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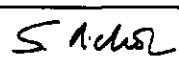
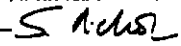
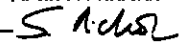
WSP

Old Mill Lane,
Barnsley,
Sustainability Statement

Peel Holdings Ltd

April 2012

QUALITY MANAGEMENT

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1 INTRODUCTION

1.1 PURPOSE OF A SUSTAINABILITY STATEMENT

1.1.1 WSP Environmental Ltd was commissioned by Peel Holdings Ltd to prepare a Sustainability Statement to accompany an outline planning application for retail development at National Grid and Circle land, off Harborough Hill Road, Barnsley (hereafter referred to as the 'Proposed Development').

1.1.2 The site extends to an area of approximately 6.02 ha. The majority of the site is currently developed and the vast majority comprises brownfield land within urban Barnsley. The River Dearne runs through the site which effectively divides the site into two. The site is allocated for retail and commercial and employment uses, as well as for two utility companies. A small area of Urban Green Space and Green Belt runs through the site to the north of the River Dearne.

1.1.3 Several large scale retail warehouses and associated parking and servicing currently occupy the southern part of the site, alongside a large gas holder. To the north of the River Dearne is a cleared site comprising a former gasworks unit and a small wooded area. The majority of the site comprises hard landscaping associated with existing and previous commercial uses.

1.2 BACKGROUND

1.2.1 Sustainable development is advocated through international initiatives including the World Summit on Sustainable Development held in Johannesburg, 2002; national initiatives including the UK Government Sustainable Development Strategy (DEFRA, 2005 'Securing our Future'); and local initiatives such as Local Agenda 21 (LA21), developed in response to the Rio Summit in 1992. The principle of sustainable development runs throughout UK Government Strategy and planning policy.

1.2.2 Sustainable development is commonly defined as:

"*Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987 'Our Common Future').*"

1.2.3 Sustainable development is about creating solutions that meet environmental, social and economic objectives in an integrated and holistic way. The UK Government's strategy Securing Our Future - A Strategy for Sustainable Development in the UK (DEFRA, 2005) identifies five key objectives:

- Living within environmental limits;
- Ensuring a strong healthy and just society;
- Achieving a sustainable economy;
- Promoting good governance; and
- Using sound science responsibly.

1.3 SUSTAINABILITY APPRAISAL

1.3.1 Sustainability appraisal (SA) is the process used to identify the potential environmental, social and economic impacts of an activity, plan, project or decision as early as possible. It provides a systematic and auditable way to explore, justify and record significant or insignificant impacts. SA enables sustainable development objectives to be integrated into the Proposed Development and helps to identify opportunities for enhancing the performance of the Proposed Development in sustainability terms.

1.3.2 The SA undertaken for the Proposed Development has two key objectives:

- To assess the performance of the Proposed Development against a set of sustainability objectives; and
- To identify opportunities to enhance the sustainability performance of the Proposed Development;

1.4 THE PROPOSED DEVELOPMENT

1.4.1 The Proposed Development comprises:

- Development of raised food superstore (circa 1,292 sqm) to the south of the River Dearne;
- Associated car parking to be provided at ground floor level (beneath the store) with access (for both customers and service vehicles) to be taken via a road bridge over the River Dearne from a new spur to the Wickes arm roundabout off the Quality Bus Corridor;
- Landscaping is proposed along the river in order to improve the river corridor and create a community park. All landscaping matters are, however, reserved;
- A small retail unit (574 sqm) is proposed to the south of the river (and the north of the foodstore) intended as a kiosk for leisure/recreation associated with the river corridor and community park;
- A Petrol Filling Station (and car wash / retail kiosk of 73 sqm) to the north of the river with access from the new link road (QBC); and
- A third retail unit of 1,961 sqm with associated parking and service access is proposed to the north of the river, and the new link road, as a reconfiguration of existing planning permission for a retail warehouse (obtained by National Grid).

1.4.2 The remainder of this statement is structured as follows:

Section 2 Method	Describes the approach adopted for the SA
Section 3 Context and Sustainability Issues	Describes the policy context for the Proposed Development with respect to the prevailing sustainability issues from regional to local considerations
Section 4 Sustainability Profile of the Proposed Development	Describes how the Proposed Development will help to achieve the sustainability objectives
Section 5 Conclusions	Summarises the sustainability performance of the Proposed Development

2 METHOD

2.1 INTRODUCTION

2.1.1 This section sets out the approach adopted for the SA. The approach has been divided into two key tasks comprising an assessment of the Proposed Development and the preparation of a Sustainability Statement. A description of these tasks is provided below.

2.2 APPRAISAL OF THE PROPOSED DEVELOPMENT

2.2.1 The Proposed Development has been appraised to ascertain how the proposals are meeting the sustainability objectives and where further actions / enhancement measures could be integrated into the scheme.

2.2.2 The sustainability appraisal was based on the objectives set out in the Barnsley Metropolitan Borough Council *Core Strategy Sustainability Appraisal* (2010), amended to be suitable to assess a scheme of the nature of the Proposed Development.

2.3 COMPILATION OF A SUSTAINABILITY STATEMENT

2.3.1 This Sustainability Statement was then prepared to inform the Proposed Development and to accompany the outline planning application. This Statement describes the performance of the Proposed Development with respect to the sustainability issues and the policy context set out in Section 3, including the key sustainability issues identified for the area.

3 CONTEXT AND SUSTAINABILITY ISSUES

3.1 INTRODUCTION AND POLICY BACKGROUND

3.1.1 This section provides a review of the key documents that set the planning policy and sustainability context for the Proposed Development from the national, regional and the local level.

National Policy

3.1.2 The Government's National Planning Policy Framework (NPPF) was published on the 27th March 2012 and supersedes the Government's Planning Policy Guidance notes (PPGs) and its more recent Planning Policy Statements (PPSs).

3.1.3 Paragraph 1 of the NPPF sets out its purpose, which is that

"The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied".

3.1.4 The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development (paragraph 6). The policies in paragraph 18 to 219, taken as a whole, constitute the Government's view on what sustainable development in England means in practice for the planning system.

3.1.5 Paragraph 4 explains that there are three dimensions to sustainable development. These are an economic role, a social role and an environmental role. These roles are mutually dependent and should be sought jointly and simultaneously through the planning system.

3.1.6 At the heart of the NPPF is the presumption in favour of sustainable development (paragraph 14), which is stated to be 'a golden thread running through both plan making and decision taking'. However, paragraph 12 confirms that the NPPF does not change the statutory status of the development plan as the starting point for decision making, but the NPPF is a material consideration in determining applications.

3.1.7 Paragraph 17 sets out the twelve core land use principles which should underpin both plan making and development management:

- Be genuinely plan led;
- Be creative in finding ways to enhance and improve places;
- To proactively drive and support sustainable economic development and meet objectively identified development needs;
- To always seek to secure a high quality of design and amenity;
- To take account of the different roles and characters of different areas, promoting the vitality of urban areas, protecting Green Belts, recognising the intrinsic character and beauty of the countryside and supporting rural communities;
- To support the transition to a low carbon future in a changing climate;
- To contribute to conserving and enhancing the natural environment and reducing pollution. Allocations should prefer land of a lesser environmental value;
- To encourage the use of previously developed land;
- To promote mixed use developments;

3.1.8 To conserve heritage assets in a manner appropriate to their significance;

- To actively manage patterns of growth to focus significant development in locations which are, or can be made, sustainable; and
- To support strategies to improve health, social and cultural wellbeing and deliver sufficient facilities and services to meet local needs.

3.1.9 Having set out the overall approach and the core land use principles, paragraphs 18 to 149 of the NPPF provide more detailed guidance across thirteen topic areas relating to the delivery of sustainable development

Regional Policy

The Yorkshire and Humber Plan (May 2008)

3.1.10 The East of England Plan sets an environmental, social and economic framework for the future development of the Yorkshire and Humber region. Sustainable Development is at the core of the plans spatial strategy:

- **Policy YH1 – Overall approach and key spatial priorities.** This policy seeks to ensure that growth and change will be managed across places and communities in Yorkshire and Humber in order to achieve sustainable development and the Spatial Vision.

3.1.11 This is carried through to the following key thematic policies:

- **ENV1 - Development & Flood Risk.** This policy seeks to ensure that allocation of areas for development will follow a sequential approach and will be in the lowest risk sites appropriate for the development (identified by Strategic Flood Risk Assessments);
- **ENV3 - Water Quality.** This policy seeks to maintain high standards of water quality through, among other measures, preventing development that could pollute surface and underground water resources especially in Source Protection Zones and close to above ground water resources of reservoirs and some rivers;
- **ENV5 - Energy.** This policy seeks to maximise improvements to energy efficiency and increases in renewable energy capacity. It promotes securing greater use of decentralised and renewable or low-carbon energy in new development;
- **ENV8 – Biodiversity.** This policy seeks to safeguard and enhance the Region's biodiversity and geological heritage, and ensure that the natural environment functions as an integrated network of habitats. Development should aim to maintain and enhance, restore or add to distinctive elements of the natural environment in line with international, national, regional, sub regional and local importance for biodiversity;
- **ENV9 - Historic Environment.** This policy states that the Region will safeguard and enhance the historic environment, and ensure that historical context informs decisions about development and regeneration;
- **ENV10 – Landscape.** This policy states that the Region will safeguard and enhance landscapes that contribute to the distinctive character of Yorkshire and the Humber. Development should safeguard and enhance landscapes and related assets of regional, sub-regional and local importance; and
- **ENV12 - Regional Waste Management Objectives.** This policy states that development should aim to reduce, reuse, recycle and recover as much waste as possible.

Local Policy

Barnsley District Council Core Strategy (September 2011)

3.1.12 Key sustainability policies within the core strategy are:

- **CSP1 – Climate change.** This policy seeks to:
  - Reduce and mitigate the impact of growth on the environment and carbon emissions ensure existing and new communities are resilient to climate change; and
  - Harness the opportunities that growth, and its associated energy demands, brings to increase the efficient use of resources through sustainable construction techniques and the use of renewable energy.

3.1.13 The policy also states that preference will be given to:

  - Development of previously developed land in sustainable locations locating and designing development to reduce the risk of flooding;
  - Promoting the use of sustainable drainage systems; and
  - Promoting investment in Green Infrastructure to promote and encourage biodiversity gain.

- **CSP2 – Sustainable Construction.** This policy states that development will be expected to:

- Demonstrate how it minimises resource and energy consumption, compared to the minimum target under current Building Regulations legislation, and how it is located and designed to withstand the longer term impacts of climate change.
- All new dwellings will be expected to achieve at least a level 3 rating under the Code for Sustainable Homes or equivalent. This requirement will rise over the plan period and by 2013 new dwellings should achieve at least level 4, rising to level 6 by 2016.
- All non-residential development will be expected to achieve at least BREEAM standard of 'very good' or equivalent.

- **CSP3 - Sustainable Drainage Systems (SuDS).** All development will be expected to use Sustainable drainage systems (SuDS). Only in exceptional circumstances, where it can be demonstrated that all types of SuDS are impractical, will other drainage management systems be permitted. Planning applications must include an assessment to show that SuDS will work and be maintained. Measures should be taken to avoid water contamination and safeguard groundwater supply. Developers will be required to contribute to the maintenance of SuDS.
- **CSP4 - Flood Risk.** This policy seeks to minimise through risk of flooding through steering development away from high flood risk areas and requiring sustainable surface water management.
- **CSP5 - Including Renewable Energy in Developments.** All development (either new build or conversion) of 10 or more dwellings or 1000sqm of non-residential floorspace will be expected to incorporate decentralised, renewable or low carbon energy sources and other appropriate design measures sufficient to reduce the development's carbon dioxide emissions by at least 15% for applications submitted up to 2015, rising to 20% for applications submitted thereafter subject to such measures being practicable and not unacceptably prejudicing the viability of the development. Where it is not appropriate to incorporate such provisions within the development, an offsite scheme, or contribution to such may be acceptable.
- **CSP25 – New Development and Sustainable Travel.** New development will be expected to:
  - Be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists provide at least the minimum levels of parking for cycles, motorbikes, scooters, mopeds and disabled people, and should not provide more than the maximum number of car parking spaces set out in a Supplementary Planning Document;
  - Provide a transport statement or assessment in line with the thresholds and guidance set out in Department for Transport 'Guidance on Transport Assessments' as published March 2007 (or any subsequent version); and
  - Provide a travel plan statement or a travel plan in accordance with the thresholds and guidance set out in Department for Transport 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process' as published April 2009 (or any subsequent version). Travel plans will be secured through a planning obligation or a planning condition.

3.2 LOCAL AREA KEY SUSTAINABILITY ISSUES

3.2.1 The key sustainability issues for Barnsley have been identified within the Core Strategy Sustainability Appraisal Report (2010) as:

- Improving the availability and affordability of housing, particularly within central areas;
- Reducing pockets of deprivation within the Borough;
- Improving the availability of family friendly cultural and leisure activities;
- Reducing the high levels of outward commuting from Barnsley;
- Increasing the levels of cycling and walking from a low base;
- Improving transport connections between and within some towns;

- Improving the quality and variety of shops in some centres;
- Improving the appearance of some areas within the public realm, including derelict and unattractive buildings and vacant areas; and
- Enhancing and protecting natural and historic assets.

4 SUSTAINABILITY PROFILE OF THE PROPOSED DEVELOPMENT

4.1 INTRODUCTION

4.1.1 This section provides a summary of the main findings of the SA of the Proposed Development. The findings are presented in three categories; environmental, economic and social sustainability issues. To assist the reader, each section begins with a list of the relevant sustainability objectives. It should be noted that in some cases an objective could fall into more than one category, however to maintain a clear presentation of the findings, the objective has been discussed in the most relevant category, which may be a result of the objective's relationship to other objectives in the category. There are 15 objectives in total.

4.2 RESULTS

Environmental Objectives
1 Biodiversity. To converse and enhance the Borough's natural habitats and wildlife
2 Landscape character. To conserve and enhance the distinctive natural and wider landscape of the borough including the setting of settlements
3 Built environment. To maintain and enhance the quality and distinctiveness of the built environment, in terms of built form and architectural integrity
4 Cultural & historic heritage. To maintain and enhance the borough's cultural and archaeological heritage and historic environment
5 Air quality. To improve local air quality and to reduce the borough's contribution to climate change
6 Water. To improve the quality of the borough's rivers and groundwater and achieve sustainable use of water and reduce the risk of flooding
7 Land & soil. To use land efficiently by bringing vacant land back into use and retaining the openness of the countryside
8 Minerals & other raw materials. To safeguard non-renewable resources and re-use primary resources through sustainable waste management practices
9 Energy sources. To increase energy efficiency and promote renewable energy sources

4.2.1 **Objective 1 – Biodiversity**. There are no internationally or nationally designated sites present within 2km of the Site. Dearne Valley Park LNR is situated adjacent to the eastern Site boundary. The reserve has been developed from relict habitats and reclaimed colliery around the river valley. The reserve consists of ancient acidic oak woodland, mixed plantation and willow dominated woodland, as well as areas of open grassland and scrub and a mosaic of wetland habitats including two ponds. Two Local Wildlife Sites (LWS) and one proposed LWS are present within 2km of the Site.

4.2.2 The Site is largely bare ground associated with the construction of the new road to service the Proposed Development. The River Dearne flows through the Site, which has been valued as being of County significance. Along the banks of the river is a small strip of broad-leaved plantation woodland which overhangs the river forming an enclosed canopy. A number of warehouses are present to the south of the River Dearne.

4.2.3 Bat emergence and activity surveys at the Site confirmed the presence of a large Daubentons bat roost of approximately 60-80 bats within the culvert adjacent to the River Dearne and running parallel with Old Mill Lane. The bats forage upstream and downstream of the Site. No significant foraging activity was recorded across the rest of the Site. No evidence of otter or water vole presence was recorded within the Site. Given the records of otter on the River Dearne both upstream and downstream of the Site it has been concluded that otters are likely to commute through the Site. The dark corridor along the River Dearne will be maintained to mitigate the impact on bats.

4.2.4 To ensure a long-term gain in biodiversity, the plantation woodland along the banks of the River Dearne will be managed to maintain its structural integrity in the long-term through the adoption of sensitive and appropriate pruning, the thinning out or supplementary planting of appropriate woody species. This, in combination with a closeboard fence erected along the River Dearne, will maintain the River Dearne as a dark corridor for bat foraging and commuting.

4.2.5 The new bridge over the River Dearne will contain integral bat bricks (exact number to be agreed at the detailed design stage) to provide bats, in particular the Daubentons bats with additional and alternative roosting locations within Site.

4.2.6 **Objective 2 – Landscape character.** The Site is located within part of the Barnsley Green Belt, the purpose of which is to preserve the openness of the area and prevent urban coalescence. It is a planning designation rather than a landscape designation and as it falls largely within the River Dearne corridor character area (C1), the impact of the Proposed Development will be considered in relation to changes to the character of Character Area C1 rather than for the wider green belt. The Site is located within character area *C3: Upper Dearne Lowland Valley Floor* of the Barnsley Borough Landscape Character Assessment.

4.2.7 There are no listed buildings located within 500m of the centre of the Site, although there are approximately 41 located within 1km of the centre of the Site. They are located to the south-west of the Site within Barnsley town centre/ University of Huddersfield.

4.2.8 To minimise the effect of the Proposed Development on the local landscape, the use of high quality materials and design and suitable directional lighting to minimise light spill and glare will help to enhance the visual amenity of the Site. Some mature trees will be lost and as such the Proposed Development will include replacement tree planting, removal of invasive species, and creation of new habitat and planting areas, primarily alongside the river corridor.

4.2.9 **Objective 3 – Built Environment.** An assessment of the external lighting environment was undertaken to ascertain the baseline lighting conditions on Site and in the immediate surrounding area. A daytime and night time lighting survey was carried out which included readings of illuminance (light spill) and luminance (glare) at key monitoring locations, supported by night time viewpoint images to illustrate the current night time scene. The Site is an area of varying levels of lighting with predominant sources of light coming from existing construction compound in the northern section of Site and floodlighting associated with retail units in the southern section of Site. The Site is located in a well-lit urban environment with high levels of lighting to the north, west and south. There is a Local Nature Reserve to the east which is currently unlit. Once the Proposed Development is operational and mitigation measures in place, effect of light spill and glare from the Proposed Development on local residents is only considered to be an adverse issue for residents on Twibell Street.

4.2.10 **Objective 4 – Cultural & Historic Heritage.** The Barnsley Canal was approved by Parliament in 1793. It was a broad canal with 15 locks between the River Calder and the main level at Walton. A further 5 locks took the canal up to Barnby Basin. Half a mile east of Barnsley, the canal crossed the River Dearne on a high five arch aqueduct. On the south side of this aqueduct was the junction with the Dearne and Dove Canal, which opened in 1804 and ran to the River Don Navigation at Swinton. A train station was built in the town in 1850.

4.2.11 As a result of competition from the new railway companies, the Barnsley Canal was leased and later bought by the Aire and Calder Navigation Company, which improved the waterway and enlarged the locks, with trade picking up again for a number of years. In 1893, the section of canal above Barugh Locks was closed as most of the trade here had been lost to the railways Although trade on the rest of the canal continued through to World War II, the canal suffered from constant subsidence problems due to mining and following a number of breeches, the canal was closed in 1953 and the viaduct demolished a year later.

4.2.12 Despite the rich industrial history of the site and the surrounding area it is highly unlikely that archaeological remains exist in the area covered by modern retail units, such is the impact of modern construction techniques and the near total landscaping of the area. The below-ground foundations of the late 19th-century laundry house and saw mill, as seen on pre-war maps, may still exist on the east side of the site.

4.2.13 Other than possible foundations of 19th-century buildings in the east of the Site and the remains of 19th and 20th-century buildings apparent in the western boundary wall, the potential impact on archaeological remains within the development area is low.

4.2.14 **Objective 5 – Air Quality.** Local air quality is predominantly influenced by local road transport, with no local sources of industrial air pollution. A number of roads (such A61 Old Mill Lane and Burton Road) pass close to the site and these sources will have a significant influence on pollutant concentrations at the proposed redevelopment site.

4.2.15 An assessment of the potential impacts on local air quality from construction activities on the Proposed Development has been carried out. This showed that during construction activities releases of dust and PM_{10} were likely to occur. However, through good site practice and the implementation of suitable mitigation measures, the impact of dust and PM_{10} releases will be reduced and excessive releases prevented.

4.2.16 A quantitative assessment of the potential impacts during the operational phase was undertaken to predict the changes in NO_2 and PM_{10} concentrations that would occur due to traffic generated by the development. The results of this assessment are presented in Chapter 5 of the Environmental Statement submitted in support of this application. At the majority of locations concentrations are predicted to meet the statutory objectives both with and without the redevelopment. An adverse impact has been identified at the facade of one residential property.

4.2.17 In addition to the air quality assessment, an environmental noise survey has been undertaken to determine the baseline noise climate currently affecting those noise sensitive receptors in the vicinity of the site. The noise measurement locations were selected to be representative of those noise sensitive locations and focussed on existing properties around Twibell Street and Burton Road.

4.2.18 During the construction phase, noise and vibration from various activities has been assessed based on anticipated phasing and equipment types to be used on site. With the adoption of Best Available Techniques (with an emphasis on piling) and a Construction Environmental Management Plan (CEMP) these temporary impacts can be controlled to be of minor to moderate significance.

4.2.19 At the operational phase, an assessment of development generated road traffic noise on existing receptors has been undertaken. Based on available future traffic flow predictions, there is anticipated to be a long term impact of minor to moderate significance. The noise impacts associated with the use of the proposed car parking facilities, car wash and petrol filling station have all been assessed and their impacts are considered to be of negligible significance. With the provision of suitable acoustic barriers around service yard perimeters, the noise impacts from associated loading and unloading activities can be mitigated to minor significance.

4.2.20 Finally, plant design noise limits have been proposed for any mechanical and electrical plant items which may be installed as part of the Proposed Development, based on the results of the baseline noise monitoring. Provided that these limits are complied with, there is likely to be a negligible effect on existing and proposed noise sensitive receptors.

4.2.21 **Objective 6 – Water.** The Site is divided into the north and south by the River Dearne. Site levels generally slope down towards the River Dearne. The north of the River Dearne is impermeable, whilst the south of the River is currently hardstanding. There is a rough vegetated area and tree lined corridor alongside both sides of the River Dearne. The Environment Agency (EA) classifies the River Dearne as Chemical Quality 'Good' and Ecological Quality 'Moderate' and the same quality is predicted for 2015. Two surface water abstractions are located within 500m of the Site. One is located upstream licensed to Yorkshire water for an unspecified use, the other is located downstream for make-up / top up water. There are two culverted watercourses within the Site boundary, one to the south of the river and the other to the north. These ultimately discharge to the River Dearne.

4.2.22 The majority of the Site is currently impermeable. It is assumed that the existing hard standing areas drain into the private drainage onsite which discharges into public sewer network and / or culverted watercourses within the Site boundary which ultimately drain into the River Dearne. This will be confirmed at detailed design stage.

4.2.23 Flood Zone 1 is land designated as having less than a 1 in 1000 annual probability of river or sea flooding in any year (<0.1%). Flood Zone 2 is land designated as having between 1 in 1000 and 1 in 100 annual probability of river flooding (between 0.1% and a 1%) or between a 1 in 1000 year and 1 in 200 year annual probability of flooding from the sea (between 0.1% and 0.5 %) in any year. Flood Zone 3 is land designated as having a 1 in 100 or greater annual probability of river flooding (>1%) in any year. The Site is located in Flood Zones 1, 2 and 3 on the EA Flood Zone Map. The Flood Zone Map also indicates a flood storage area within the Site boundary.

4.2.24 The EA has confirmed that there are no formal flood defences or structures in the immediate area that contributes towards reducing flood risk. However, the EA Flood Zone Map indicates that there is a flood storage area upstream of the Site and also within the Site boundary.

4.2.25 The EA has recommended that the finished floor level of the proposed units should be set 600 mm above the 1 in 100 year plus climate change flood level. The main food superstore will be developed on 'stilts', providing flood mitigation. In addition, it is recommended that flood resilience measures be incorporated into the design of the buildings. Although site specific water saving measures have not been determined in detail yet, they are likely to include the following:

- Water saving fittings such as dual flush toilets and aerated taps and shower heads in the residential and public toilets;
- Rain water harvesting for the public toilets;
- Green roofs; and
- Leak detection and proximity auto water shut off will be installed in the retail units to comply with BREEAM requirements.

4.2.26 A CEMP for the control and management of potential risks at the Site will be developed for each phase and implemented by individual contractors for the preparatory and construction stages of the development. Each CEMP will incorporate the mitigation measures recommended above to reduce the significance and, where possible, eliminate the identified effects.

4.2.27 **Objective 7 – Land and Soil.** The application site presently comprises a vacant and under-utilised brownfield site. The northern area of the Site is open land; the previous buildings associated with the former gas works have been removed to ground level. A contractor office and compound area is located in the northwest corner of the site and comprised four porta cabins. There is an area for storing machinery and whilst there is equipment there, no fuel storage has been identified. However, given that machinery is used on-site the present of fuel / oils cannot be fully discounted. A sub-station is also present in within a fenced compound.

4.2.28 The southern area of the Site is occupied by warehouses, a former gas holder (still present and will be removed as a part of the Proposed Development) and an area of land which has been subject to demolition. It is understood that the gas holder will be decommissioned and removed from site prior to redevelopment. In the southeast corner of the site a former depot and warehouse is present, some of which has been demolished and demolition materials including metal remain in stockpiles. Three buildings remain in situ and have yet to be demolished. The remainder of the southern area is occupied by three large warehouse units, one of the units is occupied by Plumber Centre (western boundary) and one is occupied by Comet (on the southern boundary adjacent to Twibell Street). The central warehouse is currently vacant and was formerly occupied by Power House. Each of the warehouses has associated car parking and soft landscaping.

4.2.29 **Objective 8 – Mineral Resources.** To the North of the River Dearne ground conditions over the majority of the area comprise a variable thickness of Made Ground up to 5m thick over superficial Alluvial Clays and Silts with bedrock at depth. Residual contamination is known to be present but the site is reported to have been remediated to a level suitable for commercial end use (with vacant green space near the river) and to a level suitably protective of controlled waters. To the South of the River Dearne ground conditions are likely to comprise a variable thickness of Made Ground up to at least 3.5m thick over superficial Alluvial Clays and Silts (nearer the river) and weathered Mudstone bedrock.

4.2.30 It is recommended that an intrusive investigation be undertaken in order to better determine the potential geotechnical constraints and environmental liabilities with the site. This intrusive investigation would be designed to provide information on the general ground, groundwater and ground gas conditions at the site together with information on potential contamination sources. To the north of the River Dearne, investigation is likely to be limited to the need to confirm geotechnical ground conditions. To the south of the river, exploratory holes would be required post demolition positioned to provide general coverage and, where possible, targeted at known or suspected contamination / sources of contamination.

4.2.31 Waste arising from excavation works would be generated through foundation works on-site. Some of the material may be suitable for reuse on-site through landscaping activities, but it is anticipated that a proportion of excavated material would require off-site disposal. This material would be disposed of at appropriately licensed

facilities. Consideration will be given, where practicable, to the reuse/recycling of excavated material generated as engineered fill and poses no long term risk to end users of the Site or controlled waters.

4.2.32 During each stage of the construction process there is the potential to create raw materials that may require off-site disposal. Such waste streams may include the following:

- Packaging;
- Timber;
- Plastic;
- Inert materials;
- Concrete;
- Plaster and cement;
- Metal;
- Insulation; and
- Ceramics.

4.2.33 A Site Waste Management Plan (SWMP) will be prepared before construction work begins. SWMPs provide a structure for systematic waste management at all stages of a project's delivery. The plans are a legal requirement for all construction projects over £300,000 (excl. VAT) in England.

4.2.34 The SWMP would identify:

- The person responsible for waste management on-site;
- The types of waste that would be generated;
- Waste management options for these waste streams;
- The use of appropriate and licensed waste management contractors and sites; and
- A plan for monitoring and reporting on the quantity of waste.

4.2.35 Measures should be taken to ensure that contractors are committed to the operation of best practice measures on-site with the emphasis being on continual improvement and identifying appropriate opportunities to reduce waste, promote recycling and use recyclable materials. The ordering of appropriate, minimum amounts of building materials would be part of the materials selection strategy. The use of the online tool developed by WRAP should be considered to determine the value of recycled content used and the top ten opportunities to increase this outcome.

4.2.36 **Objective 9 – Energy.** To reduce the energy of a building below Building Regulation requirements, the energy hierarchy methodology will be used. This consists in three simple steps:

- Step 1. Be Lean: reduce energy demand;
- Step 2. Be Clean: supply energy efficiency; and
- Step 3. Be Green: use green energy.

4.2.37 Utilising energy efficiency measures under steps 1 and 2 above, it is considered that a minimum overall 5% energy reduction is considered achievable for the Proposed Development. Energy efficiency measures are considerd to include

- Low energy lighting (adjusted to meet daylight levels and occupancy);
- Roof Light Panels – reducing the need for electric lighting;
- Heat reclaim on all refrigeration units;
- Voltage optimisation units – reducing energy demand; and
- Trim Heater Control.

4.2.38 With regards to potential renewable energy sources, the technologies considered viable for the site are:

- Gas CHP;
- Photovoltaic panels (no Feed in Tariffs); and
- Biomass fuelled boilers + PVs.

4.2.39 Installation of gas CHP is considered the most viable of these three technologies. Sizing of this system is indicative at this stage; the calculation is indicative and based on the store loads and previous experience of these systems shows they can provide large carbon emission reductions and significant proportion of the overall energy demand Photovoltaic panels offer an opportunity to provide a contribution to the renewable energy generation, and offer a visible demonstration of renewable technology. These are therefore a good technical solution but still one of the most financially onerous. In order to maximise the benefits from Feed in Tariffs scheme the ideal solution is an installation below 50kW; this however will only contribute to approximately 1% of the CO2 emissions reduction required. A more extensive installation, as described in the PV section of this report, should be considered.

4.2.40 The biomass heating options offer 7% carbon emission reductions and PV would need to be installed to meet the required renewable target and might present greater logistical difficulties compare to a gas CHP system. However it is understood this solution have been already applied to a number of developments in Barnsley and is working efficiently.

Social Objectives
10 Accessibility. To enable all sections of the community to access to services, facilities and opportunities and provide travel choice
11 Health, safety & security. To improve overall levels of health (reducing disparities between different groups and areas) and reduce crime and the fear of crime

4.2.41 **Objective 10 – Accessibility.** The Proposed Development is located adjacent to an established high frequency bus route that offers access to the town centre and surrounding residential areas.

4.2.42 In addition to public transport, the application site is also highly accessible by foot or bicycle. Wide footways are provided for pedestrians on all approaches to the application site, including the new site access road (running from the new Quality Bus Corridor route). In addition, a new pedestrian / cycle bridge is proposed from Old Mill Lane, linking directly with the foodstore. Cycle parking facilities will be provided at appropriate locations within the site to encourage cycle usage.

4.2.43 The proposal will ultimately deliver accessibility and road safety benefits to residential dwellings on Twibell Street in particular by removing significant traffic generating uses through the closure of the existing site access.

4.2.44 **Objective 11 – Health, Safety and Security.** The IMD shows that a third of the Barnsley population live in the worst 10% of areas in England in terms of health deprivation and disability scores. The Joint Strategic Needs Assessment (JSNA, 2010) estimates that 28.5% of adults in Barnsley are obese, which is significantly higher than the national average of 23.6%, the JSNA also states that 20% of Year 6 children in Barnsley are obese. Obesity has been linked with Coronary Heart Disease (CHD), in Barnsley the recorded prevalence of CHD was 5.1% in 2009/10, this is 1% higher than Yorkshire & Humber and 1.7% higher than England. The Proposed Development will have a role in providing access to healthy fresh food, fruit and vegetables.

4.2.45 The Proposed Development will lead to an overall increase in green space of 0.2ha which will be appropriately landscaped to ensure accessibility and useability for all. The residents of Barnsley would benefit significantly from increased exercise and access to open space. The Proposed Development will also significantly enhance access to the River Dearne and encourage use of key footpaths along this river corridor, providing opportunities for recreation and health benefits for local residents.

4.2.46 The Proposed Development will deliver accessibility and road safety benefits to residential dwellings on Twibell Street in particular by removing significant traffic generating uses through the closure of the existing site access.

Economic Objectives
12 Employment. To maintain and enhance employment opportunities to benefit the local labour force and reduce disparities
13 Local economy. To promote economic activity and regeneration

4.2.47 **Objective 12 – Employment.** It is anticipated that the Proposed Development will lead to the creation of over 300 full time equivalent (FTE) jobs. This is particularly important in a deprived area such as Barnsley. The nature of the employment opportunities should mean that the majority of positions will be taken by the local community. The proposed will also offer opportunities for employees to up skill through vocational training and qualifications.

4.2.48 **Objective 13 – Local Economy**. The scheme will deliver significant economic and physical regeneration benefits by providing major (flexible) employment opportunities.

4.2.49 The scheme will address the overriding need for a new mainstream foodstore in the Barnsley catchment identified in the Council's own Foodstore RIA Study (May 2011). Existing mainstream foodstores (Asda and Morrison's) are significantly overtrading and a new comparable store will deliver major qualitative benefits in terms of enhancing choice and competition for local residents.

4.3 CONCLUSIONS

4.3.1 The Proposed Development presents a significant opportunity to make a positive contribution to the sustainability aspirations for Barnsley Metropolitan Borough Council and to help achieve the various sustainability aspirations from the local to national level.

4.3.2 This will be achieved through the following aspects of the Proposed Development:

- Creation of over 300 new jobs;
- Removal of the current gas holder and remediation of poor quality ground;
- Open up access to the River Dearne Valley Park, encouraging walking and cycling;
- Anticipated use of energy efficiency measures and low and zero carbon technology;
- Preservation of the sites landscape character;
- Building to BREEAM 'Very Good' standard;
- Improve consumer choice;
- Utilisation of sustainable design and construction methods to improve building efficiency; and
- Improving the existing pedestrian access to and through the Site.