Diamondpool Ltd

Hatton Wall
BREEAM Offices Assessment

26th March 2008

Hyder Consulting

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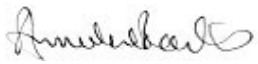
Checker:	Annabel Roberts	
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Hyder Consulting

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1 Introduction

This report has been prepared for Diamondpool Ltd by Hyder Consulting who have been appointed as the independent BREEAM Assessors for the Hatton Wall Development, Hatton Gardens. The report outlines the likely environmental performance under the BRE BREEAM for Office 2006 Assessment. At this early stage in the design a score of 64.14% is likely to be achieved which equates to a rating of 'VERY GOOD'. This is based on a number of assumptions using the BREEAM Offices Pre Assessment tool.

1.1 Development

The site is at no. 20-28 Hatton Wall which comprises of an existing building at no. 20-24 which is currently used as offices/workshops, with an existing building at no. 26-28 used as retail and offices.

It is proposed that the building at no. 20-24 is partially demolished and a new building constructed, with jewellery workshops in the basement and office from ground to the 5th floor.

The building at no. 26-28 will be refurbished to provide a ground floor retail unit with a change in use to 3 residential units.

It is proposed that the existing office entrance will be converted to office use and there will be a direct office entrance via no. 20-24.

1.2 Design Team

Client/ Developer:	Diamondpool Ltd
Architects (including Design and Access Statement and crime prevention statement)	Tate and Hindle
Transport Assessment	JMP
Conservation Statement	DPP
Conservation Area Consent Drawings	Tate and Hindle
Noise Impact Assessment	Sharpes Redmore
Archaeological Assessment	CGMS
Energy Statement	Mendick Waring
Daylight Sunlight Report	Drivas Jonas
Sustainability Assessment	Hyder Consulting

2 Background

BREEAM is a market-focused tool aimed at encouraging significant improvements in the performance of buildings through the recognition and demonstration of improvements made to those buildings.

The BREEAM score provides a means of measuring the environmental impact of a building throughout its life and so benchmarking this against other buildings. There are a number of key uses for the methodology, which provide the following benefits:

- Maximising opportunities of the building's performance during the design phase of both new build and refurbishment schemes.
- Specifying environmental requirements in the procurement and management of office accommodation of any age or type.
- Providing an independently verifiable measurement tool for use within Environmental Management Systems.
- Providing an independently verifiable environmental label for marketing and promotional purposes.

The BREEAM Offices rating is divided into four levels, with PASS, GOOD, VERY GOOD, and EXCELLENT being the achievable ratings. The percentage score achieved within the assessment is categorised accordingly, based on calculations in the BREEAM software:

Minimum scores required for Design and Procurement Assessment are as follows:

PASS	25%,
GOOD	40%,
VERY GOOD	55%,
EXCELLENT	70%,

3 Credit Summary Table

The tables below summarise the BREEAM Office credits against which Hatton Wall is likely to be assessed. The table details the maximum credits available under BREEAM, and the credits achieved to secure a VERY GOOD rating as confirmed during the BREEAM pre-planning workshop meeting and further correspondence.

- **Credits Likely to be achieved – VERY GOOD:** The credits detailed under this heading currently achieve a score of 64.14%and a rating of VERY GOOD as confirmed and agreed as suitable by the design team at this early stage in the design.

It should be understood that a minimum score of 55% is required to secure a rating of VERY GOOD. We advise that a score above 55% is secured so that, in the rare event that any credits are not awarded during the BRE QA process, the percentage is still sufficient to ensure the target rating is awarded.

- **Additional credits**- Hyder and the design team have identified additional credits to optimise the current VERY GOOD score.

The overall summary of credit rating is highlighted in the following table:

Core & Design & Procurement Credit Allocation Table					
Overall Credit Allocation	**Env Weighting**	**Available**	**Achieved**	**Percentage section credits achieved**	**Overall Weighted Percentage**
Management	15%	9	4	44.44%	**6.67%**
Health & Wellbeing	15%	13	10	76.92%	**11.54%**
Energy		18	11	61.11%	
Transport		15	14	93.33%	
Energy & Transport	25%	33	25	75.76%	**18.94%**
Water	5%	6	4	66.67%	**3.33%**
Materials	10%	12	5	41.67%	**4.17%**
Land Use & Ecology	15%	10	5	50.00%	**7.50%**
Pollution	15%	15	12	80.00%	**12.00%**
				Totals	**64.14%**

A breakdown of the score is shown in the following table:

Credit Ref.	Credit Heading	Maximum Credits Available	Credits likely to be achieved	Additional Credits
Management				
M1	Commissioning	2	1	-
M4	Considerate Constructors	2	1	-
M5	Construction Site Impacts	4	1	-
M12	Building User Guide	1	1	-
Health and Wellbeing				
HW1	Daylighting	1	0	-
HW2	View Out	1	0	-
HW3	Glare Control	1	1	-
HW4	High frequency lighting	1	1	-
HW5	Internal and external lighting levels	1	1	-
HW6	Lighting Zones	1	1	-
HW8	Potential for Natural Ventilation	1	0	-
HW9	Internal Air Pollution	1	1	-
HW11	Ventilation Rates	1	1	-

Credit Ref.	Credit Heading	Maximum Credits Available	Credits likely to be achieved	Additional Credits
HW14	Thermal Comfort	1	1	-
HW15	Thermal Zoning	1	1	
HW16	Microbial Contamination	1	1	-
HW17	Acoustic Performance	1	1	-
Energy				
E1	Reduction of CO2 emissions	15	8	-
E2	Sub-metering of substantial energy uses	1	1	-
E3	Sub-metering of areas/tenancy	1	1	-
E4	External Lighting	1	1	-
Transport				
T1	Provision of public transport	2	2	
T2	Transport CO_2	10	9	-
T3	Cyclist facilities	2	2	-
T4	Travel plan	1	1	-
Water				
W1	Water Consumption	3	2	-
W2	Water Meter	1	1	-
W3	Major Leak Detection	1	0	-

Credit Ref.	Credit Heading	Maximum Credits Available	Credits likely to be achieved	Additional Credits
W4	Sanitary Supply Shut Off	1	1	-
Material				
MW1	Materials specification (major building elements) Windows, external walls, roof, upper floor, internal walls, floor finishes, ceilings etc	4	2	-
MW3	Floor finishes	1	1	-
MW5	Re-use of building façade	1	0	-
MW6	Re-use of building structure	1	0	-
MW7	Recycled aggregates	1	0	-
MW8	Responsible sourcing of materials	3	2	
MW12	Storage of recyclable waste	1	0	-
Land & Ecology				
LE1	Reuse of Land	1	1	-
LE2	Contaminated Land	1	1	-
LE3	Ecological value of site and Protection of ecological features	1	1	-
LE4	Mitigating ecological impact	2	2	-
LE5	Enhancing site ecology	3	0	-
LE6	Long term impact on biodiversity	2	0	-

Credit Ref.	Credit Heading	Maximum Credits Available	Credits likely to be achieved	Additional Credits
Pollution				
P1	Refrigerant GWP - Building services	1	1	-
P2	Preventing refrigerant leaks	2	2	-
P4	Insulant GWP	1	1	-
P6	NOx emissions from heating source	3	2	-
P7	Flood risk and water run-off	2	0	-
P8	Minimising watercourse pollution	1	1	-
P11	Renewable and low emission energy	3	3	-
P12	Reduction of night time light pollution	1	0	-
		TOTAL	**64.14%**	

4 Management

The current ratings for management are summarised below:

4.1 Current Rating

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
M1	Commissioning	1 of 2	To recognise and encourage an appropriate level of building services commissioning that is carried out in a co-ordinated and comprehensive manner, this ensuring optimum performance under actual occupancy conditions.	Where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be carried out in line with current Building Regulations, BSRIA/CIBSE guidelines and (where applicable), best practice and where there are complex systems then a specialist agent or manager is appointed. Evidence should also be provided to show that seasonal commissioning will be carried out during the first year of occupation of the building.	The design team have committed to appointing a commissioning monitor on behalf of the client. Copies of the appointment letter will be required to achieve this credit.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
M4	Considerate Constructors	1 of 2	To recognise and encourage construction sites which are managed in an environmentally and socially considerate and accountable manner.	Where the project complies with either the Considerate Constructors scheme or an alternative independently assessed scheme and where a firm commitment is made to achieve certification under that scheme to the following standards: - Better than industry standard OR - Best practice	Assumption made that this credit will be achieved as it will be considered in detail by the design team at later stages. Documentation detailing this requirement will be required as evidence to enable these credits to be awarded. A commitment to achieve a CCS score between 32 and 40 will result in 2 credits being achieved.
M5	Construction Site Impacts	1 of 4	To recognise and encourage construction sites managed in an environmentally sound manner in terms of resource use, energy consumption, waste management and pollutions.	Where evidence demonstrates that - 2 or more of items a-g listed below are achievedOR- 4 or more of items a-g listed below are achievedOR- 6 or more of items a-g listed below are achieveda) monitor and report CO2 or energy arising from site activitiesb) monitor and report on water consumption from site activitiesc) monitor and report transport to and from site to enable CO2 emissions arising from transport to be calculatedd) monitor construction waste on sitee) sort and recycle construction waste on sitef) adopt best practice policies in respect to air	The design team have stated that the contractor will be required to sign up to the CCS and produce a CMP which complies with at least 2 out of the list as a baseline. Documentation detailing this requirement will be required as evidence to enable these credits to be awarded.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
				(dust) pollutiong) adopt best practice policies in respect to water (ground and surface) pollutionWhere temporary timber is used on site during construction, this is from a sustainable responsible source or is re-used or recycled.	
M12	Building user guide	1 of 1	To recognise and encourage the provision of guidance to enable a building user to understand and operate the building efficiently, in line with current good practice and in the manner envisaged by the design team.	Where evidence demonstrates the provision of a simple guide that covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building.	It was confirmed by the design team that a non-technical building guide will be provided for tenants/occupants. This should include building services information, emergency information and an energy & environmental strategy.

5 Health and Wellbeing

The current ratings for health and wellbeing are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
HW1	Daylighting	0 of 1	To improve the level of daylighting for building users.	Where at least 80% of net lettable office floor area is adequately daylight.	It is unlikely that this credit will be achieved.
HW2	View out	0 of 1	To allow occupants to refocus their eyes from close work and so reduce the risk of eyestrain.	Where evidence provided demonstrates that all desks are within a 7m radius of a window.	There is not sufficient information at this stage. However the assumption made is that this credit will not be achieved.
HW3	Glare control	1 of 1	To reduce problems associated with glare in internal occupied areas.	Where evidence provided demonstrates that an occupant controlled glare control system (i.e. internal or external blinds) is fitted.	External louvres (solar shading devices) are to be provided on west facing windows and internal roller blinds will be fitted. Assumption made that this credit will be achieved.
HW4	High frequency lighting	1 of 1	To reduce the risk of health problems related to frequency of fluorescent lighting.	Where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	It was confirmed by the design team that high frequency ballasts will be used on all fluorescent and compact fluorescent lamps. Relevant sections of the specification will need to be provided for the credit to be awarded.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
HW5	Internal and external lighting levels	1 of 1	To ensure lighting has been designed in line with best practice for suitably and visual comfort.	Where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained illuminance levels (in lux) recommended by CIBSE.	The design team have committed to provide internal and external lighting in accordance with the appropriate maintained illuminance levels (in lux) recommended by CIBSE. Relevant sections of the specification will need to be provided for the credit to be awarded.
HW6	Lighting zones	1 of 1	To optimise the level of occupant control over lighting within each workshop.	Where evidence provided demonstrates that lighting, in all occupied areas, is zoned to allow separate control.	Light control systems to allow separate control are to be installed. Confirmation of the control systems specified, including details of installations and zoning will need to be cited for the credit to be awarded.
HW8	Potential for natural ventilation	0 of 1	To ensure adequate cross flow of air in naturally ventilated buildings and future adaptation to natural ventilation in air conditioned/mechanically ventilated buildings.	Where evidence provided demonstrates that external façade windows to all occupied areas are openable.	At present it is not envisaged that this credit will be achieved.
HW9	Internal air pollution	1 of 1	To reduce the risk to health associated with poor indoor air	Where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust	The exact details of the air intakes/exhausts are not yet finalised however, it is likely that air intakes/outlets will be over 10m apart to

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
			quality.	air.	minimise recirculation and intakes over 20m from sources of external pollution. Therefore, the assumption can be made that this credit will be achieved.
HW11	Ventilation rates	1 of 1	To recognise the provision of adequate fresh air rated, in order to maintain a healthy indoor environment.	Where evidence provided demonstrates that each space within the development achieves recommended minimum fresh air rates	Commitment by the design team to provide minimum fresh air rates that will be at a rate of 12 litres per second per person. Therefore, this credit will be achieved.
HW14	Thermal comfort	1 of 1	To encourage the use of design tools to ensure that thermal comfort is achieved.	Where thermal comfort levels are assessed at design stage, this is used to evaluate appropriate servicing options, and appropriate thermal comfort levels are achieved	Thermal feasibility study has been carried out. The installations will be designed to achieve thermal comfort levels as recommended by CIBSE.
HW15	Thermal zoning	1 of 1	To recognise the provision of controls allowing independent adjustment of heating/cooling systems to reflect differing load requirements.	Where evidence provided demonstrates that local occupant control is available for temperature adjustment in each area to reflect differing load requirements.	The design team have made a commitment that thermal comfort will be zoned to allow separate control. Documents stating details of thermal zoning and the method of control will need to be provided for the credit to be awarded.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
HW16	Microbial contamin-ation	1 of 1	To ensure the building services are designed and maintained to avoid risk of Legionellosis.	Where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised.	Commitment made by the design team that all HVAC systems are designed to meet the requirements for control of legionella. This credit is therefore likely to be achieved.
HW17	Acoustic performance	1 of 1	To ensure the performance of the building meets the appropriate standards for its purpose.	Where the building design can be shown to achieve ambient internal noise levels as specified below: · 35-40dB LAeqT in single occupancy, cellular offices · 40-45 dB LAeqT I in medium sized, multi-occupancy open plan offices– ≤ 4 work stations ≤ 40m² · 45-50 dB LAeqT in large multi-occupancy, open plan offices > 4 work stations > 40m²	Confirmation made by the design team that the building will achieve the required noise levels as set out in the guidance. This credit is therefore likely to be achieved.

6 Energy

The current ratings for energy are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
E1	Reduction of CO_2 emissions	8 of 15	To recognise and encourage buildings that are designed to minimise the CO2 emissions associated with their operational energy consumption.	Where the building demonstrates a percentage improvement above the requirement for CO2 emissions as set out in the Building Regulations.	The estimated percentage improvement in carbon emissions will total approximately 14.5%, therefore it is likely that a total of 9 out of 15 credits will be achieved.
E2	Sub-metering of substantial energy uses	1 of 1	To recognise and encourage the provision of energy sub-metering to facilitate monitoring of energy use.	Where evidence is provided to demonstrate the provision of direct sub-metering of substantive energy uses within the building	It is assumed that submetering of substantive energy uses within the building will be used. Sub-meters should be provided for the following: space heating, humidification plant, cooling plant, fans, lighting, small power and other major energy consuming items.
E3	Sub-metering of areas/tenancy	1 of 1	To recognise and encourage the provision of energy sub-metering to facilitate energy monitoring by tenant or end user.	Where evidence provided demonstrates sub-metering of energy use by tenancy/areas is installed within the building.	It is anticipated that each floor of the building will comprise a separate tenancy and the electricity and energy use will be sub-metered accordingly. Therefore, one credit can be awarded.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
E4	External lighting	1 of 1	To recognise and encourage the specification of energy efficient light fittings for external areas.	Where energy efficient external luminaries are specified and all light fittings controlled for the presence of daylight.	Assumption made that energy efficient light luminaires will be used throughout the building and this also assumes that this includes external lighting.

7 Transport

The current ratings for transport are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
T1	Provision of public transport	2 of 2	To recognise and encourage the selection of sites served by good public transport facilities.	Where good access is available to and from public transport networks for: · Commuting AND/OR · Business travel.	The site is well served by public transport and is in the 500m zone. Frequency of services also meets the requirements. This credit will be achieved.
T2	Transport CO_2	9 of 10	To reduce the production of CO2 emissions as a result of commuter travel to and from the building by its users.	Where total commuting CO2 emissions are estimated to be <1300 kg/person/year Where total commuting CO2 emissions are estimated to be <1200 kg/person/year Where total commuting CO2 emissions are estimated to be <1100 kg/person/year Where total commuting CO2 emissions are estimated to be <1000 kg/person/year	Assumption made at this stage that 9 credits will be achieved in this section using the T2 - Transport Calculator.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
				Where total commuting CO2 emissions are estimated to be <900 kg/person/year Where total commuting CO2 emissions are estimated to be <800 kg/person/year Where total commuting CO2 emissions are estimated to be <700 kg/person/year Where total commuting CO2 emissions are estimated to be <600 kg/person/year Where total commuting CO2 emissions are estimated to be <500 kg/person/year Where total commuting CO2 emissions are estimated to be <400 kg/person/year	
T5	Cyclist facilities	2 of 2	To encourage building occupants to cycle by ensuring adequate cyclist	Where evidence is provided to demonstrate that there is adequate provision of covered, secure and well	A total of 17 secure, sheltered cycle storage racks are proposed for staff of the office which meets the requirements and will achieve 1 credit. However it is assumed that the second

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
			facilities are or will be present on site.	lit cycle racks and showers. Where in addition to the above, information is provided to demonstrate that there is adequate provision of changing facilities and lockers for clothes or a dedicated drying space for wet clothes.	credit will be achieved and meet the requirements for either changing facilities and lockers OR drying space for wet clothes.
T8	Travel plan	1 of 1	To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.	Where evidence is provided to demonstrate that a travel plan has been developed and tailored to the specific needs of the users of the assessed development.	A Travel Plan has bee written for the site which addreses the impact of traffic on the new development, walking, cycling, public transport, private cars, motorcycles etc. This credit will be achieved.

8 Water

The current ratings for water are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
W1	Water consumption	2 of 3	To encourage the specification of low water use sanitary fittings.	Where the specification includes taps, urinals, WCs and showers that consume less water in use than standard specifications for the same type of fittings.	The development will include water efficiency features such as dual flush and aerated taps in the design. One credit is awarded at this stage. However, information on water consumption per person could lead to further credits being awarded.
W2	Water meter	1 of 1	To ensure water consumption can be monitored and managed and therefore encourage reductions in water consumption.	Where evidence is provided to demonstrate that a water meter with a pulsed output will be installed on the mains supply to each building.	It is understood that standard meters used by Thames Water do not have a pulsed output, however it can be assumed that a pulsed meter could be used to achieve this credit.
W3	Major leak detection	0 of 1	To reduce the impact of major water leaks.	Where evidence is provided to demonstrate that a leak detection system is specified or installed.	It is not currently intended for this facility to be provided, however if a water meter was installed and water flow rates monitored and programmable to suit owner/occupiers requirements and an audible alarm to set to be activated upon an out of range reading, this

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
					credit could potentially be achieved.
W4	Sanitary supply shut off	1 of 1	To reduce the risk of minor leaks in toilet areas.	Where evidence provided demonstrates that proximity detection shut off is provided to water supply for all urinals and WC's.	There is a current commitment by the design team that proximity detection shut off will be supplied for all WC's. No urinals are being used in the development.

9 Materials and Waste

The current ratings for materials and waste are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
MW1	Materials specification (major building elements) Windows, external walls, roof, upper floor, internal walls, floor finishes, ceilings etc	2 of 4	To recognise and encourage the use of construction materials with a low environmental impact over the full life cycle of the building.	Where evidence provided demonstrates that the major building elements specified have an 'A rating', as defined in the *Green Guide to Specification*	At present the exact materials for the walls, windows, upper floor slabs and roof are not yet finalised. The design team have committed that consideration to the Green Guide will be given. For credits to be achieved the major building elements need to have an A rating from the green guide to specification.
MW3	Floor finishes	1 of 1	To avoid wastage of materials, by encouraging a single installation of floor finishes selected by the building occupant.	Where carpets and other floor finishes are specified by the future occupant or, in tenant areas of speculative buildings, where carpets or floor finishes are installed in a limited show area only	The design team have provided a commitment to install a show area indicating floor finishes.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
MW5	Re-use of building façade	0 of 1	To recognise and encourage the reuse of existing facades from buildings that occupy the site.	Where at least 50% of the new building's total façade comprises re-used façade and at least 80% by mass of the reused façade comprises in-situ re-used material	At present it is not envisaged that this credit will be achieved.
MW6	Re-use of building structure		To recognise and encourage the reuse of existing structures that previously occupied the site.	Where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's volume.	This credit cannot be awarded as the development is part new build and part re-furbishment, 50% by volume of the final building would need to be re-used which is not achievable in this instance.
MW7	Recycled aggregates		To recognise and encourage the use of recycled aggregates in construction thereby reducing the demand for virgin material.	Where significant use of crushed aggregate, crushed masonry or alternative aggregates (manufactured from recycled materials) are specified for 'high grade' aggregate uses (such as the building structure, ground slabs, roads, etc.).	At present it is not envisaged that this credit will be achieved.
MW8	Responsible sourcing of materials		To recognise and encourage the specification of responsibly sourced materials for key	Where materials used in structural and non-structural elements are responsibly sourced.	There is a current commitment by the design team that that timber will be FSC sourced. To achieve a higher rating other materials throughout the building must be responsibly

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
			building elements.		sourced. This includes elements such as roof, frame, external walls, floors, doors and windows.
MW12	Storage of recyclable waste		To recognise and encourage recycling of consumables in order to reduce the demand for virgin material and the amount of waste going to landfill or incineration.	Where the presence of a central dedicated storage space for recyclable materials either within the building or on site skips are provided with good access for collections .	At present it is not envisaged that this credit will be achieved. However it could be considered to achieve a higher rating by providing dedicated storage space for separation and storage of recyclable waste material.

10 Land use and Ecology

The current ratings for land use and ecology are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
LE1	Re use of land	1 of 1	To encourage the reuse of land that has been previously occupied by building developments and discourage the use of previously underdeveloped land for building.	Where evidence is provided to demonstrate that the footprint of the proposed development largely falls within the boundary of land previously developed	To achieve this credit at least 75% of the site needs to have been previously built on. As no new land is being developed this credit can be awarded.
LE2	Contaminated land	1 of 1	To encourage positive action to use contaminated land that otherwise would not have been developed.	Where evidence is provided to demonstrate that the land used for the new development has, prior to development, been defined as contaminated and where adequate remedial steps have been taken to decontaminate the site prior to construction.	At this stage it is unknown whether any contamination has occurred from previous tenants, however it is assumed that this credit will be awarded as no new land is being developed on for this scheme.
LE3	Ecological value of site AND Protection of ecological	1 of 1	To encourage development on land that already has limited value to	Where evidence is provided to demonstrate that the construction zone is defined as land of low ecological value and all existing features of	It is likely that the site does not contain any trees greater than 100mm in diameter, hedges/natural areas and watercourses/wetland, therefore the site is not classed as one with low ecological

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
	features		wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.	ecological value will be fully protected from damage during site preparation and construction works.	value. This credit will be awarded.
LE4	Mitigating ecological impact	2 of 2	To minimise the impact of a building development project on existing site ecology.	Where evidence is provided to demonstrate the change in ecological value of the site, as a result of development, is between less than zero and equal to, or less than, minus nine species, I.e. a small negative change Where evidence is provided to demonstrate there is no negative change in the ecological value of the site as a result of development I.e. equal to, or greater than, zero species.	It is believed that the site will not change in ecological value, therefore two credits can be awarded. Existing site plans, proposed site plans detailing planting types, trees, hard/soft landscaped areas need to be provided.
LE5	Enhancing site ecology	0 of 2	To maintain and enhance the ecological value of the site.	Where evidence is provided to demonstrate that the design team (or client) has I) appointed a professional to advise and report on enhancing and protecting the ecological value of the site; AND ii) implemented the	It is unlikely that an ecologist will be appointed, therefore this credit is not likely to be achieved.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
				professional's recommendations for general enhancement and protection for site ecology. Where, in addition to the above, evidence is provided to demonstrate a positive increase in the ecological value of the site of up to (but not including) 6 species. Where, in addition to the above, evidence is provided to demonstrate a positive increase in the ecological value of the site of 6 species or greater.	
LE6	Long term impact on biodiversity	0 of 2	To minimise the long term impact of the development on the sites and surrounding sites biodiversity.	Where evidence is provided to demonstrate that the client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements Where evidence is provided to demonstrate that the client has committed to achieving the mandatory requirements listed below and at least four of the additional requirements	As no advice from an ecologist is being sought this credit cannot be achieved.

11 Pollution

The current ratings for pollution are summarised below:

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
P1	Refrigerant GWP - Building services	1 of 1	To reduce the contribution to potential climate change from refrigerants with a high global warming potential.	Where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less that 5 or where there are no refrigerants specified for use in building services.	There is a commitment by the design team that refrigerants with a global warming potential (GWP) of less than 5 will be used in building services. Therefore, it is likely that this credit will be achieved.
P2	Preventing refrigerant leaks	2 of 2	To reduce the emissions of refrigerants to the atmosphere arising from leakages in cooling plant.	Where evidence provided demonstrates that refrigerant leaks can be detected or where there are no refrigerants specified for use in the building or development. Where the vidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves or where there are no refrigerants specified for the development.	The system proposed is ground source which circulates water around the building. Local ceiling mounted heat pumps use this to either heat or cool as required. Refrigerant is therefore limited to the heat pump. There is no refrigerant distribution pipework in the building.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
P4	Insulant ODP & GWP	1 of 1	To reduce the potential for global warming from substances used in the manufacture or composition of insulating materials.	Where evidence provided demonstrates that the specification of insulating materials avoids the use of substances with a global warming potential (GWP) of 5 or more in either manufacture or composition	Assumption made that refrigerants with a global warming potential (GWP) of 5 or more will not be used. Therefore, this credit is likely to be achieved.
P6	NOx emissions from heating source	3 of 3	To encourage the use of heating that minimises NOx emissions, and therefore reduces pollution of the local environment.	Where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are: · ≤100 mg/kWh (at 0% excess O2). · ≤70 mg/kWh (at 0% excess O2). · ≤40 mg/kWh (at 0% excess O2).	As gas is no longer required for space heating, ground source heating and cooling is proposed which is considered to have no resulting emissions. This can be therefore counted as having zero NOx emissions and three credits are likely to be achieved.
P7	Flood risk	2 of 3	To encourage the development of buildings in areas with reduced risk of flooding and ensure that storm water run-off from the development does not increase the flood risk on site or	Where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. Where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual	The area falls within a zone of low annual probability of flooding. At present two credits have been awarded. A further credit could be awarded if SUDS techniques are specified to attenuate 50% of the peak flow rate of water runoff, from hard surfaces to natural watercourses or municpal drainage systems, during a design storm event.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
			elsewhere.	probability of flooding OR Where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium annual probability of flooding and the ground level of the building, car parking and access is above the design flood level for the site's location AND Sustainable Urban Drainage techniques are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site through development. Where evidence provided demonstrates Sustainable Urban Drainage techniques are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site through development.	
P8	Minimising watercourse pollution	0 of 1	To reduce the potential for pollution to natural watercourses from surface water run off from buildings and	Where evidence provided demonstrates that on site treatment such as oil separators/interceptors or filtration have been specified for areas at risk from pollution, i.e. vehicle manoeuvring areas, car parks, waste	This credit could be awarded if a commitment is made to provide on site treatment such as oil separators/interceptors or filtration have been specified for areas at risk from pollution.

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
			hard surfaces.	disposal facilities, delivery facilities or plant areas	
P11	Renewable and low emission energy	3 of 3	To reduce atmospheric pollution by encouraging locally generated renewable or low emission energy to supply a significant proportion of the building's energy demand.	Where evidence provided demonstrates that a feasibility study considering renewable and low emission energy has been carried out and the results implemented. Where evidence provided demonstrates that the first credit has been achieved and 10% of total energy demand for the building/development is supplied from local renewable or low emission energy, sources. Where evidence provided demonstrates that the first credit has been achieved and 15% of total energy demand for the building/development is supplied from local renewable, or low emission energy, sources.	Three credits can be awarded as a feasibility study considering renewable and low emission energy has been undertaken and a renewable/low emission technology has been recommended and more than 20% renewable energy will be achieved.
P12	Reduction of night time light pollution	0 of 1	To ensure that night-time lighting is concentrated in the appropriate areas	Where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institution of Lighting	Currently the credit has not been awarded, however to achieve this credit all external lighting needs to be automatically switched off between 2300 and 0700 by ensuring that a timer

Credit	Definition	Credits Awarded	Aims	Credit Criteria	Assumptions
			and that upward lighting is minimised, reducing unnecessary, light pollution, energy consumption and nuisance to neighbouring properties.	Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.	will be provided for all external lighting and that the timer will be set to the appropriate hours. If safety or security lighting is provided and will be used between 2300 and 0700, the lighting system should automatically switch to the lower levels of lighting recommended during these hours. One credit could be awarded if the design team provide a commitment to achieve this.

12 Conclusions and Recommendations

In order to gain planning permission, the development must achieve a BRREAM Offices rating of VERY GOOD. To achieve this level the development is required to achieve a score above 55 points across the various categories. To develop the Pre-Assessment for the Site it is necessary to make a few assumptions. Providing all these assumptions are actually implemented then a score of **64.14%** will be achieved.