

Dunsbury Hill Farm
Sustainability Statement

Portsmouth City Council

March 2012

Dunsbury Hill Farm

Sustainability Statement

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1. Introduction

Purpose of the Sustainability Statement

- 1.1 This Sustainability Statement has been prepared by Atkins for Portsmouth City Council (PCC) to explain how sustainable development principles have been considered within the hybrid application relating to the development of Dunsbury Hill Farm for employment uses and a quality hotel with conference facilities. This statement indicates how the identified sustainability requirements have been or will be addressed as the details of the proposals are developed. This is particularly important as Dunsbury Hill Farm is envisaged to be an exemplar for sustainable construction and design.
- 1.2 This statement forms part of the supporting information for the planning application for the development of Dunsbury Hill Farm and should be read in conjunction with the other documentation which comprises the application.

Structure of Report

- 1.3 This Sustainability Statement is structured as follows:
- Section 2 describes the Site and its context;
 - Section 3 explains the approach taken to the preparation of the Statement, explains objectives under each sustainability topic and sets the policy context;
 - Section 4 details findings for each sustainability topic;
 - Conclusions are set out in Section 5.

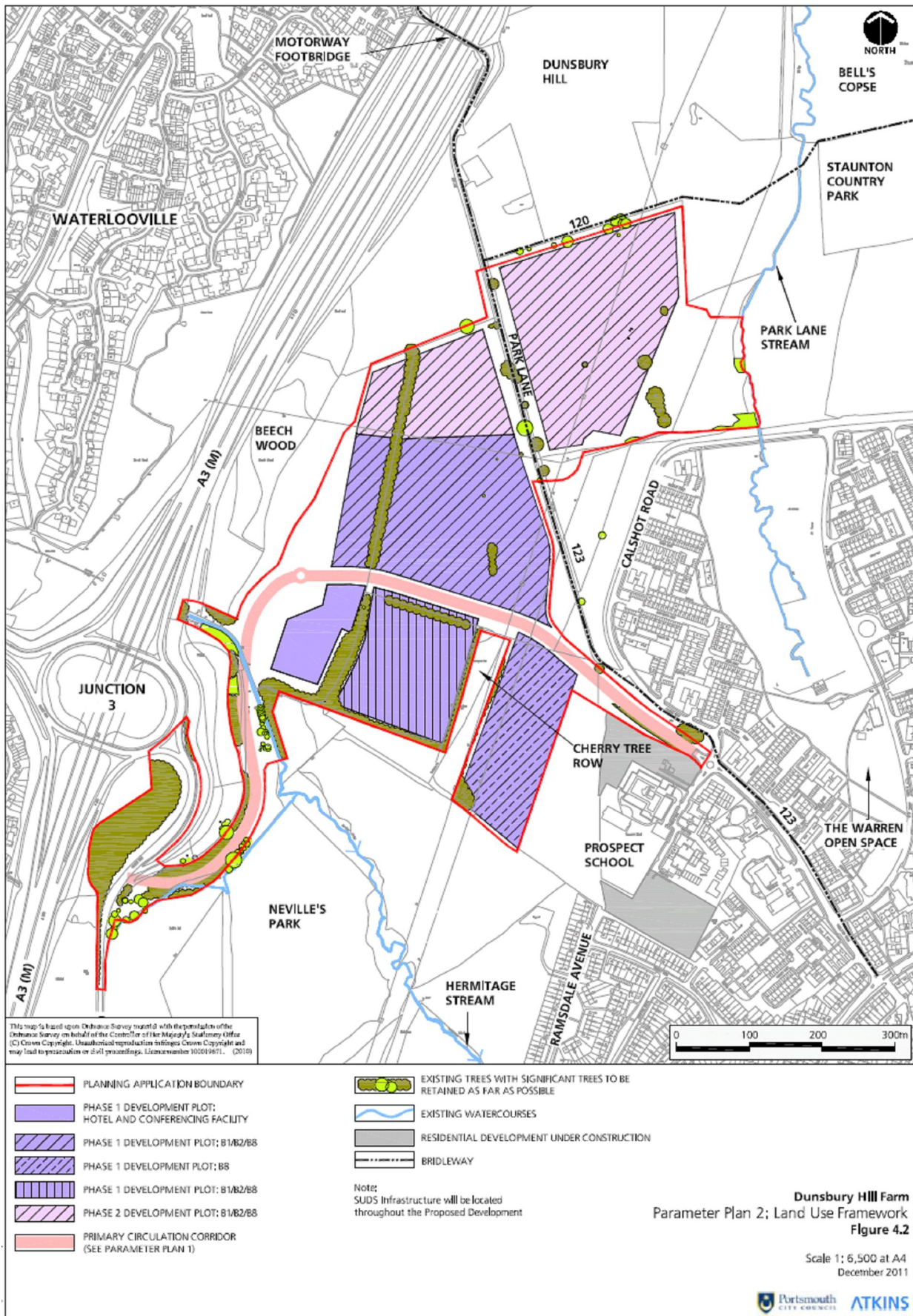
Sustainable Development

- 1.4 The concept of sustainable development is central to the planning system. The term “sustainable development” has been used since 1987 following the publication of the World Commission on Environment and Development (WCED) report “Our Common Future”, commonly referred to as the Brundtland report. It called for a strategy that united development and the environment – described by the now-common term “sustainable development”, which is defined as:
- ‘Development that meets the needs of the present without compromising the ability of future generations to meet their own needs’*
- 1.5 The key aim of sustainable development is commonly defined by the UK Government as ‘ensuring a better quality of life for everyone, now and for future generations to come’.

2. Site Description and Context

- 2.1 Dunsbury Hill Farm is a key strategic employment site for Havant Borough. The Regeneration Strategy for Havant Borough shows Dunsbury Hill Farm as a major development opportunity. The Strategy sees this site as important, because it will deliver a considerable number of jobs next to Leigh Park which is a priority area for regeneration.
- 2.2 The Site comprises a 39 hectare area of land. The Proposed Development includes 20.2 hectares which will be developed for employment uses and a hotel with conference facilities. The rest of the Site will be developed to provide a comprehensive landscape framework and supporting infrastructure including a new link road (see Figure 2.1).
- 2.3 The Site is located on undeveloped land between Waterlooville and Leigh Park on the north western side of Havant Borough. The Site lies immediately to the east of the A3(M) motorway Junction 3, and the A3(M) runs along the western edge of the Site.
- 2.4 The residential area of Waterlooville lies to the west of the Site, while the Leigh Park estate lies to the east. Open countryside consisting of blocks of woodland and agricultural fields lie to the north of the Site. There is a further area of woodland and agricultural fields to the south of the Site, with superstores located further south on Purbrook Way.
- 2.5 The slip road leading off the A3(M) is the B2150 Hubert Road, which runs on the western side of the Site, and is proposed to provide access for the Proposed Development.
- 2.6 The Site comprises a series of extensive open fields enclosed with established hedgerows. It is dissected across the north east corner by Park Lane which connects Waterlooville with the Leigh Park estate. The Site slopes gently from north to south, down to the Hermitage Stream which runs on the south western side of the Site from Waterlooville to Leigh Park. A 50m section of the stream is canalised where it runs eastwards from the A3(M). The stream is located within Flood Zone 3 and is subject to fluvial flooding.
- 2.7 Belts of woodland lie to the south and west of the Site which are identified as Sites of Importance to Nature Conservation (SINCs), namely Beech Wood East, Cherry Tree Row and Bushy Lease. There are a number of trees located within and adjacent to the Site.
- 2.8 High voltage power lines and a mains gas pipeline run through the Site along the eastern side.
- 2.9 The Site is owned by Portsmouth City Council (apart from a small area close to Hulbert Road which is owned by Department of Transport. The majority of the land is let to two agricultural tenants).

Figure 2.1 – Dunsbury Hill Farm



3. Derivation of Sustainability Requirements

Approach

- 3.1 As stated in the Pre-Submission Core Strategy (March 2011) 'The Dunsbury Hill Farm development will be an exemplar for sustainable construction and design. All commercial buildings constructed on the site after 2012 will be required to achieve at least BREEAM 'excellent' standard.'
- 3.2 Therefore, the sustainability assessment framework that has been used to assess the masterplan has been structured around Building Research Establishment's Environmental Assessment Method (BREEAM) Offices categories and objectives. The relevant local planning policy context has been also analysed and taken on board.
- 3.3 BREEAM sets the standards for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance. The BREEAM Offices requirements have been supplemented by the BREEAM Communities requirements to cover site-wide considerations, where deemed necessary.
- 3.4 The BREEAM Office scheme covers ten categories of sustainability including:
- Management
 - Health & Wellbeing
 - Energy
 - Transport
 - Water
 - Materials
 - Waste
 - Land Use and Ecology
 - Pollution
 - Innovation

Table 3.1- Summary of BREEAM categories and main issues

Management • Commissioning • Construction site impacts • Security	Waste • Construction waste • Recycled aggregates • Recycling facilities
Health and Wellbeing • Daylight • Occupant thermal comfort • Acoustics • Indoor air and water quality • Lighting	Pollution • Refrigerant use and leakage • Flood risk • NO_x emissions • Watercourse pollution • External light and noise pollution
Energy • CO₂ emissions • Low or zero carbon technologies • Energy sub metering • Energy efficient building systems	Land Use and Ecology • Site selection • Protection of ecological features • Mitigation/enhancement of ecological value
Transport • Public transport network connectivity • Pedestrian and Cyclist facilities • Access to amenities • Travel plans and information	Materials • Embodied life cycle impact of materials • Materials re-use • Responsible sourcing • Robustness
Water • Water consumption • Leak detection • Water re-use and recycling	Innovation • Exemplary performance levels • Use of BREEAM Accredited Professionals • New technologies and building processes

- 3.5 The BREEAM Communities manual in addition to the categories above includes '*Place Shaping*' and '*Business*' categories which are relevant to the proposed development. Additionally, its category '*Climate and Energy*' is wider in scope than '*Energy*' category in the BREEAM Offices. Therefore, a number of issues and requirements from the BREEAM Communities have been added to the sustainability assessment framework to ensure a proper coverage of sustainability considerations applicable for the whole site rather than buildings in isolation.
- 3.6 It should be noted, however, that the information included in this report does not in any way constitute a BREEAM assessment or preliminary assessment. BREEAM assessment would need to be undertaken at the later stage for each building or group of buildings, utilising the right BREEAM assessment tools for different types of buildings on site when more detailed design information becomes available.
- 3.7 A Briefing Note, selectively listing only those BREEAM issues and requirements that were deemed to be relevant to facilitate the preparation of the hybrid planning application, was prepared earlier and circulated to the EIA specialists (see Appendix A). The Note aimed to steer the specialists in the right direction in the preparation of their workstreams' outputs, which then informed the development of the Sustainability Statement.
- 3.8 The Statement does not aim to reward any credits under the issues listed below. It only indicates whether the application has been prepared generally in line with the relevant BREEAM requirements. Consideration of the relevant BREEAM requirements early in the process provides an opportunity to ensure that when the BREEAM certification is sought at the later stage, there should be no significant barriers in achieving this.

Local Planning Context and Overarching Design Requirements

3.9

Relevant policies from the Core Strategy and requirements from the Dunsbury Hill Farm Development Brief for the BREEAM categories are outlined in relevant sub-sections below to set out local policy context. This section indicates the requirements of the overarching **Core Strategy Policy 16: High Quality Design** for achieving high quality and sustainable places:

‘Planning permission will be granted for development that is designed to a high standard, which helps to create places where people want to live, work and relax. All development should demonstrate that its design:

- Responds to, draws inspiration from and respects local context and:
 - Identifies and responds positively to existing features of natural, historic or local character within or close to the proposed development site;
 - Integrates with existing local landscape features, promotes wildlife and biodiversity and/or applies characteristics of the local area into the design of a scheme wherever possible to create variety and interest;
 - Uses the characteristics of the locality to help inform the design of the new development including heights, massing, existing buildings lines, plot widths and depths, materials and proportions of windows and doors;
 - Is well connected to and integrates with the immediate local area and the wider area by linking to existing pedestrian and cycle routes and encouraging people to use public transport where possible; and
 - The development does not cause unacceptable harm to the amenity of neighbours through smell, the loss of privacy, outlook, noise and overlooking.
- Produces a positive relationship between buildings, street and spaces both existing and proposed, where:
 - The layout of the development reduces opportunities for crime and antisocial behaviour; contributes to improving community safety; and makes provision for the management and maintenance of the development;
 - New streets are not dominated by vehicular traffic;
 - The layout of the development is legible, meaning it is easy to orientate oneself and move through.
- Contributes to the improvement of the public realm close to the development, particularly sites close to town, district and local centres and other priority regeneration areas by using high quality hard and soft landscape material and street furniture; and where development is of a significant scale or prominence makes provision for public art.
- Is inclusive by considering the needs of those with disabilities, ensuring safe and convenient access for all; and integrating affordable and supported housing with market housing through tenure blind design to minimise social exclusion and promote social integration.
- Maximises opportunities for mixed use developments, particularly in town and district centres; and encourage higher densities (50+ dwellings per hectare) where appropriate.
- Mitigates negative environmental impacts through sustainable design and construction methods, resource efficiencies, particularly water and the provision of facilities for waste recycling.

- Adapts to the changing needs of the users and the changing climate over the lifespan of the building. ‘

3.10 **Dunsbury Hill Farm Development Brief** also sets out a number of general requirements for the development’s design:

- A varied built form should be created to reflect the variety in the function, types and sizes of units and the spaces that they define.
- Boxes and regular blocks should be avoided in the built form. Buildings should utilise irregular and ‘natural’ forms e.g. including the use of curves.
- The built form should be predominantly low rise (2 - 3 storeys), designed not to protrude excessively above the tree canopy. Rooflines should be clean and free from the clutter of plant. Where necessary, this equipment should be designed into the roof form.
- Key landmark buildings must be very carefully sited to mark junctions and activity nodes. They should take into account the utilisation of sight lines to aid navigation.
- Landmark buildings should conform to the low rise character of the development. A landmark building is one that is distinctive and memorable. They should be seen as a focus for architectural excellence and the use of high quality materials.
- The use of a restricted palette of high quality materials will help to create a unified appearance - the developer should refer to the Council’s Public Realm Design Framework
- Creative use of large areas of glazing is an effective way of allowing buildings to become part of the environment
- A high quality public realm should be created through high quality paving materials, street furniture, boundary treatments and planting. Materials appropriate to the setting should be selected.
- Three-dimensional features that provide landmarks, gateways, reference points and edges should be included to provide structure and aid navigation.
- The Council will negotiate with the developer to fund the commissioning of art and craftwork to enhance the distinctiveness of the development and the quality of the public realm within the development site, in accordance with Local Plan Policy D3. Gateway and landmark features within the site present an opportunity to provide this artwork.
- Public art should be placed at key intersections and activity nodes within the development. This will help to structure the layout and act as an aid to navigation.

Sustainability Assessment Framework: Relevant BREEAM Issues and Objectives

3.11 This section identifies the relevant BREEAM topics and objectives that form the sustainability assessment framework. The relevant local policy background has also been set out for each topic. Specifically, 12 main topics have been identified as detailed below:

- | | |
|-------------------------|----------------------------------|
| 1. Place Shaping | 7. Materials/Resources Selection |
| 2. Management | 8. Waste |
| 3. Health and Wellbeing | 9. Land Use and Ecology |
| 4. Energy and Climate | 10. Pollution |
| 5. Transport | 11. Business and Economy |
| 6. Water | 12. Cultural Heritage |

Place Shaping

Issue PS4: Landscaping

3.12 The issue objective is: *To ensure that the character of the landscape is respected and, whenever and wherever possible, enhanced through appropriate location and design appropriate to the local environment.*

Local Policy Background

Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough

3.13 Planning permission will be granted for development that:

- Ensures the key landscape and built form principles set out in the Havant Borough Townscape, Landscape and Seascape Character Assessment are protected and where possible enhanced by partnership working with developers, groups and the wider community.

Core Strategy Policy CS18 Strategic Site Delivery

- Provision of a minimum 150 to 180 metre wide landscaped gap between the A3(M) and the development;
- Provision of woodland 'fingers' extending eastwards into the development from Beech Wood;
- Enhancement of the Hermitage Stream Corridor with a natural channel running through a new wetland feature.

Dunsbury Hill Farm Development Brief

3.14 Impact on the Strategic Gap must be kept to a minimum. In order to achieve this, the buildings must be sensitively designed and built to a very high standard. They must respect and enhance the character of their woodland and countryside setting. They must blend with their surroundings in a way that creates a distinctive sense of place and character.

3.15 A landscape strategy should be produced to ensure the creation of significant new landscape features, including new areas of woodland and extensive structure planting to form a framework for the new development.

- 3.16 The landscape requirements of Local Plan Policy L7 must be met including an extension of Beech Wood to provide a minimum 150m – 180m landscaped gap between the A3(M) and the development. In addition the Gap should be emphasised in an east/west direction by providing belts or ‘fingers’ of woodland extending eastwards from Beech Wood together with a landscaped corridor on the east/west spine road.
- 3.17 In accordance with Local Plan Policy L6 the landscape strategy for this site must integrate the retention of existing important trees, particularly protected trees, and hedgerows, into the development. Existing structural / buffer planting should be retained and enhanced. Vegetation to be retained must be protected from development - buildings, hard surfaces, engineering and construction works - in accordance with the guidance contained in the British Standard ‘Trees in relation to construction’, BS5837:1991 in conjunction with such other guidance provided by the local authority.
- 3.18 Natural landscape features such as water and specimen trees should be emphasised through the design of buildings and the use of landscaping.
- 3.19 Where existing trees are of poor quality or dead, dying or diseased they should be replaced with appropriately sized standard young trees of native species.
- 3.20 Surface car parking should be landscaped in a way that minimises its visual impact. When doing this, care should be taken not to restrict natural surveillance of parking areas.

Issue PS5: Design and Access

- 3.21 The issue objective is: *To ensure that the development is accessible, aesthetically and architecturally attractive.*

Local Policy Background

Core Strategy Policy CS18 Strategic Site Delivery

- The design of the new buildings, particularly their bulk and orientation, will respect and enhance the character of their woodland location outside the built up area ;
- The layout of the site will provide an accessible, safe and permeable environment fully integrated with its surroundings;
- Entrance to the site from the A3(M) should incorporate a dramatic gateway feature;
- Highway access and appropriate mitigation measures including demand management measures will be provided in accordance with the DfT Circular 02/2007;
- A Transport Impact Assessment will be required in support of the development for access from A3(M).

Policy CS20 Transport and Access Strategy

- 3.22 Development will be permitted that: [...]
- Does not increase congestion and promotes better use of existing transport networks.

Management

Issue Man 2: Considerate Constructors

- 3.23 The issue objective is: *To recognise and encourage construction sites which are managed in an environmentally and socially considerate and accountable manner.*
- 3.24 The proposal needs to demonstrate an intention for the site to be certified under ‘Considerate Contractors Scheme’ (CCS) or a similar scheme. CCS is a UK certification scheme that encourages the considerate management of construction sites.

Issue Man 3 Construction Site Impacts

- 3.25 The issue objective is: *To recognise and encourage construction sites managed in an environmentally sound manner in terms of resource use, energy consumption and pollution.*

Issue Man 8: Security

- 3.26 The issue objective is: *To recognise and encourage the implementation of effective design measures that will reduce the opportunity for and fear of crime on the new development.*

Health and Wellbeing

Issue Hea 1: Daylighting

- 3.27 The issue objective is: *To give building users sufficient access to daylight.*

Issue Hea 2: View Out

- 3.28 The issue objective is: *To allow occupants to refocus their eyes from close work and enjoy an external view, thus reducing the risk of eyestrain and breaking the monotony of the indoor environment.*

Issue Hea 5: Internal and external lighting levels

- 3.29 The issue objective is: *To ensure lighting has been designed in line with best practice for visual performance and comfort.*

Energy and Climate

Issue Ene 4: External Lighting

- 3.30 The issue objective is: *To recognise and encourage the specification of energy-efficient light fittings for external areas of the development.*

Issue CE4 – Heat Island

- 3.31 The issue objective is: *To reduce heat absorption within the development (Heat Island effect) thus reducing the incidence of overheating and the need for powered cooling.*

Issue CE4 – Energy Efficiency

- 3.32 The issue objective is: *To increase the overall efficiency of the development through energy efficient design and management.*

Issue Ene 5: Low or Zero Carbon Technologies

- 3.33 The issue objective is: *To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the energy demand.*

Local Policy Background

Core Strategy Policy CS14 Efficient Use of Resources and CS18 Strategic Site Delivery

- 3.34 The development will contribute to the PUSH target of delivering 100MW of renewable energy by 2020 by maximising on-site renewable energy production and resource efficiency.

Dunsbury Hill Farm Development Brief

- 3.35 Buildings should be designed to maximise solar gain. They should also be designed to minimise energy consumption. Features such as super insulation should be included. The use of renewable energy should be an important element of the development. The inclusion of features such as solar panels and wind turbines should be investigated and pursued.

Transport

Issue Tra 1: Provision of Public Transport

- 3.36 The issue objective is: *To recognise and encourage development in proximity to good public transport networks, thereby helping to reduce transport-related emissions and traffic congestion.*

Local Policy Background

Core Strategy Policy CS18 Strategic Site Delivery

- 3.37 A dedicated public transport link is to be provided between residential areas to the east and west.

Policy CS20 Transport and Access Strategy

- 3.38 Development will be permitted that: [...]
- Maintains or improves the range of transport modes accessible to the users of the development site with specific emphasis on public transport, especially high quality/frequency buses.

Issue Tra 2: Proximity to amenities

- 3.39 The issue objective is: *To encourage and reward a building that is located in proximity to local amenities, thereby reducing the need for extended travel or multiple trips.*

Policy CS20 Transport and Access Strategy

- 3.40 Development will be permitted that: [...]
- Improves accessibility to goods, services and employment and promotes equality in the transport system.
 - Improves highway, cycling and pedestrian links between the western built up area of the borough (Waterlooville) and the eastern area of the borough (centred on Havant) to create a strong east/west communication axis that passes through Dunsbury Hill Farm/Leigh Park.

Issue Tra 3: Cyclist Facilities

- 3.41 The issue objective is: *To encourage building users to cycle by ensuring adequate provision of cyclist facilities.*

Local Policy Background

Core Strategy Policy CS18 Strategic Site Delivery

- 3.42 Park Lane will be enhanced as a leisure route and be provided with a metalled surface for use by cyclists and pedestrians.

Core Strategy Policy CS20 Transport and Access Strategy

- 3.43 Development will be permitted that: [...]
- Maintains or improves the range of transport modes accessible to the users of the development site [...] and includes walking and cycling where appropriate.

Issue Tra 4: Pedestrian and Cyclist Safety

- 3.44 The issue objective is: *To recognise and encourage the provision of safe and secure pedestrian and cycle access routes on the development.*

Issue Tra 5: Travel Plan

- 3.45 The issue objective is: *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.*

Local Policy Background

Core Strategy Policy CS18 Strategic Site Delivery

- 3.46 A green travel plan will be required to demonstrate the measures undertaken to maximise the proportion of journeys to and from and within the site made by public transport, cycling and walking.

Issue Tra 6: Maximum Car Parking Capacity

- 3.47 The issue objective is: *To encourage the use of alternative means of transport to the building other than the private car, thereby helping to reduce transport related emissions and traffic congestion.*

Water

- 3.48 BREEAM Offices requirements for this topic relate to the detailed design stage.

Issue RES 5 - Water Masterplanning Strategy

- 3.49 The issue objective is: *To develop a sustainable water efficiency strategy at a master planning level for the whole site.* It should demonstrate how the development will meet the required water demands placed upon the site.

Local Policy Background

Core Strategy Policy CS14 Efficient Use of Resources

- 3.50 [...] Particular attention should be paid to water efficiency measures.

Dunsbury Hill Farm Development Brief

- 3.51 Buildings should be designed to minimise water consumption. Features such as grey water recycling should be included.

Materials/Resources Selection

Issue Mat 1: Materials Specification (Major Building Elements)

- 3.52 The issue objective is: *To recognise and encourage the use of construction materials with a low environmental impact over the full life cycle of the building.*

Issue Mat 2: Hard Landscaping and Boundary Protection

- 3.53 The issue objective is: *To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking account of the full life cycle of materials used.*

Issue Mat 5: Responsible Sourcing of Materials

- 3.54 The issue objective is: *To recognise and encourage the specification of responsibly sourced materials for key building elements.*

Issue RES3 – Road Construction

- 3.55 The issue objective is: *To increase the proportion of locally reclaimed materials in the construction of roads, pavement, public spaces and car parks.*

Issue Mat 7: Designing for Robustness

- 3.56 The issue objective is: *To recognise and encourage adequate protection of exposed parts of the building and landscape, therefore minimising the frequency of use of replacement materials.*

Dunsbury Hill Farm Development Brief

- 3.57 Materials should be carefully selected to complement the setting. Materials such as hardwoods, natural stone, stainless steel, or other natural or high quality materials are acceptable. Large expanses of artificial cladding materials or extensive elevations of blank brickwork should be avoided.

Waste

Issue Wst 1: Construction Site Waste Management

- 3.58 The issue objective is: *To promote resource efficiency via the effective and appropriate management of construction site waste.*

Issue Wst 2: Recycled Aggregates

- 3.59 The issue objective is: *To recognise and encourage the use of recycled and secondary aggregates in construction, thereby reducing the demand for virgin material.*

Issue Wst 3: Recyclable Waste Storage

- 3.60 The issue objective is: *To recognise the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that such waste is diverted from landfill or incineration.*

Local Policy Background

Core Strategy Policy CS14 Efficient Use of Resources

- 3.61 Planning permission will be granted for development that:
- Provides adequate land or funding for waste management infrastructure.

Land Use and Ecology

Agricultural Land (Non-BREEAM Issue)

Local Policy Background

Core Strategy Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough

- 3.62 Protect the best and most versatile agricultural land that has the greatest potential for local food security.

Issue LE3: Ecological Value of Site and Protection of Ecological Features

- 3.63 The issue objective is: *To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.*
- 3.64 It would not be possible to obtain credits under this issue, as the proposed site cannot be defined as 'land of low ecological value'. However, as no minimum standards apply to this issue, the lack of credits should not prevent the proposal from obtaining a 'Very Good' or 'Excellent' BREEAM rating. Regardless of this, it is deemed important that ecological mitigation measures are carefully implemented.

Dunsbury Hill Farm Development Brief

- 3.65 Ecological survey of the site must be undertaken prior to any development being carried out.

Issue LE4: Mitigating Ecological Impact

- 3.66 The issue objective is: *To minimise the impact of a building development on existing site ecology.*

Issue LE5: Enhancing Site Ecology

- 3.67 The issue objective is: *To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.*

Dunsbury Hill Farm Development Brief

- 3.68 Features such as green roofs should be included.

Issue LE6: Long Term Impact on Biodiversity

- 3.69 The issue objective is: *To minimise the long term impact of the development on the site's, and surrounding area's, biodiversity.*

Local Policy Background

Core Strategy Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough

- 3.70 Planning permission will be granted for development that:
- Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.
 - Has particular regard to the following hierarchy of nature conservation designations within the borough (as identified on the Proposals Map):
 - (i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar [International].
 - (ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves [National].
 - (iii) Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above [Local].
 - Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation.
 - Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites to reduce harm to nature conservation interests.
 - Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh.
 - Protects wildlife habitats and wildlife corridors to prevent the fragmentation of existing habitats and to allow species to respond to the impacts of climate change by making provision for habitat adaptation.

- Protects the best and most versatile agricultural land that has the greatest potential for local food security.
- Responds to the emerging evidence from the Solent Disturbance and Mitigation Project, the published recommendations, and future related research.

Core Strategy Policy CS13 Green Infrastructure

3.71 Development will be permitted that:

- Maintains and manages the network of green infrastructure identified at the sub regional and local levels.
- Incorporates, where appropriate, improvements to existing green infrastructure through the restoration, enhancement or creation of additional resources.
- Does not undermine the functional integrity of the green infrastructure.
- Creates, where appropriate, new green infrastructure (including access management measures) either through on site provision or financial contributions.
- Development proposals that adversely affect green infrastructure will not be permitted unless superior alternative provision can be provided or where it is part of a service provider's plans to provide improved local services in equally accessible locations.
- Green infrastructure sites will be allocated in the Development Delivery (Allocations) Plan.

Core Strategy Policy CS18 Strategic Site Delivery

3.72 Green infrastructure links between Havant Thicket Reservoir and Dunsbury Hill Farm will be enhanced.

Pollution

Issue Pol 5: Flood Risk

3.73 The issue objective is: *To encourage development in low flood risk areas or to take measures to reduce the impact of flooding on buildings in areas with a medium or high risk of flooding.*

Local Policy Background

Core Strategy Policy CS15 Flood and Coastal Erosion Risk

3.74 Development in areas at risk of flooding now and in the future as identified on the latest Environment Agency flood risk maps and Strategic Flood Risk Assessment climate change maps will only be permitted where:

- It meets the sequential and exception test (where required) in relation to PPS25.
- The site is located in a low hazard area as defined in the Strategic Flood Risk Assessment.
- A site-specific flood risk assessment demonstrates that the development will be safe, including the access, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.
- The scheme incorporates flood protection, flood resilience and resistance measures appropriate to the character and biodiversity of the area and the specific requirements of the site.
- Appropriate flood warning and evacuation plans are in place.
- New site drainage systems are designed taking account of events which exceed the normal design standard.

- 3.75 All development will be required to ensure that there is no net increase in surface water run off. Priority should be given to incorporating Sustainable Drainage Systems (SuDS) to manage surface water drainage, unless it is proven that SuDS are not appropriate. Where SuDS are provided arrangements must be put in place for their whole life management and maintenance.

Core Strategy Policy CS18 Strategic Site Delivery

- 3.76 Water drainage, including a SuDS and flood defence, will be provided in accordance with advice from the Environment Agency

Issue Pol 6: Minimising Watercourse Pollution

- 3.77 The issue objective is: *To reduce the potential for silt, heavy metals, chemicals or oil pollution to natural watercourses from surface water run-off from buildings and hard surfaces.*

Issue Pol: 7 Reduction of Night Time Light Pollution

- 3.78 The issue objective is: *To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.*

Local Policy Background

Dunsbury Hill Farm Development Brief

- 3.79 Lighting within the development should be designed to minimise light pollution and negative impact on the natural setting. Lighting should be low level and anti-glare. High-level flood lighting of areas will not be acceptable. Illuminated bollards are one effective means of providing subtle low-level lighting and picking out routes.

Pol 8: Noise Attenuation

- 3.80 The issue objective is: *To reduce the likelihood of noise from the new development affecting nearby noise-sensitive buildings.*

Business and Economy

Issue BUS 1 – Business Priority Sectors

- 3.81 The issue objective is: *To promote business growth within regionally prioritised sectors.*

Local Policy Background

Core Strategy Policy CS18 Strategic Site Delivery

- No more than 20% of the new employment floorspace will be for B8 storage and distribution as defined in the Use Classes Order 2005;
- 80% of the new employment floorspace can be split flexibly between B1 business and B2 general industrial uses as defined in the Use Classes Order 2005;
- B1(a) uses will be acceptable on the site providing a sequential test has been carried out to ensure there are no suitable sites in the town centres;
- Provision of a quality hotel with conference facilities;
- Provision of start-up and move-on accommodation and flexible space;
- Creation of an enterprise centre of at least one hectare.

Issue BUS 2 – Labour and Skills

- 3.82 The issue objective is: *To ensure that the development contributes to regeneration initiatives.*

Issue BUS 3 – Employment

3.83 The issue objective is: *To create permanent jobs within the local area.*

Local Policy Background

Core Strategy Policy CS2 Employment

3.84 Planning permission will be granted for development proposals that: [...]

- Promote local employment and training initiatives on new employment sites particularly with regard to construction skills.
- Promote existing and potential business clusters and sectors particularly advanced manufacturing and marine businesses.
- Encourage smart economic growth and promote advances in information and communications technologies.

Core Strategy Policy CS3 Skills and Employability

3.85 Planning permission will be granted for development proposals that:

- Raise skill levels and increase employability.
- Tackle skill shortages in existing and potential business clusters and sectors particularly advanced manufacturing and marine businesses.
- Promote skills provision in emerging growth sectors such as sustainable construction methods.
- Promote skills provision on strategic sites particularly with regard to construction skills.
- Address barriers to employment for economically inactive people.
- Provide childcare facilities within or in close proximity to employment sites.

Core Strategy Policy CS18 Strategic Site Delivery

- A legal agreement will be sought for a scheme to train local people as one component of site delivery

Additional Topic not covered by BREEAM

Cultural Heritage

Core Strategy Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough

3.86 Planning permission will be granted for development that:

- Protects and where appropriate enhances the borough's statutory and non-statutory heritage designations by appropriately managing development in or adjacent to conservation areas, listed buildings, scheduled ancient monuments, historic parks and gardens, archaeological sites, buildings of local historic or architectural interest.

Dunsbury Hill Farm Development Brief

3.87 Archaeological survey of the site must be undertaken prior to any development being carried out.

4. Sustainability Findings

- 4.1 The likely effects of the proposed site development have been considered against the sustainability objectives under each sustainability topic set out in the previous section. The findings of the assessment are detailed in this section in Table 4.1. Proposals for improving the sustainability performance of the proposed development have been made where the compliance with the sustainability requirements has not been fully demonstrated at this planning stage yet, and where there is room for further enhancement.

Table 4.1 – Sustainability Findings

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
Place Shaping			
Issue PS4: Landscaping			
To ensure that the character of the landscape is respected and, whenever and wherever possible, enhanced through appropriate location and design appropriate to the local environment.	What measures have been taken to respect the local landscape?	The following steps have been taken to respect the local landscape and minimise negative effects: - retention of the strong existing pattern of woodland compartments. The proposals aim to reinforce the edges of existing woodland or hedgerows to further define the structure and also meet ecological objectives. - the majority of site vegetation will be retained and reinforced as part of the proposed landscape structure with the exception of the loss of some mature oak trees. The mitigation measure that has been proposed is to replant semi-mature oak specimens as part of the wider landscape. - position development within the Site such that it reduces potential visual impact. The requirements of Core Strategy Policy CS18 Strategic Site Delivery set out in Section 3 are met in the outline application. Reserved matters applications will include: - detailed landscape and ecological mitigation strategies; - a long-term management plan to manage operations within the Site and the adjoining areas which include landscape and ecological mitigation measures.	To ensure compliance with BREEAM standards, a landscape design statement will need to be developed in consultation with Local Authority and qualified landscape architect and/or qualified ecologist to determine the specific native species' requirements for the proposed development. It should incorporate the relevant recommendations set out in the ES and the Development Brief.
	Does the development enhance the local landscape?	The proposals aim to: - enhance river corridors, in particular the Hermitage Stream and the crossing point for the proposed link road, decanalising the existing channel; - improve local biodiversity as part of the works for the link road and wider masterplan area with a series of species specific	

¹ For more information on requirements for credits awarded under BREEAM certification please refer to Appendix A or the BREEAM manual (BREEAM New Construction Non-Domestic Buildings 2011).

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		ecological measures refuge areas. In accordance with the guiding principles in the Development Specification document the applications for reserved matters will commit to the following: - new hedgerow planting and inter-planting to existing hedgerows should be native hawthorn/blackthorn mix with other native shrub species; - landscaped amenity areas within the employment units for employee use and ensuring the buildings sit within a landscape setting.	
Issue PS5: Design and Access			
To ensure that the development is accessible, aesthetically and architecturally attractive.	What measures does the development contain to ensure the development is accessible and aesthetically and architecturally attractive?	A Design and Access Statement (DAS) has been completed that builds on context appraisal, including: - Context; - Spatial relationships; - Connectivity to other areas/neighbourhoods; - Landmarks, vistas and focal points; - Urban design; - Conservation; - Urban form; - Internal environment. According to the DAS, access to the Site will be provided by a new link road, originating at a junction with Hulbert Road to the west and connecting to Ramsdale Avenue to the east. A dedicated public transport link is proposed between residential areas to the east and west with a bus gate proposed at the junction with Woolston Road. The ES incorporates the Transport and Accessibility Assessment Section and a separate Transport Assessment has been carried out, which fully assesses the transport impact of the proposals to support the planning application.	At the next stage of reserved matters application the compliance with following requirements of the Core Strategy Policy CS18 Strategic Site Delivery should be ensured: - The design of the new buildings, particularly their bulk and orientation, will respect and enhance the character of their woodland location outside the built up area ; - The layout of the site will provide an accessible, safe and permeable environment fully integrated with its surroundings; - Entrance to the site from the A3(M) should incorporate a dramatic gateway feature; and - Highway access and appropriate mitigation measures including demand management measures will be provided in accordance with the DfT Circular 02/2007.
Management			

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
Issue Man 2: Considerate Constructors			
To recognise and encourage construction sites which are managed in an environmentally and socially considerate and accountable manner.	Will construction sites be managed in an environmentally and socially considerate manner?	As stated in the ES the contractors will, as part of their planning, produce Construction Environmental Management Plans (CEMPs) to set out the control measures and actions that they intend to apply during construction in response to the relevant issues raised by the EIA, including noise control, dust control, protection of surface waters and groundwater, protection of high quality soils, protection of existing trees and hedgerows, protection of archaeological resources, and protected species. The planning authority may also impose specific practices or requirements through planning conditions and the CEMPs will need to reflect those needs in their content.	To ensure the compliance with the BREEAM requirements, the future development proposals need to demonstrate an intention for the site to be certified under 'Considerate Contractors Scheme' (CCS) or a similar scheme.
Issue Man 3 Construction Site Impacts			
To recognise and encourage construction sites managed in an environmentally sound manner in terms of resource use, energy consumption and pollution.	What measures will be applied to encourage site impacts to be managed in an environmentally sound manner, in terms of: - Resource use? - Energy Consumption? - Pollution?	As mentioned above the preparation of the CEMP will ensure that the construction is managed in an environmentally sound manner. Additionally, the development of the Site Waste Management Plans (SWMP) should help ensure good waste management practice, minimising the quantity of waste produced or sent to landfill and the environmental burden in terms of pollution, energy and carbon impact associated with the production of products from virgin material.	To ensure full compliance with this objective and to be able to achieve BREEAM credits, reserved matters applications should expand the list of requirements for the CEMP to cover the following: • Minimise and report the amount of CO₂ or energy arising from site activities and transport; • Minimise and report water consumption arising from site activities; • Link with an environmental materials policy; • Legally and responsibly sourced timber. Preference in the selection of contractors should be given to those operating an Environmental Management System.
Issue Man 8: Security			
To recognise and encourage the	What security measures will be	The D&A Statement acknowledges the need for the development to adopt crime prevention measures, adhering to the principles and	It is recommended that the advice of the local police Architectural Liaison

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
implementation of effective design measures that will reduce the opportunity for and fear of crime on the new development.	applied at the development to reduce the opportunity for and fear of crime?	guidance of 'Safer Places' and 'Secured by Design'. The Statement further explains that spaces should be designed with good natural surveillance avoiding areas, which are contained and unsafe in nature. CCTV could provide a means of actively managing the Site out of hours.	Officer (ALO) or Crime Prevention Design Advisor (CPDA) on designing out the opportunity for crime is sought when a detailed design of the Site is prepared to ensure compliance with BREEAM requirements. Reserved matter applications should include a marked-up copy of the site/design plan(s) that demonstrate the conformance to ALO/CPDA recommendations and Secured by Design principles and guidance.
Health and Wellbeing			
Issue Hea 1: Daylighting			
To give building users sufficient access to daylight.	Will sufficient access to daylight for building users be ensured?	The D&A Statement states that wherever possible buildings should be designed to take advantage of natural light and ventilation and avoiding deep footprints requiring air conditioning and additional lighting.	Buildings design should be informed by the relevant standards set out in BREEAM manuals.
Issue Hea 2: View Out			
To allow occupants to refocus their eyes from close work and enjoy an external view, thus reducing the risk of eyestrain and breaking the monotony of the indoor environment.	Will external view be ensured in buildings design?	The compliance with this objective should be demonstrated at the detailed design stage.	The design team should consider and use the relevant standards set out in BREEAM manuals. The site plan should indicate buildings' location and proximity to external obstructions.
Issue Hea 5: Internal and external lighting levels			
To ensure lighting has been designed in line with best practice for visual performance and comfort.	What measures are in place to ensure internal and external lighting levels are designed in line with best practice?	The compliance with this objective should be demonstrated at the detailed design stage. The D&A Statement states that the following principle could be considered at the next design stage: 'Use the most of efficient lamps and luminaries'.	The design team should consider and use the relevant standards set out in BREEAM manuals for illuminance levels for each internal/external space.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
Energy and Climate			
Issue Ene 4: External Lighting			
To recognise and encourage the specification of energy-efficient light fittings for external areas of the development.	Has energy efficient lighting been considered/specified as part of the development?	The compliance with this objective should be demonstrated at the detailed design stage.	The design team should consider and use the relevant standards set out in BREEAM manuals for external light fittings. The detailed design applications should include marked-up site plan and building elevations showing location and purpose of all external lighting fittings.
Issue CE4 – Heat Island			
To reduce heat absorption within the development (Heat Island effect) thus reducing the incidence of overheating and the need for powered cooling.	What measures are in place to reduce heat absorption (heat island effect)?	The D&A Statement states that the following principles could be considered at the next design stage: - <i>Optimise passive solar gain by providing natural shading and cooling to minimise overheating;</i> - <i>Solar shading to reduce solar gains from high summer sun;</i> - <i>Provide exposed thermal mass to [...]absorb the cool air during summer nights;</i> - <i>Make use of street trees to provide shelter and shade within car parks and outdoor spaces within the development parcels.</i>	The detailed design applications should demonstrate the compliance with the principles aiming to reduce contributions to the heat island effect.
Issue CE4 – Energy Efficiency			
To increase the overall efficiency of the development through energy efficient design and management.	What energy efficiency design measures are in place: - to minimise the energy demand for the site (site orientation, passive solar design)? - to maximise the thermal efficiency of the building envelopes?	The D&A Statement states that the following principles could be considered at the next design stage: - <i>Optimise passive solar gain by providing natural shading and cooling to minimise overheating;</i> - <i>Heat exchanger to retain heat during the winter;</i> - <i>Natural ventilation to provide comfort cooling in summer;</i> - <i>High levels of insulation to contain heat;</i> - <i>Make maximum use of natural daylight.</i> - <i>Provide exposed thermal mass to absorb solar gains in the</i>	The detailed design applications should include an Energy strategy describing energy efficiency measures to be used on site. This could be developed jointly with a Renewable Energy Strategy, commitment for which is included in the Development Specification document.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		winter and absorb the cool air during summer nights; - The potential for collecting solar energy at roof level, should be optimised; - Consider the potential for shared heating systems, and the ancillary needs such as drop-off points for fuel distribution.	
Issue Ene 5: Low or Zero Carbon Technologies			
To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the energy demand.	Have local low or zero carbon technologies energy sources been considered for the development?	The Development Specification document commits to the development of a site-wide Renewable Energy Strategy at the reserved matters application stage to demonstrate how the Proposed Development will achieve BREEAM 'excellent' standard.	A site-wide Energy Efficiency and Renewable Energy Strategy should demonstrate how a minimum of 10% or higher target for renewable and low carbon energy will be met. This should consider such renewable and low carbon energy technologies presently available on the market as: • Solar - solar hot water and photovoltaics; • Wind – wind turbines; • Biomass - biomass single room heaters, stoves; biomass boilers; biomass community heating scheme Combined Heat and Power (CHP) and micro CHP with natural gas and biomass; and • Heat pumps – air source heat pumps, ground source heat pumps and geothermal heating systems. The Strategy should identify applicable technologies by assessing each under the following four categories: • the type of energy it can deliver (i.e. heat, power or both) • whether a local resource is available to 'fuel' the system

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
			- whether land space is available to site the system - the expected contribution (low, medium or high) to the set target (10% or higher). Based on these factors the suitable technologies should be identified and the reasons why made clear. The UK government has introduced the Renewable Heat Incentive and Feed-in-Tariffs for owners of renewable energy technologies, which effectively provide a revenue stream based on the quantity of energy produced by a renewable energy system. The introduction of these incentives improves the financial viability of these technologies and this revenue stream should be considered during the feasibility stage.
Transport			
Issue Tra 1: Provision of Public Transport			
To recognise and encourage development in proximity to good public transport networks, thereby helping to reduce transport-related emissions and traffic congestion.	Is the proposed development in close proximity to good public transport networks?	Environmental Statement (2011) – Transport & Accessibility Identifies that: - There are plans for a Havant Cross Borough Bus Service connecting Waterlooville to the west and Leigh Park to the east of the A3 (M) corridor. It is envisaged that this bus route will use the Hulbert Road access and the Woolston Road bus-only link across the Site (see Vol2 Figure 8.1). - It is proposed that this bus service would operate with a frequency of 4 buses per hour. This will substantially reduce the journey time between Leigh Park and Waterlooville. - Additionally, these access points will enable existing local bus services to enter and leave the Site from either the east or west	The reserved matters application should include: - Marked-up plan of the development and surrounding areas, showing public transport plans (existing and proposed). - The BREEAM Accessibility Index established for the proposed buildings on site, using BREEAM Public Transport Calculator. - Scale map indicating building location and public transport

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		of the A3 (M) without needing to travel through the Site. - New bus infrastructure on the link road in the form of a bus turn round or bus interchange will ensure the site can be served by both proposed and existing services. - The Proposed Development therefore allows for the opportunity to directly link existing bus services: 39 and 23 into and potentially to the west of the site. Dunsbury Hill: Design and Access Statement: - Parameter Plan 1 – Movement Framework – illustrates the proposed primary circulation corridor, the western access area and the bus gate to the east. Provision of a dedicated public transport link between residential areas to the east and west is in line with the Core Strategy Policy CS18 Strategic Site Delivery. Core Strategic Policy CS18: Strategic Site Delivery – A dedicated public transport link is to be provided between residential areas to the east and west. Core Strategic Policy CS20: Transport and Access Strategy – Development will be permitted if it maintains or improves the range of transport modes accessible to the users of the development site with specific emphasis on public transport, especially high quality / frequency buses.	nodes in relation to building. A service timetable for each public transport node under consideration.
Issue Tra 2: Proximity to amenities			
To encourage and reward a building that is located in proximity to local amenities, thereby reducing the need for extended travel or multiple trips.	Is the proposed development in close proximity to amenities, including: - Grocery shop - Post Box - Cash Machine	The detailed information on location and type of amenities to be provided as part of the proposed development is not available at this planning stage. It is indicated that reserved matters applications will include ancillary uses to support the employment development, including café's (A3) and small scale retail (A1). The Proposed Development will be in compliance with the following Transport Policy: Core Strategic Policy CS20: Transport and Access Strategy – Development will be permitted that [...]: Improves accessibility to	The reserved matters application should include a site plan or map, highlighting location and type of amenities in relation to buildings and connecting routes.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		goods, services and employment and promotes equality in the transport system; Improves highway, cycling and pedestrian links between the western built up area of the borough (Waterlooville) and the eastern area of the borough (centred on Havant) to create a strong east/west communication axis that passes through Dunsbury Hill Farm / Leigh Park.	
Issue Tra 3: Cyclist Facilities			
To encourage building users to cycle by ensuring adequate provision of cyclist facilities.	Does the development consider providing adequate cycle storage spaces and facilities?	The Site Travel Plan includes a Cycling Strategy which states that cycle parking will be provided at the site in accordance with the relevant HBC standards for employment land uses and hotel developments (as detailed in Chapter 4 of the Transport Assessment). The Transport Assessment estimates that 23% percent of staff will either walk or cycle to work. Provision for this level of cyclists or walkers should ensure compliance with BREEAM requirements. The detailed information on cyclist facilities to be provided as part of the Proposed Development is not available at this planning stage. The Proposed Development will be in compliance with the following Transport Policy: Core Strategic Policy CS20: Transport and Access Strategy - Development will be permitted that [...]: Maintains or improves the range of transport modes accessible to the users of the development site [...] and includes walking and cycling where appropriate.	To ensure compliance with BREEAM standards the detailed planning applications should demonstrate that adequate provision of cyclist facilities for different building types (please refer to the BREEAM Manual and Appendix A for details) will be ensured. Cycle facilities must be accessible to all types of building users including visitors. The reserved matters application should include a site plan, design drawings and / or a copy of the specification confirming: • The location of the cycle storage facilities; • The number of cycle spaces provided; • The type, dimensions and layout of cycle racks. The Proposed Development should also be in compliance with the following Transport Policy: Core Strategic Policy CS18: Strategic Site Survey – Park Lane will be enhanced as a leisure route and be provided with a metalled surface for use by cyclists or pedestrians.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
Issue Tra 4: Pedestrian and Cyclist Safety			
To recognise and encourage the provision of safe and secure pedestrian and cycle access routes on the development.	What measures does the development contain to ensure the safety of pedestrian and cyclists?	Environmental Statement (2011) – Transport & Accessibility Identifies that: Proposed Development Site baseline conditions have identified: - An existing Bridleway passing through the Site along Park Lane, which forms a cycle route linking Tempest Avenue, to the west of the A3 (M), to Middle Park Way and Dunsbury Way to the east of the A3 (M); this crosses the A3 (M) on a bridge to the north of Junction 3. - An off road cycle route southbound from Woolston Road roundabout along Middle Park Way. The route continues off road along the Hermitage Stream path which heads south towards Havant town centre. - An off-road cycle route along Purbrook Way west of the Hubert Road / ASDA roundabout which heads to the west of the A3 (M). All of these routes are connected to the residential areas and Havant town centre, with a network of suggested link routes, some of which are signposted at present: - There is a circular (pedestrian) footpath through the Site between Park House Farm Way and Ramsdale Avenue between Ramsdale Avenue and Park Lane, which connects with Park Lane bridleway. - An east-west bridleway connects with Park Lane leading from the north of the Site eastwards to Stansted and Rowlands Castle. From this there is a bridleway leading south to Swanmore Road and Dunsbury Way. Pedestrian and cycle linkages would exist on site and access would be provided to the east at Leigh Park. The details will be confirmed in detail design. The Site Travel Plan includes the Walking and Cycling Strategies. According to the Walking Strategy, a map of local footways,	The reserved matters application should demonstrate that cycle lanes and pedestrian paths have been designed and will be constructed in compliance with the BREEAM standards (please refer to the BREEAM Manual and Appendix A for details). The reserved matters application should include a scaled proposed site plan, specification and / or design details highlighting all necessary features and dimensions. It should also include a copy of the specification, site plan and / or manufacturer's technical details, confirming external lighting design strategy.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		particularly those which are well lit, will be provided free of charge to all staff to encourage them to walk to work. This will also increase safety for walkers. The Cycling Strategy indicates that cycle training will be provided. This will give staff confidence to cycle on the roads and improve staff safety.	
Issue Tra 5: Travel Plan			
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.	Does the development consider a range of travel options?	A range of travel options, including walking, public transport, cycling, motorcycling and car sharing, has been considered in the Site Travel Plan. More detailed design information will be developed for the next planning stage. The Proposed Development will be in compliance with the following Transport Policy: Core Strategic Policy CS18: Strategic Site Delivery – A green travel plan will be required to demonstrate the measures undertaken to maximise the proportion of journeys to and from and within the site made by public transport, cycling and walking.	The reserved matters application should include a marked-up copy of the site plan demonstrating examples of design measures, implemented in support of the travel plan's findings.
Issue Tra 6: Maximum Car Parking Capacity			
To encourage the use of alternative means of transport to the building other than the private car, thereby helping to reduce transport related emissions and traffic congestion.	What measures does the development contain to encourage the use of alternative means of transport other than private car?	Measures to encourage the use of the public transport, walking and cycling are described above. The proposed levels of parking provision will be in accordance with relevant HBC standards for employment land uses and hotel developments. Where possible the strategy will seek to reduce parking provision to strengthen the sustainability credential of the Site, matching the public transport strategy. The Site Travel includes the Car Park Management Plan which provides disincentives for lone car travel and ensure that staff members without alternative travel modes have priority access to parking spaces. This strengthens the sustainability credentials of the Site.	BREEAM Office requires that no more than one parking space is provided for every three or four building users and the reserved matters application should show how this requirement will be met.
Water			
Issue RES 5 - Water Masterplanning Strategy			
To develop a sustainable water efficiency strategy	Has a sustainable water efficiency	The D&A Statement outlines that the increasingly frequent heavy rains brought about by climate change pose a challenge for	The reserved matters application should include a copy of the

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
at a master planning level for the whole site. It should demonstrate how the development will meet the required water demands placed upon the site.	strategy been prepared? Have water efficiency measures been proposed/ envisaged?	drainage and floodwater management systems. As the climate changes and summer droughts become more frequent, it is more important that water is used efficiently and recycled. All buildings in the Proposed Development will be fitted with water efficient fittings and appliances, such as low-flush dual-flush toilets and aerated showers and taps. It is envisaged that rainwater will be harvested and used for the irrigation of soft landscape areas. Certain key buildings could be provided with a green roof – in addition to managing rainwater, green roofs help reduce building heat loss in winter, provide heat gain in summer, reduce air pollution and create habitats. The Proposed Development will be in compliance with the following Policies: Core Strategic Policy CS14: Efficient Use of Resources – [...] Particular attention should be paid to water efficiency measures. Dunsbury Hill Farm Development Brief - Buildings should be designed to minimise water consumption. Features such as grey water recycling should be included.	specification clauses or letter from the design team confirming: - A water management demand study for the development site will be completed; - Rainwater harvesting and greywater recycling technology will be installed for buildings within the Proposed Development. A copy of the communication from the local Water Authority confirming that there will be sufficient capacity within the current supply to serve the development.
Materials/Resources Selection			
Issue Mat 1: Materials Specification (Major Building Elements)			
To recognise and encourage the use of construction materials with a low environmental impact over the full life cycle of the building.	Will construction materials with a low environmental impact be used?	The compliance with this objective should be demonstrated at the detailed design stage. It is currently envisaged that construction materials will be selected to balance aesthetic and environmental issues and that optimum use will be made of reclaimed, recycled, natural and locally-sourced products.	The design team should develop materials specifications which meet Green Guide ratings required by BREEAM.
Issue Mat 2: Hard Landscaping and Boundary Protection			
To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low	Will construction materials for boundary protection and external hard surfaces with a low environmental impact be used?	As above.	As above.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
environmental impact, taking account of the full life cycle of materials used.			
Issue Mat 5: Responsible Sourcing of Materials			
To recognise and encourage the specification of responsibly sourced materials for key building elements.	Will responsibly sourced materials be specified?	The compliance with this objective should be demonstrated at the detailed design stage. It is currently envisaged that construction materials will be selected to balance aesthetic and environmental issues and that optimum use will be made of reclaimed, recycled, natural and locally-sourced products.	To ensure compliance with BREEAM requirements the detailed design applications should include evidence demonstrating that 80% of the applicable materials comprising key building elements are responsibly sourced.
Issue RES3 – Road Construction			
To increase the proportion of locally reclaimed materials in the construction of roads, pavement, public spaces and car parks.	Will locally reclaimed materials be used in the construction of roads, pavement, public spaces and car parks?	Materials required for the works will be locally sourced, wherever possible. The road has been designed on the basis of balancing the cut and fill required for the works with material arising from cuttings being used on site e.g. in embankments. If additional fill material is required, the sources of recycled materials will be considered prior to sourcing from local quarries where practicable. The compliance with this objective should be demonstrated at the detailed design stage.	The evidence demonstrating that locally reclaimed or recycled material will be used in the construction of the road and public spaces should be provided at the detailed design stage. It is recommend that a target of >15% or higher of locally reclaimed or recycled material is adopted to achieve BREEAM credits under this issue.
Issue Mat 7: Designing for Robustness			
To recognise and encourage adequate protection of exposed parts of the building and landscape, therefore minimising the frequency of use of replacement materials.	Will exposed parts of the building and landscape be protected?	The compliance with this objective should be demonstrated at the detailed design stage.	Design drawings illustrating vulnerable areas/parts of buildings and design drawings and/or specification confirming the durability measures should be provided at the detailed design application stage.
Waste			

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
Issue Wst 1: Construction Site Waste Management			
To promote resource efficiency via the effective and appropriate management of construction site waste.	Will resource efficiency and sustainable management of construction site waste be promoted?	Environmental Statement (2011): Waste and Recycling Identifies that: The proposed development will result in the generation of 16,901 tonnes of construction waste and 2,751 tonnes per annum of commercial and industrial waste. If good recycling practices are adopted it will be possible to reduce the volumes of waste by at least 60% for construction and demolition waste and at least 50% for operational waste. This will reduce the impact of the waste on the existing waste treatment capacity in Hampshire and the associated environmental impacts. As the waste produced is minimal in comparison to the overall waste arising in Hampshire and the available treatment capacity, it is expected that the Proposed Development will result in a minor impact in terms of waste. Targets will be set to reduce levels of construction waste through the implementation of a comprehensive SWMP.	The SWMP should be compliant with best practice (see the BREEAM manual for details).
Issue Wst 2: Recycled Aggregates			
To recognise and encourage the use of recycled and secondary aggregates in construction, thereby reducing the demand for virgin material.	Has the use of recycled and secondary aggregates in construction been encouraged?	The compliance with this objective should be demonstrated at the detailed design stage. The development and implementation of the SWMP should help ensure good waste management practice, minimising the environmental burden associated with the production of products from virgin material. It is currently envisaged that construction materials will be selected to balance aesthetic and environmental issues and that optimum use will be made of reclaimed, recycled, natural and locally-sourced products.	To obtain credits under this BREEAM Issue the amount of recycled and secondary aggregate specified should be over 25% (by weight or volume) of the total high-grade aggregate uses for the building. The design team should develop materials specifications which meet Green Guide ratings required by BREEAM.
Issue Wst 3: Recyclable Waste Storage			
To recognise the provision of dedicated storage facilities for a	Has the provision of dedicated storage facilities for a building's	The Dunsbury Hill Design and Access Statement identifies that the Proposed Development will provide facilities and information to make it easy for occupiers to reduce their environmental impacts by	The reserved matters application should include a copy of the marked-up building / site plan and / or copy of the specification confirming:

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
building's operational-related recyclable waste streams, so that such waste is diverted from landfill or incineration.	operational-related recyclable waste streams been made?	minimising waste and promoting recycling and composting. Each Site will be provided with access to composters for the treatment of putrescible waste. Advanced in-vessel systems are proposed for the highest density areas to enable landscape waste to be composted and hence avoid removal from Site to landfill. In line with the highest standards of BREEAM requirements all buildings will be supplied with internal and external bin provision to enable segregation of different waste streams for recycling. The Proposed Development will be in compliance with the following Policy: Core Strategic Policy CS14: Efficient use of Resources – Planning permission will be granted for development that provides adequate land or funding for waste management infrastructure.	• The location of the dedicated recyclable storage area; • Storage area for general waste; • The area (m²) of the storage space(s); • Description of the labelling.
Land Use and Ecology			
<i>Agricultural land (Non-BREEAM Issue)</i>			

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
Core Strategy Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough Protect the best and most versatile agricultural land that has the greatest potential for local food security.	Will the best and most versatile agricultural land be protected?	Environmental Statement (2011): Land Use: An assessment of the likely significant effects of the Proposed Development on agricultural land quality, including soils, and on individual farm businesses that are present on or linked to the Proposed Development Site was completed. A specialist study of agricultural land classification undertaken by Soil Environmental Services identified that land of Grade 3a and above (best and most versatile) was not present. A small section of land to the south and east of the A3 (M) roundabout at Hulbert Road was not included in the study. This land is currently under grazing and woodland land uses. It is classified as Grade 4 on the MAFF Provisional Agricultural Land Classification map. . The primary impact of the Proposed Development is land take. The total permanent land take is 39ha. In National and Regional terms there would be a permanent adverse affect of slight significance. The principal residual effect of the Proposed Development is likely to be the loss of 39 ha of agricultural land, none of which comprises soils in the best and most versatile category.	The relevant mitigation measures proposed in the ES should be firmed up at the next planning stage.
Issue LE3: Ecological Value of Site and Protection of Ecological Features			
To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.	Will existing ecological features be protected from substantial damage?	Environmental Statement (2011): Ecology: The Site consists mainly of arable fields with a number of hedgerows, and is bordered by woodland. It also includes areas of semi-improved neutral grassland and mixed scrub with scattered bracken. There are no statutory designated sites within 2km of the Site. There are, however, several internationally designated sites that fall within the potential zone of influence as agreed with Natural England. There is one SAC designated for bats within 30km of the Site and 52 Sites of Importance for Nature Conservation (SINC) within 2km of the Proposed Development while seven are either within or immediately adjacent to it. In addition to statutory designated sites, vegetation and flora as well as rare, notable and legally protected species have also been assessed for the Environmental Statement.	The Proposed Development Site cannot be defined as 'land of low ecological value' and therefore will not be awarded BREEAM credits. Nevertheless, it is important that the proposed ecological mitigation measures are carefully implemented and the following BREEAM requirements taken onboard. Follow the advice / recommendations, given by the ecologist who completed site survey in order to protect existing features and areas of ecological value.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		Proposed mitigation measures include: - Protection for SINC's using temporary fencing and the establishment of buffer planting; - Incorporation of retained grassland into the landscape design alongside the creation of new grassland habitat. - Protection of retained hedgerows during construction as well as replacement and supplementary hedgerow planting; - Amphibians and reptiles will be protected via enhancement and standard mitigation techniques; - Strict measures to minimise any risk of harm to bats and roosts. With mitigation measures fully implemented, the significance of the overall residual effect on the ecology of the Proposed Development Site is likely to range from slight beneficial to slight adverse. The overall residual effect of the scheme, taking mitigation into account has been assessed as being neutral. The Proposed Development will be in compliance with the following: Dunsbury Hill Farm Development Brief – Ecological survey of the site should be undertaken prior to any development being carried out.	- Ensure all existing features of ecological value surrounding the construction zone and site area boundary are adequately protected from damage during clearance, site preparation and construction activities as follows: - Barriers to protect trees with a trunk diameter over 100mm. - Trees should be protected from direct impact from severance or asphyxiation of the roots. - Hedges and natural areas should be protected from construction works. - Watercourses and wetland areas should be protected by cut-off ditches and site drainage to prevent run-off to natural watercourses. - In all cases the contractor is required to construct ecological protection prior to any preliminary site construction or preparation works (e.g. clearing of the site or erection of temporary site facilities).
Issue LE4: Mitigating Ecological Impact			
To minimise the impact of a building development on existing site ecology.	Will the impact on existing site ecology be minimised?	Proposed mitigation measures are discussed above.	As above.
Issue LE5: Enhancing Site Ecology			
To recognise and encourage actions taken to maintain and enhance	Will actions be taken to maintain and enhance the ecological value of	Proposals to maintain and enhance the ecological value of the site have been identified above. The Dunsbury Hill Design and Access Statement outlines that the	As above.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
the ecological value of the site as a result of development.	the site as a result of development?	principle of sustainability will be established in the way the Proposed Development is managed and through its future governance. Management mechanisms should be developed to ensure appropriate maintenance of communal features such as the open space and SUDS infrastructure. In particular this can be explored in the ongoing management of woodlands which are a local asset for the wider Leigh Park community. Site elements might include: • Woodland and public open space; • SUDS. Dunsbury Hill Farm Development Brief – Features such as green roofs should be included. The D&A Statement encourages the use of green roofs.	
Issue LE6: Long Term Impact on Biodiversity			
To minimise the long term impact of the development on the site's, and surrounding area's biodiversity.	How will the long term impact of the development on the site's, and surrounding area's biodiversity be minimised?	Proposals to minimise the long term impact of the development on the sites and surrounding areas biodiversity have been identified above.	As above.
Pollution			
Issue Pol 5: Flood Risk			
To encourage development in low flood risk areas or to take measures to reduce the impact of flooding on buildings in areas with a medium or high risk of flooding.	Are there flood risks for the development and how have they been mitigated (if applicable)?	A Flood Risk Assessment (FRA) accompanies this application. The fluvial, groundwater and pluvial flood risks for both detailed road design and outline masterplan have been rated as neutral in the ES. An increase of impermeable areas on Site will require attenuation mitigation, i.e. sustainable drainage system as detailed in the ES.	Sustainable drainage system should be specified at the reserved matters application stage.
Issue Pol 6: Minimising Watercourse Pollution			

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
To reduce the potential for silt, heavy metals, chemicals or oil pollution to natural watercourses from surface water run-off from buildings and hard surfaces.	Will control systems be in place to ensure water quality protection?	Consent will be required for any new headwalls that will discharge into either Hermitage Stream or Park Lane Stream through consultation with Environment Agency and should be applied for as they are required in the development of the Site. Temporary adverse effect of neutral significance on water quality has been predicted for the construction phase. This is expected to be mitigated through the implementation of the CEMP. During operation effects on surface and groundwater water quality are expected to be neutral. Compliance with this objective will depend on the use and appropriate maintenance of SUDS installations.	Sustainable drainage systems should be specified and a drainage site management plan developed at the reserved matters application stage. More detailed information should be provided to the sewerage provider at detailed planning application stage.
Issue Pol: 7 Reduction of Night Time Light Pollution			
To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.	Will night time effects from lighting be minimised?	According to the Visual Impact Assessment carried out as part of the EIA the low level of intrusion the lighting would cause would create a minor adverse effect. As explained in the ES the effects of the lighting can be mitigated through carrying out a detailed lighting survey, minimising light spillage through selective positioning of street lights, building design and screen planting.	Lighting design should be developed in compliance with guidance in the BREEAM manual. Implementation of the mitigation measures detailed in the ES.
Pol 8: Noise Attenuation			
To reduce the likelihood of noise from the new development affecting nearby noise-sensitive buildings	Will noise from the new development affect nearby noise-sensitive buildings?	Construction noise could give rise to a significant impact at receptors especially those within 50m from road construction works. With appropriate noise mitigation measures and good working practices, it would be possible to minimise the duration and extent of significant construction noise effects. A number of generic noise control measures have been described in the ES (e.g. appropriate noise barriers, reducing noise at source, etc). The operation of the site, including the car parks, site traffic and night time deliveries is unlikely to have a significant effect on the	Further assessment should be carried out at the detailed design stage and mitigation measures confirmed.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		nearest noise sensitive properties. Where there may be potential noise impacts from the unknown usage of the units, the detailed design of the Proposed Development and conditions imposed can ensure that the nearest residents are not affected by the noise from the Site outside acceptable limits. The noise from the A3(M), the access road, the car parks and night time deliveries may affect the proposed hotel. The design of the layout, construction and orientation of the hotel can influence the noise levels within the hotel bedrooms.	
Business and Economy			
Issue BUS 1 – Business Priority Sectors			
To promote business growth within regionally prioritised sectors.	Will priority business sectors be introduced?	In line with the Core Strategy Policy CS18 Strategic Site Delivery requirements, the Site will provide the following employment uses across both phases: • 20% of employment space to be B8 (storage and distribution) • 80% of new employment space to be split between B1 (business) and B2 (general industrial uses). The development is located in an area that suffers from high levels of deprivation. Many of the manufacturing firms that were once based there have now left the area and there is a significant gap between the skills of the local population and the jobs available in the sub-region. Addressing the skills gap is a priority for the regeneration of the area and the provision of new facilities is equally important.	At the next planning stage a copy of the master plan should be provided highlighting the location and areas set aside for likely tenants and business types/sectors. Additional information that demonstrates that there will be one or more priority business sectors introduced through the proposed development should be provided at a later stage of the project development.
Issue BUS 2 – Labour and Skills			
To ensure that the development contributes to regeneration initiatives.	Will there be a stimulus to regeneration initiatives?	The major investment project will help the regeneration of a deprived area by lifting community and investor confidence in the area. During the construction phase of the development, it is estimated that 844 local construction jobs, over the scheme's four year construction period, will be created. In addition, further indirect jobs would be supported locally and regionally through supply chain linkages including, supplying	It should be ensured that local labour and/ or local contractors (including sub-contractors) will be used during the construction phase of the development.

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
		construction materials and equipment and construction workers spending part of their wages in the local economy. It is estimated that the construction of the scheme could indirectly support 245 jobs locally and 371 jobs regionally.	
Issue BUS 3 – Employment			
To create permanent jobs within the local area.	Will permanent jobs be created in the local area?	The development is located in the area of Leigh Park, which has a population of approximately 26,700 with a relatively young age structure. Overall the area suffers from high levels of deprivation. The proposed development would provide 46,450 m2 of new employment floor space and 5,574 m2 of hotel floor space under Phase 1 and an additional 15,329 m2 of new employment floor space under Phase 2. It would therefore be a major employment generating scheme during both its construction and operational phases. Overall, the proposed scheme could create some 3,500 FTE jobs over the two phases of development.	According to the Core Strategy Policy CS18 Strategic Site Delivery a legal agreement should be sought for a scheme to train local people as one component of site delivery. Therefore, it is recommended that documentation that demonstrates an alliance with a local training provider (e.g., Universities, Higher Education Institutions, Apprentice Schemes, other) is prepared at the future appropriate stages of the project development.
Cultural Heritage (Non-BREEAM topic)			
Protect and where appropriate enhance the borough's statutory and non-statutory heritage designations	What measures have been undertaken to protect and where appropriate enhance the borough's heritage assets? Has an archaeological survey of the site been undertaken?	Environmental Statement (2011): Cultural Heritage: The Proposed Development Site does not contain any designated heritage assets and no significant known heritage assets. HBC requested that potential impacts on the Sir George Staunton Conservation Area should be assessed. Further assessment was undertaken and no adverse effects have been identified. The main issue identified was the likely significant effects of the Proposed Development on currently unidentified archaeological remains that may lie within the Site. This reflects the fact that the Site has not been subject to past development and the construction phase of the development, therefore, has the potential to disturb and degrade currently unidentified archaeological remains. To address this issue, a comprehensive programme of archaeological research has been recommended.	According to the Dunsbury Hill Farm Development Brief, an archaeological survey of the site must be undertaken prior to any development being carried out. The Proposed Development should be in compliance with the following Policy: Core Strategic Policy CS11: Protecting and Enhancing the Special Environmental and Heritage of Havant Borough – Planning permission will be granted for development that protects and where appropriate enhances the Borough's statutory and non-statutory heritage

Objective	Questions	Evidence	Proposals / Considerations for future BREEAM compliance ¹
			designations by appropriately managing development in or adjacent to conservation areas, listed buildings, scheduled ancient monuments, historic parks and gardens, archaeological sites and buildings of local historic interest.

5. Conclusions

- 5.1 This Statement assesses the performance of the strategic employment site, Dunsbury Hill Farm, against 12 sustainability topics:
- | | |
|-------------------------|----------------------------------|
| 1. Place Shaping | 7. Materials/Resources Selection |
| 2. Management | 8. Waste |
| 3. Health and Wellbeing | 9. Land Use and Ecology |
| 4. Energy and Climate | 10. Pollution |
| 5. Transport | 11. Business and Economy |
| 6. Water | 12. Cultural Heritage |
- 5.2 The Dunsbury Hill Farm development is expected to become an exemplar for sustainable construction and design and achieve BREEAM 'excellent' standard.'
- 5.3 This assessment has demonstrated that the proposed development is generally aligned with sustainable development considerations. The assessment did not aim to assign BREEAM credits, as this is a hybrid application, comprising the outline planning application for the entire Site and full application for the access junction and road link; and there is a lack of detailed design information at this stage. However, the assessment has set out a number of recommendations for the next planning stage to ensure that BREEAM rating could be obtained and the sustainability performance of the proposed development enhanced.
- 5.4 Overall, the proposed development performs well in relation to the economic and social topics, bringing more temporal and permanent jobs to an area that suffers from high levels of deprivation. An aspiration to use reclaimed, recycled, natural and locally-sourced materials and products and the need to develop a Site Waste management Plan results in a good performance against the materials and resource selection and waste topics. A dedicated public transport link and the development of the Site Travel Plan, promoting cycling and walking align the development proposal with the sustainability objectives under the Transport topic. The guiding principles in the Design and Access Statement indicate that the proposed development should be compatible with the objectives under landscaping and place-making topics.
- 5.5 Potential adverse effects are predicted for such issues as noise, water quality, heritage, land use and ecology during construction and flood and lighting during operation. These effects can be effectively mitigated as set out in the ES providing the mitigation measures identified are implemented on the ground.
- 5.6 This Statement has made a number of recommendations which should enhance and add certainty to the sustainability performance of the proposed development with regards to BREEAM and wider sustainability requirements. These recommendations include:
- more detailed assessments for specific topics (e.g. noise, archaeology) to be carried out at the next reserved matters applications stage, where necessary;
 - preparation of more detailed site plans for waste recycling and sustainable drainage for example;
 - preparation of an Energy Efficiency and Renewable Energy Strategy. The minimum target for renewable and low carbon energy should be 10%. The Strategy should identify applicable renewable and low carbon energy technologies (e.g. solar hot water and solar PV, wind turbines, biomass boilers,

biomass fired CHP, gas fired CHP, heat pumps) presently available on the market by assessing each under the following four categories:

- the type of energy it can deliver (i.e. heat, power or both);
- whether a local resource is available to 'fuel' the system;
- whether land space is available to site the system;
- the expected contribution (low, medium or high) to the set target (10% or higher).

The Strategy should also assess the financial viability of these technologies, taking into account the government incentives.

- provision of more details on buildings', public spaces', walking and cycling routes' and ancillary facilities' design and locations;
- commitment for certification under the 'Considerate Contractors Scheme' or similar scheme;
- specification of materials and products to be used; and
- firm commitments to the mitigation measures for the reserved matters application.

6. References

1. BREEAM Communities, Technical Guidance Manual 2009, SD5065B
2. BREEAM New Construction Non-Domestic Buildings, Technical Manual 2011, SD 5073
3. BREEAM Offices 2008, Scheme Document, SD 5055
4. Dunsbury Hill Design and Access Statement 2012
5. Dunsbury Hill Development Brief (2007)
6. Dunsbury Hill Farm Development Specification and Application Drawings, December 2011
7. Dunsbury Hill Farm Environmental Statement Volume 1, Portsmouth City Council, December 2011
8. Dunsbury Hill Farm Framework Travel Plan, October 2011

Appendix A – BREEAM Requirements Identified in the Sustainability Briefing Note

A.1 BREEAM Requirements Identified in the Sustainability Briefing Note

Place Shaping

Issue PS4: Landscaping

- A.1.1 The issue objective is: To ensure that the character of the landscape is respected and, whenever and wherever possible, enhanced through appropriate location and design appropriate to the local environment.
- A.1.2 The following demonstrates compliance:
- A landscape design statement that has been developed in consultation with Local Authority to determine the specific native species' requirements for the proposed development.
 - A landscape design statement that has been developed to determine the specific native species' requirements for the proposed development in consultation with Local Authority and one of the following experts:
 - Qualified landscape architect; and/or
 - Qualified ecologist.

Evidence Required for Obtaining Credits for this Issue

- Copy of the proposed landscape design statement with details the specific native species' required for the proposed development.
- A letter from the developer or project team to the Local Authority with a commitment to plant native flora species' within the development.
- A letter from the developer or project team appointing:
 - Qualified landscape architect; and/or
 - Qualified ecologist.

Issue PS5: Design and Access

- A.1.3 The issue objective is: *To ensure that the development is accessible, aesthetically and architecturally attractive.*
- A.1.4 The following demonstrates compliance:
- A Design and Access Statement has been completed that builds on context appraisal, including:
 - Context;
 - Spatial relationships;
 - Connectivity to other areas/neighbourhoods;
 - Landmarks, vistas and focal points;
 - Urban design;
 - Conservation;
 - Urban form;

- Internal environment.

Evidence Required for Obtaining Credits for this Issue

- A.1.5 An outline of the proposed Design and Access Statement that confirms that the development will address the elements listed above.

Management

Issue Man 2: Considerate Constructors

- A.1.6 The issue objective is: *To recognise and encourage construction sites which are managed in an environmentally and socially considerate and accountable manner.*
- A.1.7 In order to achieve credits under this issue, the proposal needs to demonstrate an intention for the site to be certified under 'Considerate Contractors Scheme' (CCS) or a similar scheme. CCS is a UK certification scheme that encourages the considerate management of construction sites. The scheme is operated by the Construction Confederation and points are awarded in increments of 0.5 over the following eight sections:
- Considerate;
 - Environmentally Aware;
 - Site Cleanliness;
 - Good Neighbour;
 - Respectful;
 - Safe;
 - Responsible;
 - Accountable.
- A.1.8 To achieve certification under this scheme a score of at least 24 is required.

Evidence Required for Obtaining Credits for this Issue

- A copy of the relevant section of the main contract specification confirming:
 - A requirement to comply with the CCS;
 - The minimum score to be achieved in each CCS section.
- A.1.9 OR
- A formal letter from the client/developer confirming:
 - The main contract will include a clause requiring CCS certification;
 - The scope of the main contractor's works;
 - A completed copy of the relevant BREEAM checklist (A1).

Issue Man 3 Construction Site Impacts

- A.1.10 The issue objective is: *To recognise and encourage construction sites managed in an environmentally sound manner in terms of resource use, energy consumption and pollution.*
- A.1.11 In order to achieve credits under this issue, the proposal needs to demonstrate that the following is achieved:
- Monitor, report and set targets for CO₂ or energy arising from site activities;
 - Monitor, report and set targets for CO₂ or energy arising from transport to and from site;

- Monitor, report and set targets for water consumption arising from site activities;
- Implement best practice policies in respect of air (dust) pollution arising from the site;
- Implement best practice policies in respect of water (ground and surface) pollution occurring on the site;
- Main contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site;
- Main contractor operates an Environmental Management System;
- at least 80% of site timber is responsibly sourced and 100% is legally sourced.

Evidence Required for Obtaining Credits for this Issue

- A copy of the relevant section from the main contract specification confirming:
 - Contractor's obligations in respect to each item on the checklist;
 - Site timber will be sourced from suppliers capable of providing certification to the level required for the particular tier claimed;
 - All timber will come from a 'legal source' and is not on the CITES list².

A.1.12 OR

- Where the main contract specification is not yet available, a formal letter from the client/developer including:
 - Completed relevant BREEAM checklist (A3) identifying which items will form part of the main contractor's obligations.
 - The policy for sourcing site timber for the project.
 - Confirmation that the above will be implemented in compliance with BREEAM's criteria.
- * Or in the case of Appendix III of the CITES list, it has not been sourced from the country seeking to protect this species as listed in Appendix III.

Issue Man 8: Security

A.1.13 The issue objective is: *To recognise and encourage the implementation of effective design measures that will reduce the opportunity for and fear of crime on the new development.*

A.1.14 In order to achieve credits under this issue, the following needs to be demonstrated:

- The design team has consulted with and sought the advice of the local police Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) on designing out the opportunity for crime, in accordance with the principles and guidance of *Secured by Design*³.
- Consultation with the ALO/CPDA occurred during or prior to the concept design stage (RIBA stage C) or equivalent.
- The final design embodies the recommendations of the ALO/CPDA and is built to conform to the principles and guidance of *Secured by Design*.

² CITES (Convention on International Trade in Endangered Species) Appendices I and II of the CITES list illustrate species of timber that are protected outright. Appendix III of the CITES list illustrates species that are protected in at least one country. If a timber species used in the development is on Appendix III it can be included as part of the assessment as long as the timber is not obtained from the country(s) seeking to protect this species.

³ Secured by Design: A police initiative that seeks to encourage the construction industry to adopt crime prevention measures in the design of developments, to assist in reducing the opportunity for and fear of crime.

Evidence Required for Obtaining Credits for this Issue

- Correspondence from or a copy of the report/feedback from the ALO/CPDA confirming:
 - Scope of their advice/involvement;
 - The stage of design in which their advice was sought;
 - Summary of their recommendations.
- A marked-up copy of the site/design plan(s) highlighting examples of:
 - The development conforming to ALO/CPDA recommendations and *Secured by Design* principles and guidance.

A.1.15 OR

- If the timing of assessment does not permit the above, a copy of the specification clause confirming:
 - The development will conform to ALO/CPDA recommendations and *Secured by Design* principles and guidance.

Health and Wellbeing

Issue Hea 1: Daylighting

A.1.16 The issue objective is: *To give building users sufficient access to daylight.*

Issue Hea 2: View Out

A.1.17 The issue objective is: *To allow occupants to refocus their eyes from close work and enjoy an external view, thus reducing the risk of eyestrain and breaking the monotony of the indoor environment.*

A.1.18 BREEAM requirements for the above issues relate to the detailed design stage. However, the design team should be aware of these considerations and the site plan should indicate buildings' location and proximity to external obstructions.

Issue Hea 5: Internal and external lighting levels

A.1.19 The issue objective is: *To ensure lighting has been designed in line with best practice for visual performance and comfort.*

A.1.20 In terms of external lighting the following demonstrates compliance:

- Illuminance levels for lighting in all external areas within the construction zone are specified in accordance with CIBSE Lighting Guide 6, 'The outdoor environment'.

Evidence Required for Obtaining Credits for this Issue

- A formal written declaration of conformity from the relevant member of the design team confirming:
 - The maintained illuminance levels for each external space are in compliance with the relevant Standard.

Energy and Climate

Issue Ene 4: External Lighting

A.1.21 The issue objective is: *To recognise and encourage the specification of energy-efficient light fittings for external areas of the development.*

A.1.22 The following demonstrates compliance (where provided):

- All external light fittings for the building, access ways and pathways have a luminous efficacy of at least 50 lamp lumens/circuit Watt when the lamp has a colour rendering index (Ra) greater than or equal to 60; OR 60 lamp Lumens / circuit Watt when the lamp has a colour rendering index (Ra) less than 60.
- All external light fittings to car parking areas, associated roads and floodlighting has a luminous efficacy of at least 70 lamp lumens/circuit Watt when the lamp has a colour rendering index (Ra) greater than or equal to 60; OR 80 lamp Lumens / circuit Watts when the lamp has a colour rendering index (Ra) less than 60.
- All external light fittings for signs and uplighting have a luminous efficacy of at least 60 lamp lumens/circuit Watt when the lamp wattage is greater than or equal to 25W; OR 50 lamp lumens/circuit Watt when the lamp wattage is less than 25W.
- External light fittings are controlled through a time switch, or daylight sensor, to prevent operation during daylight hours. Daylight sensor override on a manually switched lighting circuit is acceptable.

Evidence Required for Obtaining Credits for this Issue

- Marked-up site plan and building elevations showing:
 - Location and purpose of all external lighting fittings.
- Lighting specification or lighting designer's calculations confirming:
 - Lamp lumens/circuit watt for each type of fitting as well as the colour rendering index Ra (where appropriate);
 - External lighting control strategy.

Issue CE4 – Heat Island

A.1.23 The issue objective is: *To reduce heat absorption within the development (Heat Island effect) thus reducing the incidence of overheating and the need for powered cooling.*

A.1.24 The following demonstrates compliance:

- The design team has provided confirmation that the design strategy includes the provision of shaded public spaces and footpaths.
- The design team has provided confirmation that the design strategy addresses at least 3-5 points below:
 - Provision of appropriate shaded green space and tree cover;
 - Green roofs and vegetated walls;
 - Design to enable air-flow throughout the development;
 - Open water and fountains in public spaces;
 - Shaded public spaces and footpaths;
 - Appropriate choice of external finishes – to avoid heat absorption;
 - Passive solar design.

Evidence Required for Obtaining Credits for this Issue

- Marked up drawings and specifications outlining where and how shaded public spaces and footpaths will be provided; or written confirmation of the proposed measures.
- Marked up drawings and specifications outlining at least 3-5 measures taken to combat heat island effect; or written confirmation of the proposed measures.

Issue CE4 – Energy Efficiency

A.1.25 The issue objective is: *To increase the overall efficiency of the development through energy efficient design and management.*

A.1.26 The following demonstrates compliance:

- An energy strategy will be developed for the proposed development;
- An independent energy specialist will be appointed to advise on the development of the energy strategy.
- The energy strategy will focus as a minimum on:
 - Minimising energy demand for the site through the site orientation and passive solar design;
 - Maximising the thermal efficiency of building envelopes through the use of (as a minimum):
 - Thermal mass;
 - High levels of insulation;
 - Good levels of air tightness;
 - Avoidance of cold bridging.

Evidence Required for Obtaining Credits for this Issue

- A copy of the specification clauses or letter from the design team confirming:
 - An energy strategy will be developed for the site;
 - An independent energy specialist will be appointed to advise in developing the energy strategy;
 - Scope of the strategy;
 - Detail of the energy efficiency measures that will be adopted.

Issue Ene 5: Low or Zero Carbon Technologies

A.1.27 The issue objective is: *To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the energy demand.*

A.1.28 The following demonstrates compliance:

- A feasibility study has been carried out by an energy specialist to establish the most appropriate local (on-site or near-site) low or zero carbon technology (LZC) energy source for the development. This study covers as a minimum:
 - Energy generated from LZC energy source per year;
 - Payback;
 - Land use;
 - Local planning criteria;
 - Noise;
 - Feasibility of exporting heat/electricity from the system;
 - Life cycle cost/lifecycle impact of the potential specification in terms of carbon emissions;

- Any available grants;
- All technologies appropriate to the site and energy demand of the development;
- Reasons for excluding other technologies.
- A local LZC energy technology has been specified for the building/development in line with the recommendations of the above feasibility study.
- The feasibility study has been carried out at RIBA stage C (concept design) or equivalent procurement stage.

A.1.29 OR

- The organisation that occupies the building has in place a contract with an energy supplier to provide electricity for the assessed building/development from a 100% renewable energy source. This supply must be delivered by an *accredited external renewable* source. The contract must be valid for a minimum of 3 years from the date the assessed building becomes occupied.
- A local LZC energy technology has been installed in line with the recommendations of the above feasibility study and this method of supply results in a **10% reduction in the building's CO₂ emissions**.

A.1.30 OR

- A local LZC energy technology has been installed in line with the recommendations of the above feasibility study and this method of supply results in a **15% reduction in the building's CO₂ emissions**.

A.1.31 Figures used for calculations of the percentage carbon reduction provided by LZC technology should be based on the output from approved energy modelling software. A higher level of CO₂ emissions reduction will enable obtaining more credits under this issue.

A.1.32 A local LZC energy technology resulting in a **20% reduction** in the building's CO₂ emissions would be in line with exemplary level criteria and help achieve additional innovative credits for this BREEAM issue.

Evidence Required for Obtaining Credits for this Issue

- A copy of the feasibility study report
- Letter from the energy specialist confirming:
 - Compliance with the definition of an energy specialist;
 - The timing of the feasibility report within the plan of works.
- Marked-up design plan or specification confirming:
 - Proposed installation of LZC energy technology.
- Manufacturer's technical data and details or calculations stating the carbon savings as a result of the installed LZC technology.
- Where an offsite supply is being used as a method of compliance, supplier's documentation confirming:
 - Name and details of supplier
 - Details of the source of supply.
- A copy of the contract or other formal documentation confirming the length of contract to supply 100% renewable energy.

Transport

Issue Tra 1: Provision of Public Transport

- A.1.33 The issue objective is: *To recognise and encourage development in proximity to good public transport networks, thereby helping to reduce transport-related emissions and traffic congestion.*
- A.1.34 The following demonstrates compliance:
- The development will be within an existing public transport corridor, and its capacity is established (BREEAM Communities).
 - The public transport *Accessibility Index* for the building is calculated by entering the following information in to the BREEAM assessor's '*Provision of Public Transport calculator*' (BREEAM Offices):
 - The distance (m) from the main building entrance to each compliant public transport node;
 - The public transport type serving the compliant node e.g. bus or rail;
 - The average number of services stopping per hour at each compliant node during the standard operating hours of the building for a typical day.
- A.1.35 Under BREEAM Offices requirements, compliant public transport node considered under this issue includes any bus stop within 650m and any railway station within 1,000m of the assessed building's main entrance, measured via a safe pedestrian route (not 'as the crow flies'). The service stopping at each node must provide transport from, or onward travel to, either an urban centre, major transport node or a community focal point e.g. doctor's surgery, library, school or village centre. Only local services should be assessed and any national public transport services should be excluded from the analysis, unless such a service can be said to provide a local commuter service. There is no limit on the number of nodes that can be considered, provided they all meet the above criteria.
- A.1.36 The BREEAM Communities requirements seek to ensure that a regular public transport node is located at a safe, walkable distance within 2km.

Evidence Required for Obtaining Credits for this Issue

- A marked up plan of the development and surrounding areas, showing the public transport nodes in existence.
- Initial results and confirmation that outline that sufficient spare capacity in the local area can be brought on-stream during the build process to meet the needs of the proposed development, or that there is excess spare capacity in the local area network to meet the needs of the proposed development.
- A copy of the output from the Provision of Public Transport calculator.
- Scale map highlighting the location of the building and all public transport nodes in proximity of the building.
- Timetables for each service at each public transport node considered.

Issue Tra 2: Proximity to amenities

- A.1.37 The issue objective is: *To encourage and reward a building that is located in proximity to local amenities, thereby reducing the need for extended travel or multiple trips.*
- A.1.38 The following demonstrates compliance:
- 1. Where the building is within 500m of the following amenities:

- a. Grocery shop and/or food outlet
- b. Post box
- c. Cash machine

Evidence Required for Obtaining Credits for this Issue

- Marked-up site plan or map highlighting:
 - Location of assessed building
 - Location and type of amenities
 - The route to the amenities
 - Plan/map scale
- Where the amenities do not currently exist, but are due to be developed, a letter from the client/developer confirming:
 - The location and type of amenities to be provided.
 - The timescale for development of the amenities.

Issue Tra 3: Cyclist Facilities

- A.1.39 The issue objective is: *To encourage building users to cycle by ensuring adequate provision of cyclist facilities.*
- A.1.40 The following demonstrates compliance with the requirements relevant at this stage of the application:
- 1. The number of *compliant cycle storage spaces* provided is as follows:
 - 10% of building users up to 500;
 - 7% for building users in the range of 501 – 1000;
 - 5% for building users over 1000.
- A.1.41 Where the term building users is referenced this refers to the staff, therefore the number of staff that will work within the building must be used to determine the number of compliant facilities that must be provided to achieve the credit. Whilst staff numbers are the means by which compliance with the assessment criteria is determined, the percentage requirements account for visitors and patients (if applicable to scheme) that will travel to and use or work within the building. As such the compliant cycle facilities must be accessible to all these types of building users.
- 6.1 Compliant cycle storage facilities are those that meet the following:
- The space is covered overhead and protected from the rain.
 - The covered area and the cycle racks are set in or fixed to a permanent structure (building or hardstanding) and allow both the wheel and frame to be locked securely (e.g. Sheffield type). Or racks are located in a locked structure fixed to or part of a permanent structure with CCTV surveillance.
 - There is a minimum distance of 1.0m between cycle racks, where the racks allow for two-sided parking, and 0.8m for one-sided parking to enable bikes to be easily stored and accessed.
 - Racks positioned in a circular array are spaced in accordance with the guidance in the New Metric Handbook.
 - There is a minimum distance from any obstruction e.g. wall (located either to the side of the stand or in front of it) of 300mm for single-sided use and 900mm for double-sided use.

- Adequate lighting is provided in accordance with BS5489 Part 1 – Lighting of roads and amenity areas.
- The facilities are in a prominent site location that is viewable from the building.
- The majority of the cycle racks are within 100m of a building entrance (ideally within 50m).

Evidence Required for Obtaining Credits for this Issue

- Site plan, design drawings and/or a copy of the specification confirming:
 - The location of the cycle storage facilities;
 - The number of cycle spaces provided;
 - The type, dimensions and layout of cycle racks;
 - The materials and construction specified for the facility;
 - The lighting for the facility is in accordance with BS5489 Part 1;
 - Building occupancy or, where relevant, net lettable/floor area.

Issue Tra 4: Pedestrian and Cyclist Safety

A.1.42 The issue objective is: *To recognise and encourage the provision of safe and secure pedestrian and cycle access routes on the development.*

A.1.43 The following demonstrates compliance:

- Where external site areas form part of the assessed site and these areas contain vehicle access roads, parking and/or pedestrian access to the building, adequate cycle lanes and pedestrian pathways must be provided. If the building does not have any external areas and internal access is directly from the public highway/footpath, then the credit(s) can be awarded on a default basis.
- The cycle lanes have been designed and constructed in accordance with the guidance in the National Cycle Network (NCN) *Guidelines and Practical Details – issue 2*, Sustrans and the relevant parts of Appendix VI *NCN Design and Construction Checklist*.
- The cycle lanes and pedestrian paths meet the following minimum width dimensions:
 - Where pedestrian and cycle routes are shared the minimum total width of the combined path is 3.0m;
 - Where the cycle lane is segregated from both the pedestrian route and carriageway the minimum width of the cycle path is 2.0m and the minimum width of the pedestrian path is 1.5m;
 - Where the cycle route forms a part of the carriageway, the minimum width of the lane is 1.5m.

Minimum widths should not be regarded as the design target, where possible best practice as detailed in the Sustrans guidelines and DfT guidance must be aimed for.

- Cycle lanes provide direct access to any cycle storage facilities provided on the site, without the need to deviate from the cycle path and, if relevant, connect to offsite cycle paths where these run adjacent to the development's boundary.

Pedestrian access criteria

- Onsite footpaths connect to public footpaths off site, providing access to local transport nodes and other offsite amenities (where present).

- Where provided, drop-off areas are designed off the access road and provide direct access to pedestrian pathways/areas, therefore avoiding the need for the pedestrian to cross vehicle access routes.
- Where dedicated pedestrian crossing of a vehicle access route is provided, the road is raised to the pavement level (i.e. the pavement is not lowered to road level).
- For larger developments with a high number of public users/visitors, pedestrian pathways must be signposted to other local amenities off site, including public transport nodes.

Combined cyclists and pedestrian access criteria

- Delivery areas are not accessed through parking areas and do not cross or share pedestrian and cyclist routes and other outside amenity areas accessible to building users and general public.
- Lighting design of pedestrian pathways and cycle paths on site are in compliance with CIBSE Lighting Guide 6 (LG6) and BS5489 Part 1.

Evidence Required for Obtaining Credits for this Issue

- A scaled proposed site plan, specification and/or design details highlighting all necessary features and dimensions.
- A copy of the specification or scaled proposed site plan confirming:
 - Cycle routes have been or will be designed in accordance with the best practice guidance.

A.1.44 AND

- A signed and dated copy of the *NCN Design and Construction Checklist* from the design/project team.
- A copy of the specification, site plan and/or manufacturer's technical details. confirming:
 - External lighting design strategy.

Issue Tra 5: Travel Plan

A.1.45 The issue objective is: *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.*

A.1.46 The following demonstrates compliance:

- A travel plan has been developed as part of the feasibility and design stages which considers all types of travel relevant to the building type and *users*.
- The travel plan is structured to meet the needs of the particular site and takes into consideration the findings of a site-specific transport survey and assessment that covers the following (as a minimum):
 - Where relevant, existing travel patterns and opinions of existing *building or site users* towards cycling and walking so that constraints and opportunities can be identified;
 - Travel patterns and transport impact of future *building users*;
 - Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children);
 - Disabled access (accounting for varying levels of disability and visual impairment);
 - Public transport links serving the site;

- Current facilities for cyclists.
- The travel plan includes a package of measures that have been used to steer the design of the development in order to meet the travel plan objectives and minimise car-based travel patterns. This is demonstrated via specific examples such as:
 - Providing parking priority spaces for car sharers;
 - Providing dedicated and convenient cycle storage and changing facilities;
 - Lighting, landscaping and shelter to make pedestrian and public transport waiting areas pleasant;
 - Negotiating improved bus services, i.e. altering bus routes or offering discounts;
 - Restricting and/or charging for car parking;
 - Criteria for lobby areas where information about public transport or car sharing can be made available;
 - Pedestrian and cycle friendly (for all types of user regardless of the level of mobility or visual impairment) via the provision of cycle lanes, safe crossing points, direct routes, appropriate tactile surfaces, well lit and signposted to other amenities, public transport nodes and adjoining offsite pedestrian and cycle routes.

Evidence Required for Obtaining Credits for this Issue

- A copy of the Travel Plan.
- A copy of the site-specific transport survey/assessment.
- A marked-up copy of the site plan demonstrating examples of design measures, implemented in support the travel plan's findings.

A.1.47 OR

- Where a detailed site plan is not available, a formal letter from the client confirming that measures will be implemented into the final design in support the travel plan's findings.

Issue Tra 6: Maximum Car Parking Capacity

A.1.48 The issue objective is: *To encourage the use of alternative means of transport to the building other than the private car, thereby helping to reduce transport related emissions and traffic congestion.*

A.1.49 The following demonstrates compliance:

- No more than one parking space is provided for every three or four building users.

Evidence Required for Obtaining Credits for this Issue

- A site plan or copy of the specification confirming:
 - Number and type of parking spaces provided for the building.
- Relevant documentation or correspondence from the design team or client confirming the number of building users.

Water

A.1.50 BREEAM Offices requirements for this topic relate to the detailed design stage.

Issue RES 5 - Water Masterplanning Strategy

- A.1.51 The issue objective is: *To develop a sustainable water efficiency strategy at a master planning level for the whole site.* It should demonstrate how the development will meet the required water demands placed upon the site.
- A.1.52 The following demonstrates compliance:
- A study is carried out to determine the most appropriate methods to be employed for reducing water demand on site, taking into account the use of the site and the user numbers.
 - Consultation has taken with the relevant local Water Authority to ascertain the existing supply and it has been confirmed that sufficient capacity already exists for the size and needs of the development.
 - Rainwater will be harvested for re-use on site.
 - Greywater recycling systems will be installed for buildings on the development.

Evidence Required for Obtaining Credits for this Issue

- A copy of the specification clauses or letter from the design team confirming:
 - A water management demand study for the development site will be completed;
 - Rainwater harvesting technology will be installed for buildings on the development;
 - Greywater recycling technology will be installed for buildings on the development.
- A copy of the communication from the local Water Authority confirming that there will be sufficient capacity within the current supply to serve the development.

Materials/Resources Selection

Issue Mat 1: Materials Specification (Major Building Elements)

- A.1.53 The issue objective is: *To recognise and encourage the use of construction materials with a low environmental impact over the full life cycle of the building.*

Issue Mat 2: Hard Landscaping and Boundary Protection

- A.1.54 The issue objective is: *To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking account of the full life cycle of materials used.*

Issue Mat 5: Responsible Sourcing of Materials

- A.1.55 The issue objective is: *To recognise and encourage the specification of responsibly sourced materials for key building elements.*
- A.1.56 BREEAM requirements for the above issues relate to the detailed design stage but it may be useful for the design team to be aware of these BREEAM objectives early in the process.

Issue RES3 – Road Construction

- A.1.57 The issue objective is: *To increase the proportion of locally reclaimed materials in the construction of roads, pavement, public spaces and car parks.*
- A.1.58 Credits (1 to 3) are obtained if the following demonstrated:
- That >15% of road construction materials are locally reclaimed or recycled material.
 - That 25-30% of road construction materials are locally reclaimed or recycled material.
 - That >30% of road construction materials are locally reclaimed or recycled material.

Issue Mat 7: Designing for Robustness

A.1.59 The issue objective is: *To recognise and encourage adequate protection of exposed parts of the building and landscape, therefore minimising the frequency of use of replacement materials.*

A.1.60 The following demonstrates compliance:

- Internal and external areas of the building where vehicular, trolley and pedestrian movement occur have been identified.
- Suitable durability and protection measures or design features have been specified to prevent damage to the vulnerable parts of these building areas from such traffic. This must include, but is not necessarily limited to:
 - Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc).
 - Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas.
 - Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas.

Evidence Required for Obtaining Credits for this Issue

- Design drawings marked up to illustrate:
 - Vulnerable areas/parts of the building.
- Design drawings and/or specification confirming:
 - The durability measures specified.

Waste

Issue Wst 1: Construction Site Waste Management

A.1.61 The issue objective is: *To promote resource efficiency via the effective and appropriate management of construction site waste.*

Issue Wst 2: Recycled Aggregates

A.1.62 The issue objective is: *To recognise and encourage the use of recycled and secondary aggregates in construction, thereby reducing the demand for virgin material.*

A.1.63 BREEAM requirements for the above issues relate to the detailed design stage but it may be useful for the design team to be aware of these BREEAM objectives early in the process.

Issue Wst 3: Recyclable Waste Storage

A.1.64 The issue objective is: *To recognise the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that such waste is diverted from landfill or incineration.*

A.1.65 The following demonstrates compliance:

- A dedicated storage space to cater for recyclable materials generated by the building during occupation, compliant with the following:
 - Clearly labelled for recycling;
 - Placed within accessible reach of the building (see below);
 - In a location with good vehicular access to facilitate collections.

- The size of the space allocated must be adequate to store the likely volume of recyclable materials generated by the building's occupants/operation. Whilst a fixed area cannot always be given, the following must be complied with as a minimum:
 - At least 2m² per 1000m² of net floor area for buildings <5000m²
 - A minimum of 10m² for buildings ≥5000 m²
 - An additional 2m² per 1000m² of net floor area where catering is provided (with an additional minimum of 10m² for buildings ≥5000m²).

A.1.66 Typically 'accessible reach' is defined in BREEAM as within 20m of a building entrance. In some circumstances, depending on the size of the building, site restrictions or tenancy arrangements, it may not be possible to meet a 20m requirement. In this case the assessor will have to exercise his judgement to determine if the facility is in an easily accessible location for building occupants and vehicle collection.

Evidence Required for Obtaining Credits for this Issue

- Marked-up building/site plan and/or copy of the specification confirming:
 - The location of the dedicated recyclable storage area;
 - Storage area for general waste;
 - The area (m²) of the storage space(s);
 - Description of the labelling.

Land Use and Ecology

Issue LE3: Ecological Value of Site and Protection of Ecological Features

A.1.67 The issue objective is: *To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.*

A.1.68 It would not be possible to obtain credits under this issue, as the proposed site cannot be defined as 'land of low ecological value'. However, as no minimum standards apply to this issue, the lack of credits should not prevent the proposal from obtaining a 'Very Good' or 'Excellent' BREEAM rating. Regardless of this, it is deemed important that ecological mitigation measures are carefully implemented and the following BREEAM requirements are taken on board:

- Follow the advice / recommendations, given by the ecologist conducted the site survey, for protecting all existing features and areas of ecological value.
- All existing features of ecological value surrounding the construction zone and site boundary area are adequately protected from damage during clearance, site preparation and construction activities as listed below:
 - Trees of over 100 mm trunk diameter, and/or of significant ecological value, are protected by barriers. Barriers must prohibit construction works in the area between itself and the tree trunk. Minimum distance between tree trunk and barriers must be either the distance of branch spread or half tree height, whichever is the greater.
 - In all cases trees must be protected from direct impact and from severance or asphyxiation of the roots.
 - Hedges and natural areas requiring protection must either have barriers erected and be protected, or, when remote from site works or storage areas, be protected with a prohibition of construction activity in their vicinity.

- Watercourses and wetland areas are to be protected by cut-off ditches and site drainage to prevent run-off to natural watercourses (as this may cause pollution, silting or erosion).
- In all cases, the contractor is required to construct ecological protection prior to any preliminary site construction or preparation works (e.g. clearing of the site or erection of temporary site facilities).

Issue LE4: Mitigating Ecological Impact

A.1.69 The issue objective is: *To minimise the impact of a building development on existing site ecology.*

A.1.70 The following demonstrates compliance:

- One credit where the change in ecological value of the site is less than zero and equal to or greater than minus nine plant species i.e. a minimal change.
Two credits where the change in ecological value of the site is equal to or greater than zero plant species i.e. no negative change.

Evidence Required for Obtaining Credits for this Issue

- A copy of the suitably qualified ecologist's report confirming prior to and after the development:
 - Landscape and vegetation plot types;
 - Area (m²) of vegetation plot types.
- The ecology report covering the information on change in ecological value outlined in the relevant BREEAM checklist (A6).

Issue LE5: Enhancing Site Ecology

A.1.71 The issue objective is: *To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.*

A.1.72 The following demonstrates compliance:

- A suitably qualified ecologist (SQE) has been appointed to report on enhancing and protecting the ecology of the site and:
 - The SQE provides an Ecology Report with appropriate recommendations for protection and enhancement of the site's ecology.
 - The report is based on a site visit/survey by the SQE prior to the commencement of initial site preparation works.
- The general recommendations of the Ecology Report for enhancement and protection of site ecology have been, or will be, implemented.
- The SQE confirms that this will result in an increase in ecological value of the site up to 6 plant species or greater.

Evidence Required for Obtaining Credits for this Issue

- A copy of the ecologist's report containing:
 - Details and scope of the site survey.
- Proposed site plan highlighting implementation of the ecologist enhancement recommendations.
- A copy of the relevant section of the specification requiring the main contractor to implement the SQE's recommendations for protection and enhancement

OR

- A letter from the client or design team member confirming:
 - That the specification will require the main contractor to implement the ecologist's recommendations.
- Filled in relevant BREEAM checklist (A6).

Issue LE6: Long Term Impact on Biodiversity

A.1.73 The issue objective is: *To minimise the long term impact of the development on the site's, and surrounding area's, biodiversity.*

A.1.74 The following demonstrates compliance:

- A SQE has been appointed prior to commencement of activities on site.
- The SQE confirms that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process.
- A landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion. This is to be handed over to the building occupants and includes:
 - Management of any protected features on site;
 - Management of any new, existing or enhanced habitats;
 - A reference to the current or future site level or local Biodiversity Action Plan.

A.1.75 Additional criteria in addition to the above mandatory include amongst others the following:

- Where a new ecologically valuable habitat, appropriate to the local area, is created. This includes habitat that supports nationally, regionally or locally important biodiversity, and/or which is nationally, regionally or locally important itself; including any habitat listed in the UK Biodiversity Action Plan (UK BAP), Local Biodiversity Action Plan (LBAP), those protected within statutory sites (e.g. SSSIs), or those within non-statutory sites identified in local plans.
- Where flora and/or fauna habitats exist on site, the contractor programmes site works to minimise disturbance to wildlife. For example, site preparation, ground works, and landscaping have been, or will be, scheduled at an appropriate time of year to minimise disturbance to wildlife. Timing of works may have a significant impact on, for example, breeding birds, flowering plants, seed germination, amphibians etc. Actions such as phased clearance of vegetation may help to mitigate ecological impacts. This additional requirement will be achieved where a clear plan has been produced detailing how activities will be timed to avoid any impact on site biodiversity in line with the recommendations of a SQE.

Evidence Required for Obtaining Credits for this Issue

- The SQE report or letter confirming:
 - That they were appointed prior to commencement of activities on site.
 - All relevant UK and EU legislations will be complied with.
 - A copy of the proposed site plan highlighting the new ecologically valuable habitat.
 - That the habitat supports the relevant biodiversity action plan(s).
 - Wildlife on site that needs to be accounted for in programming works.
 - Actions required with respect to programming site works to minimise disturbance.
- Filled in relevant BREEAM checklist (A6).

Pollution

Issue Pol 5: Flood Risk

A.1.76 The issue objective is: *To encourage development in low flood risk areas or to take measures to reduce the impact of flooding on buildings in areas with a medium or high risk of flooding.*

A.1.77 The following demonstrates compliance:

Two credits

- 1. Where the assessed development is situated in a flood zone that is defined as having a low annual probability of flooding.
- 2. A site specific Flood Risk Assessment (FRA) confirms that there is a low risk of flooding from all sources.

Or one credit

- 1. Where the assessed development is situated in a flood zone that is defined as having a medium or high annual probability of flooding
- AND
- 2. A site specific Flood Risk Assessment (FRA) confirms to the satisfaction of the local authority and statutory body that the development is appropriately flood resilient and resistant from all sources of flooding

AND

- 3. The ground level of the building, and access to it and the site, are designed (or zoned) so they are at least 600mm above the design flood level of the flood zone in which the assessed development is located (see compliance notes for further guidance).

One additional credit

- 1. Where attenuation measures are specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the predevelopment site. This should comply with the *Interim Code of Practice for Sustainable Drainage* systems published by CIRIA, or for at least a 1 year and 100 year return period event with a 6 hour duration.
- 2. The capacity of the attenuation measures must include an allowance for climate change; this should be made in accordance with current best practice.

Evidence Required for Obtaining Credits for this Issue

- A copy of a flood map or flood risk assessment confirming:
 - Flood zone or annual probability of flooding in the site location.
- Where appropriate, correspondence from the appropriate statutory body confirming:
 - Reduced annual probability of flooding due to existing flood defences.
- A copy of the Flood Risk Assessment.
- Site plans/sections confirming:
 - The design flood level for the site;
 - The design ground level(s) for all developed areas of the site;
 - Safe access and escape routes.

Additional SUDS Credit:

- Site plans and a copy of the specification or consultants report confirming:
 - Type and storage volume (l) of the water run-off attenuation measures;
 - Total area of hard surfaces (m²);
 - Peak flow rate (l/s) for the design storm event;
 - Additional allowance for climate change designed in to the system.

Issue Pol 6: Minimising Watercourse Pollution

A.1.78 The issue objective is: *To reduce the potential for silt, heavy metals, chemicals or oil pollution to natural watercourses from surface water run-off from buildings and hard surfaces.*

A.1.79 The following demonstrates compliance:

- Specification of SuDS or source control systems such as permeable surfaces or infiltration trenches where run-off drains are in areas with a relatively low risk source of watercourse pollution.
- Specification of oil/petrol separators (or equivalent system) in surface water drainage systems, where there is a high risk of contamination or spillage of substances such as petrol and oil
- All water pollution prevention systems have been designed and detailed in accordance with the recommendations of Pollution Prevention Guideline 3 and where applicable the SuDS manual.
- A comprehensive and up-to-date drainage plan of the site will be made available for the building/site occupiers.

Evidence Required for Obtaining Credits for this Issue

- Marked-up proposed site plan highlighting:
 - Low and high risk areas of the site.
- A copy of the specification or design plan confirming:
 - Type of pollution control systems specified.
- A letter from the design team confirming:
 - All water pollution prevention systems designed in accordance with PPG3 and the SuDS manual (where appropriate);
 - Outlining indicative examples of compliance with PPG3 and the SuDS manual;
 - A copy of the drainage plan will be produced and handed over to the building occupier.

Issue Pol: 7 Reduction of Night Time Light Pollution

A.1.80 The issue objective is: *To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.*

A.1.81 The following demonstrates compliance:

- The external lighting strategy has been designed in compliance with Table 1 (and its accompanying notes) of the ILE Guidance notes for the reduction of obtrusive light, 2005.
- All external lighting (except for safety and security lighting) can be automatically switched off between 2300hrs and 0700hrs. This can be achieved by providing a timer for all external lighting set to the appropriate hours.

- If safety or security lighting is provided and will be used between 2300hrs and 0700hrs, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 1 of the ILE's Guidance notes, for example by using an automatic switch to reduce the lighting levels at 2300 or earlier.
- Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements.

Evidence Required for Obtaining Credits for this Issue

- A marked-up copy of the site plan showing:
 - Areas of the building and site that will be externally lit;
 - Any nearby properties.
- A copy of the specification clause requiring, or external lighting design confirming:
 - The external lighting design in compliance with Table 1 of the ILE Guidance notes;
 - Controls for all external lighting;
 - Illuminated advertisements designed in compliance with ILE Technical Report 5 (if relevant).
- In the case of the external lighting design, the M&E engineer or lighting designer must provide indicative examples of where and how the strategy complies with the assessment criteria.

Pol 8: Noise Attenuation

A.1.82 The issue objective is: *To reduce the likelihood of noise from the new development affecting nearby noise-sensitive buildings.*

A.1.83 The following demonstrates compliance:

- There are, or will be, existing noise-sensitive areas or buildings within 800m radius of the assessed development.
- Where there are or will be no noise-sensitive areas or buildings in the locality of the assessed development, the credit can be awarded by default.
- A noise impact assessment in compliance with BS 4142:199782 has been carried out and the following noise levels measured/determined:
 - Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development; or at a location where background conditions can be argued to be similar.
 - The rating noise level resulting from the proposed noise-source. This can be based upon reference to similar installations or sites, or determined by calculation.

A.1.84 The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body (see relevant definitions in the additional guidance section).

- Where the rating level of the noise source(s) from the site/building is equivalent to or less than the background noise level, the credit can be awarded.
- Where the rating level of the noise source(s) from the site/building is greater than the background noise level, measures have been installed to attenuate the noise at its source to a level where it will comply with requirement 3.

Evidence Required for Obtaining Credits for this Issue

- Site plan highlighting:
 - All existing and proposed noise-sensitive buildings local to, and within, the site boundary;
 - Proposed sources of noise from the new development;
 - Distance (m) from these buildings to the assessed development.
- A copy of the acoustician's report.
- The acoustician's qualifications and professional status.

OR

- A copy of the specification clause requiring:
 - A noise assessment in compliance with BS 4142:1997 by a suitably qualified acoustician.

OR

- A formal letter from the client or design team confirming that they will appoint an acoustician to carry out a noise assessment in compliance with BS 4142:1997.
- Acoustician's report with recommendations for noise attenuation measures.

AND

- A marked-up design plan highlighting the specification of the acoustician's attenuation measures

OR

- A formal letter from the client or design team confirming that:
 - If relevant, attenuation measures recommended by an appointed suitably qualified acoustician will be installed.

Business and Economy

Issue BUS 1 – Business Priority Sectors

A.1.85 The issue objective is: *To promote business growth within regionally prioritised sectors.*

A.1.86 The following demonstrates compliance:

- A feasibility study (or investigation report) has been carried out, as a minimum, has examined and addressed the following:
 - Regional Economic Strategy;
 - Business occupancy of the development;
 - Services and facilities required;
 - Location of business occupants;
 - Local zoning planning requirements.
- A copy of the master plan is provided highlighting the location and areas set aside for likely tenants and business types/sectors.
- Additional information that demonstrates that there will be one or more priority business sectors introduced through the proposed development.

Issue BUS 2 – Labour and Skills

A.1.87 The issue objective is: *To ensure that the development contributes to regeneration initiatives.*

A.1.88 The following demonstrates compliance:

- Evidence is provided that local labour and/ or local contractors (including sub-contractors) will be used during the construction phase of the development.

Issue BUS 3 – Employment

A.1.89 The issue objective is: *To create permanent jobs within the local area.*

A.1.90 The following demonstrates compliance:

- An economic study (or investigation report) has been carried out and has examined and addressed the following:
 - Business in existing area;
 - Employment rates (unemployment rates);
 - Location of business types (existing and proposed);
 - Provisions of services (services and infrastructure).
- Evidence that demonstrates that the development will have a positive net gain on employment opportunities through the region and local area.
- Documentation that demonstrates an alliance with a local training provider (e.g., Universities, Higher Education Institutions, Apprentice Schemes, other).

