



**PROPOSED RIVERSIDE WORKS
THE ORACLE CENTRE
READING**

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APPENDIX 1

Predictive Assessment Summary Sheet – Very Good



EXECUTIVE SUMMARY

1. Hammerson has commissioned Envision Sustainability Ltd (Envision) to provide a BREEAM Sustainability Statement, incorporating a BREEAM predictive assessment for enhancements to Public Realm and a new Pavilion at the Oracle Shopping Centre, Reading.
2. The Statutory Development Plan for the site comprises the Reading Borough Council Core Strategy (adopted 2008), the Reading Central Area Action Plan (CAAP) (adopted 2009) and the Sites and Detailed Policies Document (adopted 2012). Policy CS1 of the Core Strategy identifies that:

“Proposals for new development, including the construction of new buildings and the redevelopment and refurbishment of existing building stock, will be acceptable where the design of buildings and site layouts use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change”.
3. The policy goes on to state that:

“All new commercial developments are required to meet the most up to date BREEAM ‘Very Good’ as a minimum standard”.
4. This predictive assessment demonstrates that a BREEAM score of ‘Very Good’ is possible for the development proposals, when made against the 2014 New Construction Criteria relevant for a speculative development. This will place specific requirements on the shell works which would be addressed by Hammerson. As explored within this statement, the scheme will deliver various sustainability benefits in support of Policy CS1:
 - The development proposals making good use of existing underutilised space to deliver a new retail offer.
 - Upgrades to existing public realm will create an enhanced outdoor area at The Oracle Centre.
 - The building’s shell will be delivered to a very high standard of fabric energy performance.
 - The contractor would register the site under the Considerate Constructors scheme, and take steps to reduce potential impacts arising through construction.
 - Water leak detection will be installed at the building’s boundary to prevent water leaks up to and within the unit.
 - Materials will be procured from manufacturers that are accredited with an EMS.
 - Thermal comfort analysis will be undertaken to ensure that the building can maintain comfortable conditions throughout the year, preventing it from overheating.
 - The design will include a living roof, and new landscaping will be introduced across the public realm.
 - Waste targets will be established and the contractor will take steps to minimise waste generation through a resource efficiency plan.
5. Should the Council impose a BREEAM condition on the scheme, it is recommended that no pre commencement BREEAM conditions are imposed on the scheme. Instead, should BREEAM be



secured by way of a condition this should only be required as a post occupancy planning condition, to be provided 3 months after first trading to enable evidence to be gathered and the BREEAM assessment to be validated by the BRE.



1 INTRODUCTION

Overview

- 1.1 Envision Sustainability Ltd (Envision) has been appointed by Hammerson Plc to prepare a Sustainability Statement and BREEAM predictive assessment for its development proposals at the Oracle Centre Reading. The predictive assessment supports a planning application made to Reading Borough Council for the construction of a new retail Pavilion and associated public realm works.
- 1.2 Full details of the proposals are provided within the Design and Access Statement, prepared by Barton Wilmore, which accompanies this application.
- 1.3 Reading Borough Council is currently working to its adopted Core Strategy 2008. Policy CS1 of the Core Strategy - Sustainable Construction and Design - requires new buildings in the borough to address sustainability principles:

***“Proposals for new development, including the construction of new buildings and the redevelopment and refurbishment of existing building stock, will be acceptable where the design of buildings and site layouts use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change.*”**

To meet these requirements: -

- ***All new housing is required to meet the most up to date Eco-Homes ‘Very Good’ as a minimum standard, and all new commercial developments are required to meet the most up to date BREEAM ‘Very Good’ as a minimum Standard”.***

Hammerson, The Oracle Centre and Sustainability

- 1.4 The Oracle Centre and surrounding public realm is owned and maintained by Hammerson Plc. Hammerson is a developer and operator of real estate in the UK and overseas. It is recognised for its approach to sustainable development. Hammerson performs highly on the FTSE4GOOD Stock Index, the Dow Jones Sustainability Index (DJSI), the Global Real Estate Sustainability Benchmark and the Carbon Disclosure Project. Its approach to sustainability shapes the way it plans and operates new and existing assets. As part of this Hammerson formally applies BREEAM to new large scale developments.
- 1.5 Hammerson have created a Retailer’s Handbook which has been applied since the opening of the Oracle Centre in 1999. The Handbook establishes requirements on tenants of the Centre to comply with various aspects of good practice, for example around safety and security, staff conduct and environmental policy. The environmental policy section of the Handbook aims to achieve the following:



- Reduce the use of energy, water and other natural resources, and implement regular maintenance and improvement programmes in order to operate Centres to their optimal environmental efficiency.
- Reduce the production of waste, recycle wherever possible, and dispose of the rest according to the best practicable environmental option.
- Operate Centres so as to minimise risks to human health or the environment, ensuring the provision of clean water and air, and minimising any hazardous effects from emissions or materials.
- Communicate with its retailers on environmental matters, ensuring that they are fully aware of the environmental policy, encouraging them to adopt similar standards in their own operations and not to do anything that contravenes its policy.
- Undertake regular health and safety inspections in accordance with current legislation and encourage its retailers to do the same.

1.6 The requirements of the handbook serve to ensure that environmental impacts are limited in accordance with the requirements of Policy CS1. The achievement of BREEAM in this instance will place additional design and administrative requirements on Hammerson and the future Tenant, the latter will be secured through a future lease agreement.



Approach to BREEAM

- 2.3 Policy CS1 requires that all new commercial developments are required to meet the most up to date BREEAM 'Very Good' as a minimum Standard. BREEAM assessments provide a sustainability rating for non-domestic buildings by giving consideration to a range of criteria. This includes principles of Management, Health & Well Being, Energy, Transport, Water, Materials, Waste, Land Use & Ecology and Pollution. Innovation credits are also available, representing new or exemplary performance in a specific sustainability issue.
- 2.4 This predictive assessment is made against the BREEAM New Construction criteria (2014 v3), and tailored to suit the speculative nature of the retail development. Hammerson will deliver the shell of the building, with a future retailer (presently unknown) to fill the space and fit out the unit with services, fixtures and fittings. As part of the scope of works the retailer would be required to install efficient services, in accordance with their future lease provisions and by following the Hammerson Retail Handbook.
- 2.5 Under BREEAM 2014 it is no longer possible to rely on a Green Lease as evidence for the assessment of speculative buildings. Non-fitted, speculative new buildings can still be assessed, however in these projects, where areas of the development are not fully-fitted, performance of the building and compliance with BREEAM is verified based on the developer's scope of works only. This is measured using two standard project type options:
- Option 1: Shell Only Assessment and certification, looking only at the buildings site and structure.
 - Option 2: Shell and Core Assessment and certification, which takes account of any CAT A works.
- 2.6 The BREEAM assessment for the Pavilion will be undertaken using Option 1, and therefore Hammerson will only be able to certify the shell of the unit. This will exclude various fit out aspects, such as water efficiency within the unit, however will still require an assessment of the development's energy performance, which on a shell only assessment places greater obligations on the buildings fabric energy efficiency. Those measures falling outside of the shell only assessment will be secured by provisions already placed upon tenants of The Oracle Centre within the Retailer's Handbook. Specific lease provisions will also be made to ensure that the tenant complies with other aspects of BREEAM, not included within the shell assessment.
- 2.7 In addition to the assessment of the building, a review has been undertaken to consider the applicability of the public realm enhancements with the BREEAM Assessment. BREEAM is able to consider hard and soft landscaping, which is ancillary to the main building under assessment. Given the scale of the public realm improvements, it is considered that the assessment of the entire site within the single building BREEAM assessment is generally inappropriate. There are no applicable BREEAM standards for public realm enhancements, and the equivalent standard for civil engineering projects (CEEQUAL) is considered to be inappropriate for the project. It is therefore recommended that the assessment is confined to the Pavilion and the immediate public realm areas where seating and planting is located.

Target Level

- 2.8 As required by Policy CS1, the target for the proposed works is 'Very Good' which is equal to or greater than 55. BREEAM scoring bands are shown below.

Target	Score
UNCLASSIFIED	<30
PASS	≥30
GOOD	≥45
V GOOD	≥55
EXCELLENT	≥70
OUTSTANDING	≥85

Mandatory Credits

- 2.9 The majority of credits within BREEAM New Construction are tradable, meaning that there is some flexibility to how a specific target can be achieved. BREEAM also includes a number of mandatory standards, which must be met in order to achieve Very Good. These credits are shown in the table below. The predictive assessment makes reference to these where appropriate.

BREEAM issue	Very Good
Ene 02 – Energy Monitoring	One Credit – Sub Metering
Wat 01 – Water Consumption	One Credit
Wat 02 – Water Monitoring	Criterion 1
Mat 03 – Responsible Sourcing	Criterion 1
LE 03 – Minimising Impact on Ecology	One Credit

Approach

- 2.10 A BREEAM predictive assessment has been undertaken for the proposed scheme. The main findings of the assessment are discussed in further detail in the following sections, including details of the efforts that will be taken to achieve individual credits. The assessment is based on an evaluation of site constraints, liaison with the design team and on the assumption that various measures and activities can be adopted in detailed design and construction. The BRE's predictive assessment estimator summary is provided in Appendix 1.
- 2.11 The process is iterative, and involves an initial assessment of the site and proposals, before considering additional sustainability measures to enhance the environmental performance of the scheme most practically and cost effectively.



Assessment Scope

- 2.12 In order to complete the assessment, a number of parameters need to be fixed. These define the criteria, and effectively remove erroneous credits for the assessment procedure. The following scope has been selected for this purpose.

Parameters	
Building Type	Retail
Building Type – Sub Group	Retail A1
Project Type	New Construction / Speculative
Heating and Cooling	Yes
Commercial Scale Refrigeration	No
Internal / External Soft Landscaping	Yes
Lifts / Escalators	No
Vehicle Wash	No

- 2.13 The following section provides a summary of performance and key issues of the building against the BREEAM Criteria.

3 BREEAM - MAIN FINDINGS

Factors for attaining BREEAM

3.1 The following factors are relevant for the achievement of a BREEAM rating for the site:

Positive factors in support of BREEAM

- Hammerson is a conscientious developer with considerable experience in delivering sustainable buildings throughout the UK.
- Due to the specialist nature of construction in a town centre environment, there is a need to operate any construction project with thorough consideration to stakeholders, including residential neighbours and retail tenants to minimise loss of trade, impacts on amenity and avoid nuisance.
- There are a number of existing facilities and practices which are already in place at the Oracle Centre which allow BREEAM credits to be awarded by default.
- The site benefits from excellent levels of public transport accessibility from Reading rail and bus stations.
- The site is deemed to have limited ecological value, albeit that the canal would require further confirmation from a suitably qualified ecologist.

Negative factors

- The assessment of the building as a shell only unit limits the assessments ability to consider measures the tenant will naturally apply. The energy assessment of a building's shell only heating and cooling as an attribute of fabric efficiency, which limits the number of credits a building can technically achieve under Ene 1. It also does not allow for factors such as efficient systems or renewable energy to be considered.
- The development is located on Flood Zone 2, and despite the building being over 300 mm above the theoretical flood level, the scheme cannot achieve BREEAM credits which requires development to be located over 600 mm above the design flood level.

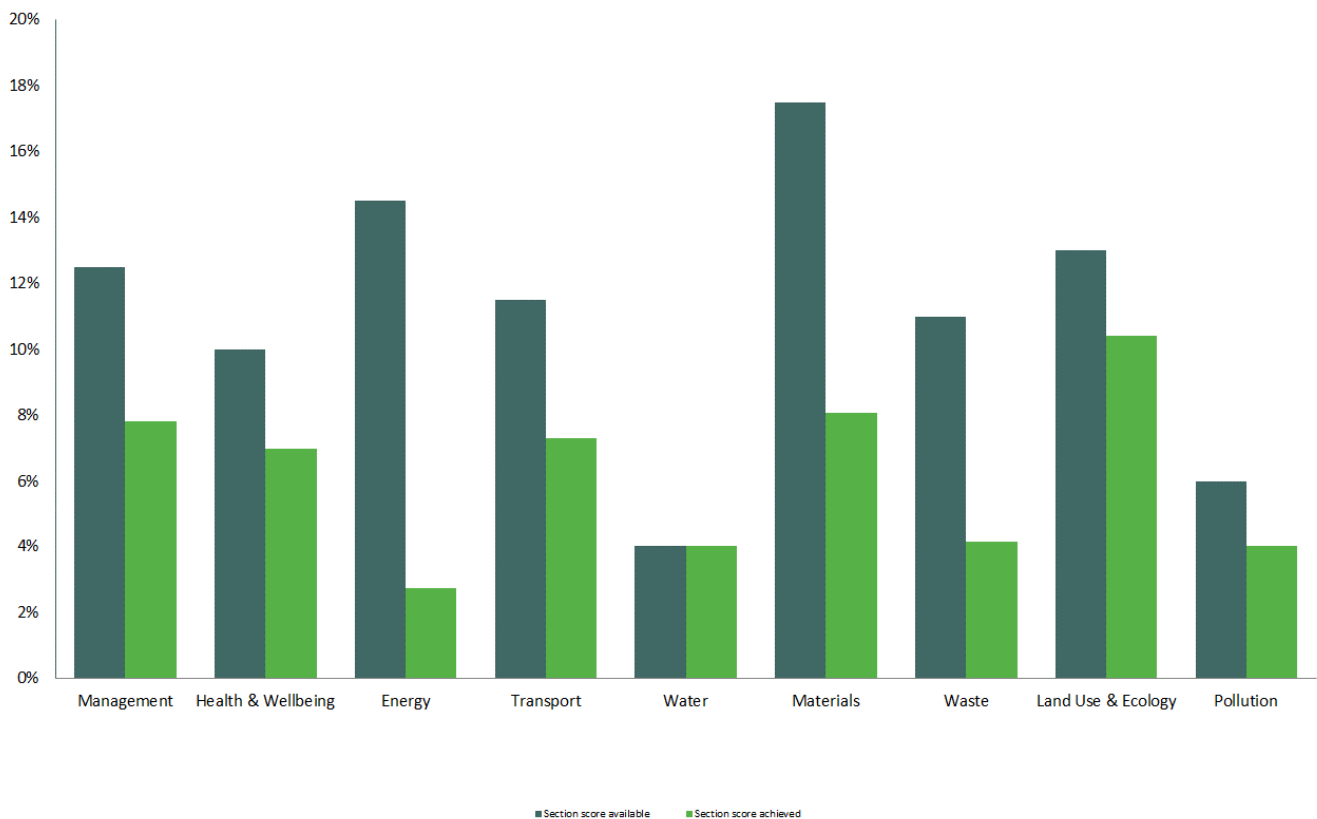
Predictive Assessment Summary Rating

3.2 The BREEAM predictive assessment demonstrates that a score of Very Good is technically achievable for the development, albeit that the performance is marginal over the 55% threshold. Through design development it is recommended that further analysis is given towards BREEAM with a view to increase the score further.

3.3 The scoring summary is shown overleaf and provided in Appendix 1.

Building name	Oracle Centre Riverside Pavilion
Indicative BREEAM rating	Very Good
Indicative Total Score	55.5%
Min. standards level achieved	Very Good level

Building Performance by Environment Section



Environmental Section		No. credits available	Indicative no. credits Achieved	% credits achieved	Section Weighting	Indicative Section Score
Management		16	10	62.5%	12.5%	7.8%
Health & Wellbeing		10	7	70.0%	10.0%	7.0%
Energy		16	3	18.8%	14.5%	2.7%
Transport		11	7	63.6%	11.5%	7.3%
Water		2	2	100.0%	4.0%	4.0%
Materials		13	6	46.2%	17.5%	8.1%
Waste		8	3	37.5%	11.0%	4.1%
Land Use & Ecology		10	8	80.0%	13.0%	10.4%
Pollution		6	4	66.7%	6.0%	4.0%
Innovation		10	0	0.0%	N/A	0

4 PREDICTIVE ASSESSMENT PROPOSALS

Management

- 4.1 BREEAM encourages good practice both in construction site management and for the operation of the building. Hammerson Plc and its partners own and manage the Oracle Centre and implement a series of procedures as standard practice when managing new construction and refurbishment projects. These limit the impacts of construction projects on the Oracle's customers and existing tenants within and around the shopping centre.

Construction Management

- 4.2 In terms of construction management, the following would be undertaken:
- The Principal contractor would register the project with the Considerate Constructors Scheme and achieve a score 35 or more;
 - Energy use would be monitored during construction using the BREEAM reporting tool, based on kWh consumption per 100K of project value.
 - Water use would be monitored and recorded during construction.
 - 100% of the timber would be sourced in accordance with Government Timber Policy¹.
 - The contractor will hold an EMS.
 - A 'sustainability champion' will oversee the setting of targets for the project. This is expected to be a member of Hammerson's sustainability team.
 - The building fabric will be commissioned prior to handover of the unit to the tenant.

Operational Management

- 4.3 In terms of facilities management and the tenants obligations, the Oracle Retailer's Handbook (2005) requires that fit out designers and contractors include energy and water efficient measures as part of their installations. Hammerson will produce a Building User Guide relevant to the shell works, which will be handed over to the tenant upon possession.

Health and Wellbeing

- 4.4 BREEAM 2014 includes various credits which assist to make buildings accessible and promote health. It includes standards for natural daylight, the control of glare, lighting levels and occupant

¹ Details of the policy may be found online. <http://www.cpet.org.uk/files/TPAN%20April%202010.pdf>



controls. More broadly credits are awarded for adopting security standards which align with the 'Secured by Design'.

Daylight and View Out

- 4.5 BREEAM requires that 35% of the restaurant floor area achieves a 2% daylight factor, with a good level of uniformity of daylight to avoid darker areas. In general the design has aimed to maximise the amount of daylight available in the pavilion. The building is expected to achieve very good levels of daylight during normal conditions due to the extensive use of glazing around the building. The southern and western facades of the building will be glazed from floor to ceiling height with Schuco glazing, which includes curtain walling and sliding doors. There is therefore an ability to achieve high levels of natural light within the building, whilst also providing views out onto the canal from the restaurant.

Artificial lighting levels and thermal comfort

- 4.6 New internal and external artificial lighting will be required as part of the works. In general there will be very limited new external lighting required as part of the works associated with the Pavilion, albeit that lighting enhancements are proposed with the public realm works. Lighting standards for the external works will be in accordance with BREEAM and will meet to relevant CIBSE standards including the CIBSE Code for Lighting 2009 for internal lighting. The internal lighting for the building will be designed by the tenant. This will be subject to the retail handbook.
- 4.7 In due course dynamic energy modelling will be used to assess energy demands and emissions for the building. This will be carried out at detailed design to ensure that appropriate internal comfort conditions can be maintained for building occupants. This is considered particularly important given the lightweight construction of the building, and high level of glazing, which could offer risk of high internal temperatures without further consideration of glazing treatments and potentially solar shading. This will be demonstrated using the CIBSE AM11 standard. The internal comfort levels will be in accordance with temperature ranges recognised by CIBSE Guide A. This will be achieved by openable windows and cooling provided by tenant's plant.

Security

- 4.8 BREEAM requires that specific consultation is undertaken with an Architectural Liaison Officer of similar. Given the location of the Pavilion in the public realm area, security is an important consideration for Hammerson, particularly at night. The site benefits from 24 hour security and a CCTV system linked to a manned control room. Hammerson employs Duty Assistants at the site whose role it is to:
- Liaise with the various shops and units with the aim of crime prevention.
 - Dispersing groups of people who appear to be loitering within the Centre and around the building and public realm areas.



- Escort visitors from the premises that appear to be under the influence of alcohol or drugs, or displaying behaviour not suited to a family environment.
- Ensure that visitors do not drink or smoke in unallocated areas.

4.9 The design of the site is being consulted through the Hammerson operational team that have advised on security issues. The police will also be consulted for input into the design.

Energy

4.10 BREEAM credit Ene 01 requires that improvements are made against 2013 building regulations. The achievement of these requirements for 'shell only' buildings places greater emphasis on fabric efficiency and air tightness over that required for Building Regulations Part L 2013 compliance alone.

4.11 A triple metric calculation methodology is used in BREEAM 2014 and promotes a 'fabric first' approach to building design. Credits are awarded based on the following triple metric hierarchy:

- Heating and cooling energy demand (influenced by factors such as building fabric performance and air permeability);
- Primary energy consumption (influenced by the efficiencies of building services systems and energy generation and transmission);
- CO₂ emissions (influenced by factors such as distribution efficiency and fuel source/renewable energy technologies).

4.12 Previously under BREEAM 2011, all three metrics were assessed for 'shell only' buildings and could contribute to achieving the Ene 01 score, however under BREEAM 2014 for 'shell only' buildings, only the building's heating and cooling energy demand is assessed. This means that it is particularly difficult to achieve credits under Ene 01.

4.13 The building's heating and cooling energy demand is influenced primarily by fabric efficiency and air tightness. Therefore, 'shell only' buildings must improve these factors in order to achieve credits under Ene 01. This also means that making assumptions of efficient building services within the energy model will not enable further credits to be achieved, as was the case with BREEAM 2011. Similarly, the use of low or zero carbon technologies will not count towards the achievement of further credits under Ene 01 for 'shell only' buildings. The focus of this building is therefore to build to a very high standard.

Thermal Construction

4.14 During detailed design consideration will be given to the thermal performance requirements of the unit. In order to satisfy the Ene 1 targets for Very Good, particular focus must be given to the insulation of the Schuco curtain walling and the opaque Reglit glass. It is anticipated that the highest possible performing systems would be required to comply with the targets.

- 4.15 Consideration has also been given to air leakage. The design air permeability rate will be lowered as far as practical. At this stage it is assumed that APR would need to be reduced to at least 5 m³/h/m² to comply with BREEAM.

Efficiency measures

- 4.16 Lighting is an important consideration for retailers and whilst is not a relevant consideration for the assessment of a building's shell, will have an impact on the overall performance of the building and will be a consideration for the tenant in its fit out. It is anticipated that heating and hot water will be provided by a split system ASHP solution, proving a highly efficient solution. Such measures will be secured through the retailer's handbook.

Transport

- 4.17 BREEAM awards credits for accessible developments that make provision for sustainable forms of transport.
- 4.18 Reading Train Station is located approximately 0.6 miles from the proposed development. The station offers connections throughout the UK, to London, Oxford the South West and the north of England. Its highly accessible location assists with the performance under BREEAM. Reading also benefits from an excellent bus network including Park and Ride schemes stopping near the Oracle including NightTrack - Reading's late night bus service. Bus services provide access the Oracle Centre 24 hours a day, 7 days a week. Many of which are powered by biofuels. Four of five credits are available for BREEAM credit Tra 1.
- 4.19 Credits are also available if a compliant Travel Plan and cycle storage. Hammerson maintains a Green Travel to Work Plan, which was last updated in January 2015. The document aims to outline how The Oracle encourages the use of sustainable travel options for Centre Management staff, but also for the retailers. Whilst the Travel Plan primarily focuses on Oracle Centre staff, the Plan is shared with retailers on the site with a view to make a modal shift away from private car use. The continued application of the Travel Plan warrants credits under BREEAM.
- 4.20 Suitable cycle storage already exists at various points around the Oracle Centre and would be made available to the staff of the management centre. The existing features are sufficient to award credits under BREEAM, as over 50 units are provided across the estate.

Water Use

- 4.21 Under BREEAM 2014 credits are awarded for reductions in water use, measured against a percentage reduction from a notional baseline. The shell only assessment excludes the consideration of water efficiency measures, however such requirements will be secured through the lease and the Retailer's Handbook. Hammerson will ensure that the tenants install efficient plumbing within the unit. The building would include low water fittings compliant with BREEAM.
- 4.22 Hammerson will install a leak detection system for the unit on the buildings main water main. This will provide leak detection capability at the buildings boundary, and within the floor slab of the unit.
- 4.23 New landscaping will be included around the public realm area. This will be watered manually from a bowser, particularly during warmer times as plants establish. The landscaping will not require any formal irrigation strategy to be put in place. The living roof will include drought tolerant plants, albeit that some manual watering will be required to establish the plants.

Materials

- 4.24 The materials section within BREEAM 2014 awards credits for the specification of sustainable 'major' building elements which are highly rated under the 'Green Guide to Specification'. BREEAM 2014 also awards additional credits if life cycle carbon emissions are considered in material specification, through the application of Environmental Product Declarations. Credits are also available for durability studies.

Building Specification

- 4.25 The design will provide a very light and healthy building through the proposal to use extensive areas of glazing within the Pavilion. The glazing, which will make up the walls and sliding doors of the unit will be classed as curtain walling from the perspective of the BREEAM assessment. These materials, using aluminium or steel frames, will generally achieve a B or C rating under the BRE's Green Guide. The exact rating will depend on the frame specification and weight of the system finally chosen. Both the Schuco and Pilkington Reglit systems are accredited with an EMS which covers the process and manufacturing phases of development. The Reglit includes up to 27% recycled content in the composition of the glass, which further supports BREEAM.
- 4.26 The roof will comprise an inverted deck with a living roof from Bauder. The specification of this will be defined during detailed design, however is expected to achieve at least a B rating under the Green Guide to specification.
- 4.27 The main structural frame will be fabricated in steel and will be procured to BES6001 Very Good. A target for the use of recycled and secondary aggregates has also been set for the project. Over 25% of the aggregates used for the Pavilion will be recycled.

Hard Landscaping

- 4.28 Similarly to Man01, credits are also awarded for the specification for sustainable materials for hard landscaping and boundary protection. The site will make use of existing landscaping where possible. Resin bound gravel will be used across the site. The epoxy content of this is detrimental to a BREEAM assessment, and would typically carry a D – E rating. This rating does not however take account of the wider durability and aesthetic benefits which the material offers, and its ability to manage surface water. The application of the resin bound gravel overall is thought to be a sustainable solution for the site.

Procuring Materials Responsibly

- 4.29 Throughout further stages of design following the appointment of a contractor, consideration will be given to the responsible sourcing of main construction materials. For example, material suppliers will preferentially hold an Environmental Management System (EMS), where possible accredited to ISO 14001. At this stage it is assumed that the main building elements including the roof, glazing, and cladding can be procured from suppliers that have a robust EMS in place.
- 4.30 All timber will be FSC and procured in accordance with the UK Government's Timber Procurement policy.

Waste

- 4.31 With regards to construction and demolition waste, prior to commencement of works, targets will be established within a simple Site Waste Management Plan which accords with the UK Waste Hierarchy.
- 90% of demolition waste (slab break up) and 90% of non-demolition waste (by tonnage) will be diverted from landfill.
 - A target for waste generation 6.5 tonnes per every 100m² of floor area will be established for construction waste.
 - Waste will be managed in accordance with existing practices maintained within the Oracle Centre.

Land Use and Ecology

- 4.32 BREEAM awards credits for locating development on brownfield sites in areas of low ecological value. Credits are also available through consultation with an ecologist and the incorporation of landscaping and ecological enhancements into a scheme.
- 4.33 In general the scheme offers enhancements to the existing situation. A new living roof will be included on the roof of the unit which will incorporate species which offer local ecological value. The wider landscaping proposals will also include planters and floating reed beds. Given the presence of the canal the site cannot be judged to have low ecological value based on the completion of the BREEAM checklist, but must be judged to have LEV based on a visit by a suitably qualified ecologist, who will be brought onto the team after planning consent has been granted



to advise on species composition, including the substrate and specification of green roof and planters. At this stage the site is deemed to have low value based on its urban location and built form. The canal is also a heavily modified waterbody and considered unlikely to offer ecological value.

Pollution

- 4.34 BREEAM awards credits for design measures which reduce pollution from the building. The section covers a number of areas including impacts from refrigerants on level of greenhouse gas emissions, NOx emissions to reduce pollution of the local environment, SuDS, light pollution and noise. Due to the scale of the proposals, many of these issues have not been raised by the local authority during pre-application consultation.

Light Pollution

- 4.35 Given the built up nature of the surrounding area and night time uses, the new build extension is not expected to add significant night time light or noise pollution to the local area. There will be new areas of glazing which can spill light. The lighting that is included will be carefully designed so as to not affect night time amenity. The design will follow the ILE guidance on the Reduction of Obtrusive Light.

Drainage and Flood Risk

- 4.36 Flood Risk and SUDs are also addressed in BREEAM. The site is located in Flood Zone 2, which is considered to have a medium risk of flooding, however the floor level of the Pavilion is 300 mm above the design flood risk level meaning that it is acceptable to locate the development in this location. A sequential assessment, prepared by Simply Planning provides justification for the location of the site. BREEAM requires development to be located above a 600 mm threshold, and therefore credits are not available for flood risk under a BREEAM assessment, albeit the development is not expected to pose any risk from flooding.

BREEAM has specific requirements for the control of surface water and for minimising the risk of flooding. The proposed development is located on an area of 100% impermeable surfacing. As there will be no increase in surface water the surface water runoff criteria area achievable by default. The application of the green roof and resin-bound gravel will also lead to betterment from the existing situation.

5 CONCLUSION AND RECOMMENDATIONS

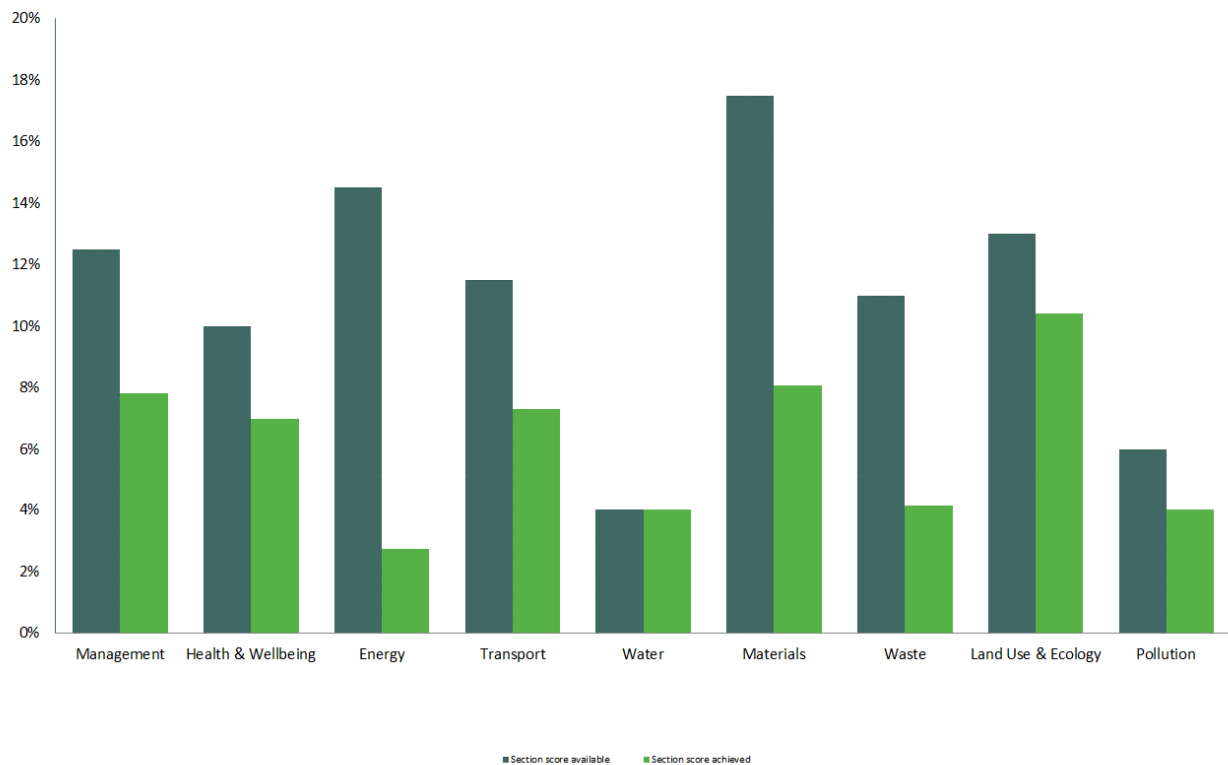
- 5.1 The proposed development forms will create new public realm at The Oracle Centre and will deliver a new retail Pavilion. Policy CS1 requires that new development addresses BREEAM requirements. A predictive assessment demonstrates that a score of 'Very Good' is achievable for a development based on a shell only assessment. Furthermore, Hammerson will take steps to reduce the impact of the tenants fit out, by securing specific measures as part of the tenancy lease agreement and through the application of the Retailer's Handbook, which requires the tenant to address various measures in the fit out.
- 5.2 The main attributes of the development that will support BREEAM and Policy CS1 are as follows:
- The development proposals making good use of existing underutilised space to deliver a new retail offer.
 - Upgrades to existing public realm will create an enhanced outdoor area at The Oracle Centre.
 - The building's shell will be delivered to a very high standard of fabric energy performance.
 - The contractor would register the site under the Considerate Constructors scheme, and take steps to reduce potential impacts arising through construction.
 - Water leak detection will be installed at the building's boundary.
 - Materials will be procured from manufacturers that are accredited with an EMS.
 - Thermal comfort analysis will be undertaken to ensure that the building can maintain comfortable conditions throughout the year, preventing it from overheating.
 - The design will include a living roof, and new landscaping will be introduced across the public realm to offer ecological enhancement.
 - Waste targets will be established and the contractor will take steps to minimise waste generation through a resource efficiency plan.
- 5.3 Should the Council impose a BREEAM condition on the scheme, it is recommended that no pre commencement BREEAM conditions are imposed on the scheme. Instead, should BREEAM be secured by way of a condition this should only be required as a post occupancy planning condition, to be provided 3 months after first trading to enable evidence to be gathered and the BREEAM assessment to be validated by the BRE.

APPENDIX 1

Predictive Assessment Summary Sheet – Very Good

Building name	Oracle Centre Riverside Pavilion
Indicative BREEAM rating	Very Good
Indicative Total Score	55.5%
Min. standards level achieved	Very Good level

Building Performance by Environment Section



Environmental Section		No. credits available	Indicative no. credits Achieved	% credits achieved	Section Weighting	Indicative Section Score
Management		16	10	62.5%	12.5%	7.8%
Health & Wellbeing		10	7	70.0%	10.0%	7.0%
Energy		16	3	18.8%	14.5%	2.7%
Transport		11	7	63.6%	11.5%	7.3%
Water		2	2	100.0%	4.0%	4.0%
Materials		13	6	46.2%	17.5%	8.1%
Waste		8	3	37.5%	11.0%	4.1%
Land Use & Ecology		10	8	80.0%	13.0%	10.4%
Pollution		6	4	66.7%	6.0%	4.0%
Innovation		10	0	0.0%	N/A	0