'responsible sources' (inc ISO14001/BES 6001). (Minimum requirement for all timber products to be legally sourced)
Mat 04	Insulation	1	1	Credits achievable based on Principal Construction Contractor required to specify insulation for the structure and building services with Green Guide rating of A or A+ where feasible, and supplied from 'responsible sources'
Mat 05	Designing for durability and resilience	1	1	Credit assumed for adequate protection of 'exposed' elements of the building and landscape.
Mat 06	Material efficiency	1	0	Credit requirements considered too onerous for this type of development.
Materials Totals:		14	10	
Materials score totals:			9.64	
Waste (8.5% weighting)				
Wst 01	Construction Waste Management	4	2	Credits achievable based on Principal Construction Contractor required to have a compliant SWMP in place and meet the following targets:- - 13.3m3 (or 11.1tonnes) of construction waste generated per 100m2 GIFA - 80% by volume or 90% by tonnage of demolition waste diverted from landfill - 70% by volume or 80% by tonnage of non-hazardous construction waste diverted from landfill - Demolition of substation / site clearance to have pre demolition audit
Wst 02	Recycled Aggregates	1	0	Credit requirements considered too onerous for this type of development

		Available	Predicted Credits	Comments
Wst 03	Operational Waste	1	0	Whilst an effective waste management strategy is proposed for this development, it is not possible to achieve this credit due to the requirement to provide recycling bins in every studio. This is not feasible without a significant impact on the internal space.
Wst 05	Adaptation to climate change	1	0	Requires a climate change adaptation appraisal at RIBA Stage 2 for development of this type. Credit requirements considered too onerous for this type of development
Wst 06	Functional adaptability	1	0	Requires a functional adaptation appraisal at RIBA Stage 2 and strategy for development of this type. Credit requirements considered too onerous for this type of development.
Waste Totals:		8	2	
Waste score totals:			2.13	
Land Use & Ecology (10% weighting)				
LE 01	Site Selection	2	1	Credit assumed for development on previously developed land. 2nd credit only achieved if site found to be contaminated and implement appropriate remediation strategy
LE 02	Ecological Value of Site and Protection of Ecological Features	2	2	ADAS ecology report confirms negligible ecological value on the site therefore 1 credit is achievable. The 2nd credit is not achievable due to the limited opportunity to protect the existing trees.
LE 03	Minimising impact on existing site ecology	2	2	Review of landscaping proposals and ecological report indicate 2 credits are achievable.
LE 04	Enhancing site ecology	2	2	Credits are achievable due to early survey/advice from ecologists, and recommendations incorporated into landscape proposals
LE 05	Long Term Impact on Biodiversity	2	1	Credits achievable based on - Appointment of ecologist to prior to construction and confirmation of compliance with all relevant UK and EU ecological legislation (see ecology report) - Preparation of a 5 year landscape and habitat management plan for this site (part of planning application documents) - Principal Construction Contractor required to:-

		Available	Predicted Credits	Comments
				- nominate a Biodiversity Champion, and recording actions to protect biodiversity during construction - training of construction workforce on protecting site ecology - OR confirmation from ecologist that above are not applicable Not considered feasible at this stage to achieve 2nd credit
Land Use & Ecology Totals:		10	7	
Land Use & Ecology score totals:			7	
Pollution (10% weighting)				
Pol 01	Impact of Refrigerants	3	1	Credit achievable based on HVAC systems specified to use refrigerants with DELC CO ₂ of <1000kgCO ₂ e/kW cooling/heating capacity.
Pol 02	NOx Emissions	2	0	No credits possible due to proposed electrical heating.
Pol 03	Surface Water Run Off	5	4	The detailed flood risk assessment has confirmed the site is in Flood Zone 1. The FRA also confirms no increase in impermeable area therefore credits 3 and 4 are achievable. 5th credit not considered achievable as it is not feasible on site of this type and design to ensure no discharge of rainfall up to 5mm.
Pol 04	Reduction of Night Time Light Pollution	1	1	External lighting layout is confirmed to address the following requirements:- - external lighting designed in compliance with Table 1 and accompanying notes of ILE Guidance Note for reduction of obtrusive light - all non-safety/security lighting automatically switched off between 2300hrs and 0700hrs, - safety and security lighting complies with lower levels in ILE guidance when operating between 2300hrs and 0700hrs.
Pol 05	Noise Attenuation	1	1	Apex Acoustics report confirms completion of a noise impact assessment and indicates acceptable noise levels of proposed building compared to background noise.

		Available	Predicted Credits	Comments
				Confirmation received from Apex Acoustics that the noise levels of proposed building would be no greater than +5db during the day and +3dB at night compared to background noise levels (or appropriate measures are installed to attenuate the noise).
Pollution Totals:		12	7	
Pollution score totals:			5.38	
Innovation (10% weighting)				
Man 03	Responsible construction practices	1	0	Exemplary level credit not possible to achieve
Hea 01	Visual Comfort	1	0	Exemplary level credit not possible to achieve
Mat 01	Life Cycle Impacts	3	0	Exemplary level credit not possible to achieve
Mat 03	Responsible Sourcing of Materials	1	0	Exemplary level credit not possible to achieve
Wst 01	Construction Waste Management	1	0	Exemplary level credit not possible to achieve
Wst 02	Recycled Aggregates	1	0	Exemplary level credit not possible to achieve
AI	Approved Innovation	1	0	No further innovation measures proposed
Innovation Totals:		10	0	
Innovation score totals:			0	