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**E.ON Blackburn Meadows
Renewable Energy Plant**

**Outline Planning
Application**

Planning Statement

March 2008

Contents

- 1.0 Introduction
- 2.0 The Site and Surroundings
- 3.0 The Proposed Development
- 4.0 Planning Policy
- 5.0 Planning Issues, and the Benefits of the Proposal
- 6.0 Summary and Conclusions

Plan

Blackburn Meadows Renewable Energy Plant - Illustrative Masterplan

1.0 Introduction

1.1 This Planning Statement has been prepared by Broadway Malyan to accompany an outline planning application by E.ON for a Renewable Energy Plant at Blackburn Meadows, Sheffield. This statement forms part of the planning application. This statement draws on and should be read in conjunction with other material submitted as part of the planning application, namely:

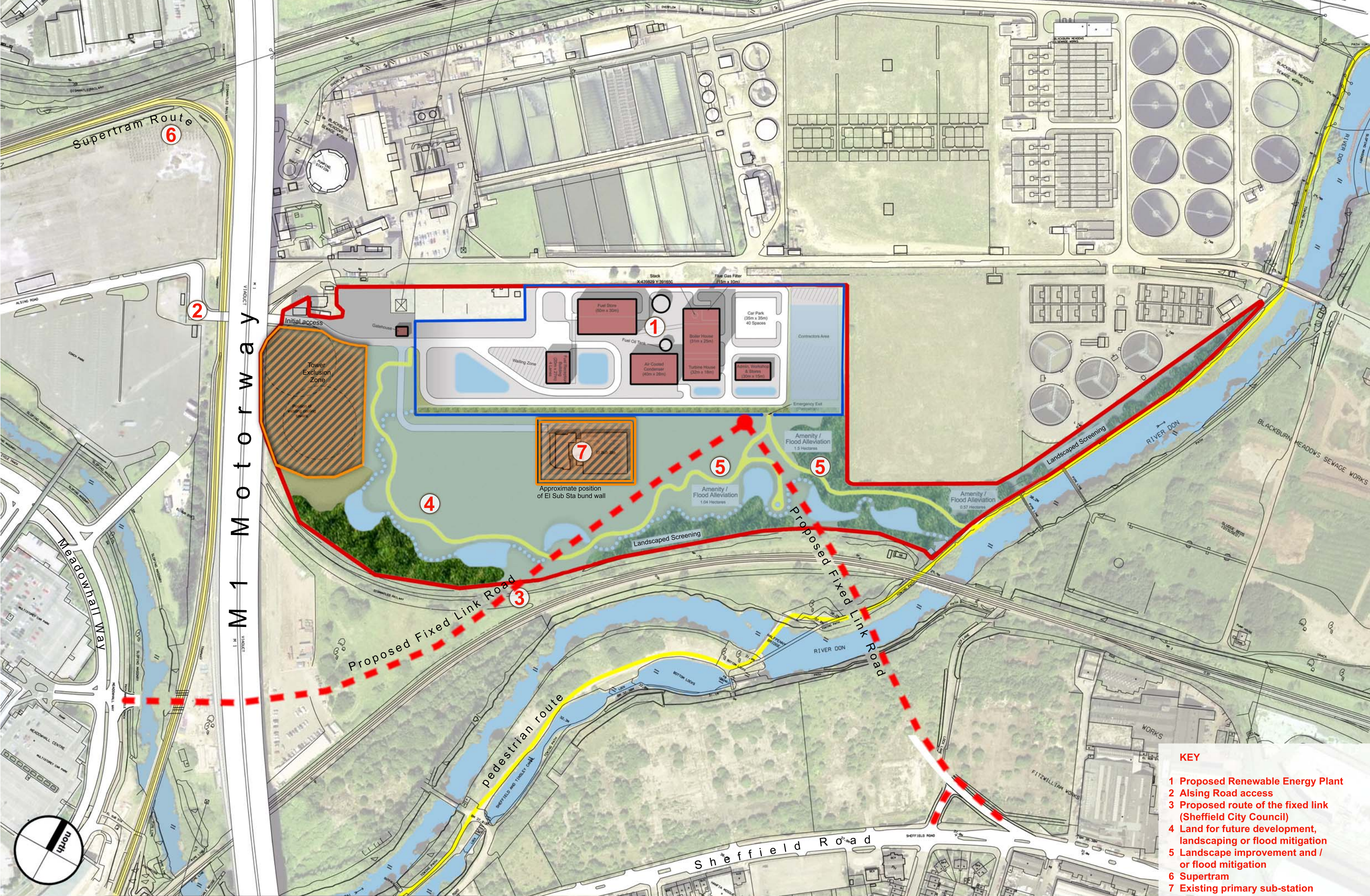
- An Environmental Statement and Non Technical Summary
- A Design and Access Statement
- A Statement of Community Involvement
- A Sustainability Statement

1.2 This statement also reflects an illustrative masterplan (ref SKA008A) for the site which is included in the statement.

1.3 The purpose of this statement is to outline the proposals and the planning context in which they are to be considered and in so doing confirm the benefits which will be delivered by a Renewable Energy Plant at Blackburn Meadows, Tinsley, Sheffield.

1.4 This proposal is an important component of E.ON's portfolio of project which have or are being developed in response to the pressing issue of climate change and the Government's objectives, at national and regional levels, to develop renewable energy sources.

1.5 The Blackburn Meadows Renewable Energy Plant will provide a clean, 'renewable' electrical generating capacity of approximately 25MW, sufficient to provide for the needs of approximately 40,000 homes and is expected to result in savings of at least 80,000 tonnes of carbon dioxide annually. Strong opportunities also exist to make use of heat generated by the plant, which will create further carbon savings. The plant will utilise renewable biomass fuel. This will be predominantly waste wood which would otherwise be sent to landfill, releasing greenhouse gasses.



- KEY**
- 1 Proposed Renewable Energy Plant
 - 2 Aising Road access
 - 3 Proposed route of the fixed link (Sheffield City Council)
 - 4 Land for future development, landscaping or flood mitigation
 - 5 Landscape improvement and / or flood mitigation
 - 6 Supertram
 - 7 Existing primary sub-station



Blackburn Meadow Renewable Energy Park
Site Masterplan
 (SK)A008A
 1:2000 @ A2
 P2001838



Building Design Partnership

2.0 The Site and Surroundings

Introduction

- 2.1 The proposed site for the Blackburn Meadows Renewable Energy Plant is located within E.ON UK's existing land holdings, previously known as Blackburn Meadows Power Station. This application relates to part of the sites, excluding the former Cooling Towers and Primary substation (the site of which is leased by E.ON to Yorkshire Electricity Distribution Limited). The application site therefore extends to 10.84 hectares.
- 2.2 The site is largely flat and quite featureless. The structures of the former power station have been removed, although some concrete foundations remain and vegetation has colonised much of the site.

Location

- 2.3 The Blackburn Meadows site is located immediately to the east of the M1 motorway between junction 34 Meadowhall (north) and Tinsley (south) roundabouts, approximately 5.5km north east of Sheffield City centre. The Ordnance Survey grid square reference for the site is given as NGR 4398 3916.
- 2.4 When built, the proposed Renewable Energy Plant will occupy a small area of land of approximately 3.5 hectares in size, adjacent to existing sewage treatment works to the north east edge of the site boundary and will be contained within the present E.ON UK's landholding. No additional land will be required during the construction phase for contractors' working areas and storage.
- 2.5 The entire site falls within the unitary authority of Sheffield City Council and is close to the administrative boundary with Rotherham Metropolitan Borough Council.

Access to the Site

- 2.6 The existing vehicular access to the site is Alsing Road via the Meadowhall interchange and is located to the west of the site, passing beneath the M1 motorway and Tinsley viaduct.
- 2.7 Alsing Road is a no through road of width 6.5m with footpaths on either side. Its surface is in good condition until a few metres before the bend adjacent to

the Sheffield Super Tram level crossing. This crossing is controlled using give-way signs to warn road users of on coming trams. It is intended to bring all fuel deliveries in to the site using this route, however it is recognised that some improvements will be required to the road surface and at the tram crossing.

- 2.8 The site can also be accessed on foot through a restricted gate at the south-eastern corner of the site, leading to the public footpath along the River Don.

General Description of the Site

- 2.9 The boundary of the site is broadly formed by the Blackburn Meadows Sewage Works to the north, the A6178 to the south and sewage works and Blackburn Meadows Nature Reserve to the east. The Tinsley viaduct, carrying the M1 motorway and the A631, passes overhead to the western edge of the site.
- 2.10 The site comprises predominantly disused industrial land. The land is comparatively level ranging from approximately 30.0m to 32.0m above ordnance datum. The majority of the site lies between 30.2m and 30.6m above ordnance datum with it rising above 31.0m above ordnance datum on the northern and western boundaries.
- 2.11 Information previously obtained from the Environment Agency indicates that the site is partially located within Flood Zone 3a. This comprises land assessed as having a significant chance of flooding from the River Don, with a 1 in 100 year or greater (<1%) annually probability.
- 2.12 To the west of the site, the two natural draught cooling towers associated with the former power coal fired station remain. These cooling towers were two of seven cooling towers that made up part of the Blackburn Meadows Power Station, built between 1937 and 1942. In the late 1960s, the M1 was built around the cooling towers while the power station was still operational. The main power station was demolished in the 1970s but the two cooling towers, numbered 6 and 7, remained standing as engineers did not have the expertise to bring them down safely without compromising the integrity of the M1 viaduct.
- 2.13 The future of the towers has been regularly considered over a number of years and EON UK has even considered using them as part of our plans to

develop the new power station. However, based on specialist engineering data collected over 30 years, and supported by the results of a structural survey, E.ON engineers have taken the decision to demolish the towers for safety reasons. With advancements in controlled demolition, and after the recent strengthening of the viaduct, E.ON are now confident that the demolition will not affect the motorway's integrity. This proposed demolition and the area surrounding the two cooling towers do not form part of this planning application.

- 2.14 A 33kV YEDL Primary Substation is located in the heart of the site, however it is excluded from this application site.
- 2.15 Large parts of the site are covered with concrete foundations. These were left when the former power station was demolished in the 1970s. A preliminary ground investigation indicated that reinforced concrete was encountered to a typical depth of 0.3 – 0.35m and underlain by backfilled voids in the northern and north western parts of the site. It is found that concrete bases below the backfilled voids were encountered at between 1.8 and 1.9 (meter below ground level (mbgl)). Former chimney foundation pads comprised mass concrete down to approximately 1.7mbgl. Ground slabs were thinner in the eastern part of the site. Typical thicknesses of concrete in these areas were 0.2m. Intact concrete slabs were also encountered at between 2.5 and 2.8mbgl in the north eastern parts of the site.
- 2.16 Subject to further ground investigation and feasibility studies, these foundations may provide a source of material for raising ground levels for the proposed Plant and be used as part of the proposed development, however this largely depends upon their load bearing capability and results from contamination testing.

Immediate Surroundings

- 2.17 To the north of the site is the existing Yorkshire Water Blackburn Meadows Sewage Treatment works. The plant incorporates a fluidised incinerator as part of its sewage sludge treatment and disposal. The incinerator incorporates an emissions stack of 35m above AOD.
- 2.18 Immediately to the east of the site is open land in the ownership of Yorkshire Water and beyond that a number of tanks associated with the treatment process.

- 2.19 To the south of the site is the River Don corridor, the Sheffield – Rotherham railway line and a former (now dismantled) freight line which curves along the south west corner of the site. This disused railway is on a low embankment.
- 2.20 The Don Valley riverside in this area accommodates the Trans Pennine Trail and has a natural, green character, albeit influenced in certain locations by industrial development.
- 2.21 To the west of the site are the two former Cooling Towers and an elevated section of the M1. Beyond that again is the line of Supertram and the River Don corridor as it meanders northward. Beyond that is the Meadowhall Shopping Centre.

The Choice of the Blackburn Meadows Site

- 2.22 Key factors in selecting a suitable site are:
- fuel availability
 - land availability and suitability
 - electrical connection
- 2.23 E.ON has initially considered the development of renewable energy plants at its own power station sites to take advantage of existing infrastructure and electrical connections. Fuel supply studies have been undertaken by experienced consultants based on a number of the more appropriate sites. These studies have demonstrated that the Blackburn Meadows site is well positioned to take advantage of the large volumes of recycled wood that is currently going to landfill.
- 2.24 In identifying a suitable location for the Renewable Energy Plant on the Blackburn Meadows site, due consideration has been given to the land requirements for further potential developments, the proximity of major road networks and the risk of flooding from the River Don. As a result, the area to the north east boundary of the site has been identified as the most appropriate location.
- 2.25 The main factors considered in the site selection process included the following:
- Proximity to the electricity infrastructure: There is an electrical export infrastructure existing on E.ON's Blackburn Meadows site with a 33kV

substation owned by the local network operator, YEDL. It is proposed that the connection circuit from the Renewable Energy Plant would be via an existing 33kV circuit breaker at Blackburn Meadows substation. The connection to the Renewable Energy Plant will be via a 33kV underground cable.

- Re-use of existing site 'assets': In order to maximise the opportunity for sustainability, it is proposed to re-use the existing road network surface drainage systems and the remaining foundations from the previous power station whenever possible. To some extent, reinstatement and some improvements may be required.
- Proximity to established transport infrastructures: The site has ready access to the M1 for fuel deliveries. Employees can make use of the local public transport network.
- Available space within the landholding: There is sufficient land within the land holdings on the Blackburn Meadows site to accommodate the Renewable Energy Plant, and to provide sufficient flood risk compensation area.

3.0 The Proposed Development

Introduction

- 3.1 This Environmental Statement supports an outline planning application for the proposed Blackburn Meadows Renewable Energy Plant. The detailed design of the Renewable Energy Plant will be carried out on behalf of E.ON by the contractors chosen for the design, construction and commissioning of the Plant.
- 3.2 Notwithstanding that, this application, and the Environmental Statement, is based upon the known and definitive parameters of the proposed development that are to be established through this planning application. These parameters, set out in the Environmental Statement, are based on the particular circumstances of the site and the experience of other similar developments, notably similar plants owned and operated by E.ON in Germany and the plant currently being commissioned for E.ON UK at Steven's Croft, Lockerbie in Scotland.
- 3.3 The final plant components and configuration will therefore not be materially different from that described and any changes will not have a material impact on the environmental analysis. The final layout of the Plant will be put forward based on technicality, economical viability and to some extent, building design factors.
- 3.4 The proposed Plant will be licensed for operation by the Environment Agency under the Pollution Prevention and Control Regulations and suitable plant and systems will be incorporated in the design to minimise emissions in line with Best Practicable Environmental Options and Best Available Techniques.
- 3.5 This section of the Planning Statement provides a detailed description of the proposed Plant. This forms part of the planning application. In summary the proposed development is described as 'A Renewable Energy Plant with associated flood management works, landscaping and improvements to an existing access'.

Overview of the Proposed Development

- 3.6 The site is accessed via the existing access of Alsing Road. This is an adopted road up to the boundary of the site. Some improvements will be required to this road, including the Supertram crossing.

- 3.7 The core development area of the site, comprising the Renewable Energy Plant, will be located on a raised area to the northern boundary of the site, north of the Primary Substation. This area will be raised to 31.53 Above Ordnance Datum (AOD). The access road will be raised as appropriate as it approaches this area to reach this level.
- 3.8 The core development area extends to approximately 4 hectares. This area has formed the basis of the Flood Risk Assessment and the associated flood compensation and mitigation works referred to elsewhere in this Statement. It has been assumed for the purposes of this application that the raised area will be bounded by a retaining wall. At detailed design this may be amended to an embankment. This would reduce the developable area of the raised platform.
- 3.9 The contractor's area to the eastern boundary of the site will be reprofiled but not raised. However chemicals and temporary fuel storage of fuels will be kept above the flood risk level.
- 3.10 To provide compensatory flood storage much of the remainder of the application site will be reprofiled. This will be undertaken in conjunction with a denominated strategy. The reprofiled areas will be established and planted to create a riverine environment and to augment the sustainable drainage strategy.
- 3.11 A new access road will be constructed from the principal site access road to the existing primary substation.
- 3.12 Development, other than works associated with flood mitigation and landscaping will not take place within the area of the proposed alignment of the Fixed Link Road to be agreed with Sheffield City Council.
- 3.13 An indicative layout of the Renewable Energy Plant included in this statement.

General Description of the Process and the Plant

- 3.14 The Renewable Energy Plant will consist of a single generating unit, which will include a combustor and boiler, a steam turbine.
- 3.15 The plant will comprise the following key elements:
- A fuel reception facility – this is a warehouse type facility which will receive the biomass fuel. The biomass fuel will be delivered to site already processed for use (i.e. chipped

and graded and mixed to achieve emission requirements). The fuel will be screened again in the reception area. This facility will have a footprint of up to 20 metres by 27 metres, with an eaves height of 15 metres.

- Fuel Store – fuel will be fed from the reception facility to the Fuel Store. The store will be fully enclosed with automatic filling and discharging. Subject to detailed design it will either be an 'A' frame building or two or more cylindrical silos. The choice of fuel store type will be dependant upon the selection of the contractor and their supplier of the fuel handling plant. The fuel store will be fully enclosed and automated.
- Fuel will be transferred from the bulk store to two or more buffer silos at the boiler house with a combined capacity of less than one hour at full load. Fuel will be metered from the buffer silos and conveyed to the boiler at the required rate by means of a system of chain and screw conveyors. The entire fuel handling and storage system will be enclosed with the necessary dust extraction and filtration equipment.
- Boiler House – the fuel store will feed fuel into the combustor, housed in the boiler house. The fuel will be burnt in the combustor to generate steam through heating of water. Steam will be fed into the turbine housed in the turbine hall. The Boiler House will have a footprint of 32 metres by 25 metres and a height of 46 metres.
- Turbine Hall – This building will house the Steam Turbine which will generate electricity. This building will have a footprint of 32 metres by 18 metres and a height of 15 metres.
- Flue Gas Treatment and Stack. Flue gas resulting from the combination process will be cleaned and filtered prior to emission to air in line with current legislation. The flue gas filter equipment will have a footprint of 10 metres by 15 metres and a height of 17 metres. A stack of 85 to 90 metres, will be used to emit the treated flue emission to air. This height of stack will enable the required dispersal to be achieved to realise emissions and air quality standards.
- Air Cooled Condensor or a Hybrid Cooling Tower System– an Air Cooled Condensor (ACC) will convert waste steam to water for re-use. The ACC will be a bank of tubes through which steam would flow. A number of fans will blow ambient air over the tubes to provide a cooling effect. The ACC will have a footprint of 40 metres by 26 metres with a height of 25 metres. A Hybrid Cooling Tower System is a combination of a wet cooling system and a dry cooling system as in ACC.

- Administration Building – the plant will also accommodate an administrative and technical building. This will be a single storey building of approximately 30 metres by 15 metres. There will be an associated workshop facility with a footprint of 10 metres by 15 metres with a height of 9 metres.

3.16 The detailed design of the plant will in large part need to respond to the type of boiler, turbine and other equipment utilised. The efficiency, robustness and suitability of plant technology will be a key factor the choice of primary contractor.

3.17 The provider of the boiler, turbine and related equipment will engage in a long-term service contract with E.ON. Therefore the exact configuration of the plant infrastructure and thereby the location and massing of buildings can only be determined once the primary contractor has been appointed.

4.0 Planning Context

- 4.1 This section confirms the national, regional and local planning context relevant to the proposed Renewable Energy Plant. In doing so, the proposed Renewable Energy Plant is considered in the context of the relevant policy and guidance.
- 4.2 The review concentrates on strategic and overarching policy issues. Further policy detail and assessment of site development issues is provided in other relevant chapters of the Environmental Statement, such as the Flood Risk Assessment and the Transport Assessment. For the sake of completeness this assessment also considers waste policy at national, local and regional level. Notwithstanding that this proposal related to a Biomass Renewable Energy which will use Biomass materials principally wood from a variety of sources. The nature of the boiler to be used and other equipment will preclude the use of substantial amount of “virgin wood” due to the relatively high moisture content. The predominant source of material will therefore be previously used wood.
- 4.3 This section is structured so as to consider in turn, national planning policy and the development plan, comprising regional and local policy as well as related documents.
- 4.4 The national policy documents considered are:
- PPS1 Delivering Sustainable Development (and supplement)
 - PPS10 Planning for Sustainable Waste Management
 - PPS22 Renewable Energy (including the companion guide)
 - PPS23 Planning and Pollution Control
 - PPS25 Development and Flood Risk
 - PPG13 Transport
- 4.5 Development Plan documents considered are:
- Regional Spatial Strategy for Yorkshire and Humberside.
 - Sheffield City Council Unitary Development Plan (UDP)
- 4.6 A revision of Regional Spatial Strategy is well advanced and Sheffield City Council is developing the Sheffield Development Framework (to replace the UDP). These emerging documents will therefore be considered as part of the development plan context, as will a

Renewable Energy Scoping and Feasibility Study, prepared on behalf of Sheffield City Council in 2006.

National Planning Policy

PPS1: Delivering Sustainable Development (2005)

- 4.7 This PPS provides the overarching framework for national planning policy and places sustainable development at the heart of the planning process. In establishing the key principles of national planning policy the PPS confirms that, amongst other things:
- 4.8 Regional and local planning authorities should ensure that development plans *'contribute to global sustainability by addressing the causes and potential impacts of climate change'*. This is to be achieved by policy through, inter alia, promoting *'the development of renewable energy resources'* (para B (ii)).
- 4.9 In considering the prudent use of natural resources the PPS confirms that planning authorities *'should promote and encourage, rather than restrict, the use of renewable resources (for example, by the development of renewable energy).'*
- 4.10 The supplement to PPS1, Planning and Climate Change (December 2007) provides further guidance on approaches to renewable energy generation.
- 4.11 At para.19 the supplement confirms that in developing core strategies and supporting local development documents, planning authorities should provide a framework that promotes and encourages renewable and low carbon energy generation. Policies should be designed to promote and not restrict renewable and low-carbon energy and supporting infrastructure.
- 4.12 In particular, planning authorities should:
- not require applicants for energy development to demonstrate either the overall need for renewable energy and its distribution, nor question the energy justification for why a proposal for such development must be sited in a particular location;
 - ensure any local approach to protecting landscape and townscape is consistent with PPS22 and does not preclude the supply of any type of renewable energy other than in the most exceptional circumstances;

- alongside any criteria-based policy developed in line with PPS22, consider identifying suitable areas for renewable and low-carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources, but in doing so take care to avoid stifling innovation including by rejecting proposals solely because they are outside areas identified for energy generation; and expect a proportion of the energy supply of new development to be secured from decentralised and renewable or low-carbon energy sources.

PPS10: Planning for Sustainable Waste Management

4.13 This PPS establishes a number of key objectives for waste management. Regional planning bodies and all planning authorities should, amongst other things:

“Help deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option.....”

4.14 Annex C to the PPS confirms the waste hierarchy, which in order of preference is:

- Reduction
- Re-use
- Recycling and Composting
- Energy Recovery
- Disposal

PPS22: Renewable Energy (2004)

4.15 This PPS establishes the approach to facilitating the development of renewable energy sources. The key principles for national planning policies on renewable energy confirm that, amongst other things:

- Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic and social impacts can be addressed satisfactorily (para 1 (i)).
- Regional Spatial Strategies and local development documents should contain policies designed to promote and encourage, rather than restrict, the development of renewable energy sources (para 1 (ii)).

- Planning authorities should set out the criteria that will be applied in assessing applications for planning permission for renewable projects (para 1 (iii)).
- The wider environmental and economic benefits of all proposals for renewable energy are material considerations and should be given significant weight in determining applications (para 1 (iv)).
- Development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures (para 1 (viii)).

4.16 The PPS notes that biomass projects are likely to require the transportation of material leading to increases in traffic (para 24). It is noted that such facilities should be located as close as possible to sources of fuel. However, in determining planning applications, planning authorities should recognise that other considerations, such as connection to the grid and the potential to use heat will influence suitable locations.

Planning for Renewable Energy - A Companion Guide to PPS22

4.17 This guide provides advice on the planning and consideration of renewable energy schemes as an accompaniment to PPS22. The guide illustrates some of the potential benefits of renewable energy schemes (para 2.7) including:

- Reducing carbon emissions;
- Creating new habitats (such as woodland planting);
- Promoting the management of existing environments;
- Improving air quality (through the reduction in fossil fuel emissions); and
- Landfill reduction.

4.18 Economic benefits can include (para 2.8):

- Job creation – direct, indirect and induced; and
- Increased security and reliability of supply.

4.19 The guide confirms the positive approach to be taken to applications for renewable energy proposals and the use of criteria based policies (para 2.16). Regional and local authorities are to establish policies that *'will be supportive of renewable energy proposals in locations*

where environmental, economic and social impacts can be addressed satisfactorily' (para 2.18).

- 4.20 The guide at Technical Annex 1 Biomass provides guidance on the consideration of biomass renewable energy proposals, which is reflected in the approach taken in developing these proposals.

PPS23: Planning and Pollution Control

- 4.21 This PPS confirms that any considerations of the quality of land, air, water and potential impacts arising from development, possibly leading to impacts on health are capable of being material considerations in the determination of planning applications. The importance that Government attaches to controlling and minimising pollution is underlined.
- 4.22 The policy in this PPS has been reflected in the approach to the proposed development and is reflected in the approach to the assessment of this proposals through the Environmental Statement.

PPS25: Development and Flood Risk

- 4.23 This PPS confirms the key planning objectives on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flood and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.
- 4.24 Planning applications in areas at risk of flooding are to be accompanied by a Flood Risk Assessment.
- 4.25 Government policy on managing flood risk has been noted in developing the application proposals and in the preparation of the Flood Risk Assessment submitted as part of this application.

PPG13: Transport

- 4.26 PPG 13 provides guidance on how the need for travel is to be managed through the planning process and the consideration to be given to promoting sustainable forms of transport and freight distribution.
- 4.27 Government guidance on transport has been reflected in the development of the proposals for the Blackburn Meadows Renewable Energy Plant and in the development of this applicaton. Accessibility and traffic movements are considered further in the Transport chapter of the Environmental Statement.

National Planning Policy - Assessment

- 4.28 National planning policy is supportive of renewable energy development, recognising its contribution towards sustainable development and tackling climate change. Policy requires regional and local authorities to be positive in their approach towards renewable energy generation development proposals. Policy acknowledges the range of location drivers for energy generation including connection to the National Grid and the potential to use heat generated by the process. Both of these factors are directly relevant to the proposed Renewable Energy Plant at Blackburn Meadows.
- 4.29 Waste policy also requires consideration to be given to driving waste management up the waste hierarchy. This proposal will make use of, in energy recovery, material that would otherwise be disposed of to land fill. Planning authorities are not to reject proposals simply because the site is not allocated for energy generation.
- 4.30 Within that context, policy notes that environmental, economic and social factors also need to be assessed in considered in determining development proposals. Notwithstanding that the wider environmental and economic benefits of all proposals for renewable energy are material considerations and should be given significant weight in determining applications.

Development Plan

- 4.31 The development plan for the Blackburn Meadows site comprises:
- Regional Spatial Strategy (RSS) for Yorkshire and the Humber to 2016 (2004)
 - Sheffield City Council Unitary Development Plan (1998)
- 4.32 The Government Office for Yorkshire and the Humber (GOYH) is currently updating and revising RSS and this is well advanced. The draft RSS has been the subject of an Examination in Public and Proposed Changes to the RSS were published by GOYH in September 2007 on behalf of the Secretary of State. The draft RSS can therefore be considered a relevant material consideration in this application.
- 4.33 Sheffield City Council is also in the process of updating the development plan through the preparation of the Local Development Framework.
- 4.34 The submission version of the Core Strategy was made available for public consultation in September 2007 and is planned to be the subject of an Examination in Public in 2008.
- 4.35 A City Sites and a City Policies document with accompanying Proposals Map have been consulted on as Preferred Options documents in 2007. Both will be subject to further statutory consultation and an Examination in Public, potentially commencing in 2009. Limited weight can therefore be attached to these documents, however it is applicable to consider them as part of this policy review.
- 4.36 Sheffield City Council has also prepared a Scoping and Feasibility Study on Renewable Energy in 2003. This has been confirmed at Cabinet and outlines the City Council's approach to renewable energy schemes and specifically considers the Blackburn Meadows site.

Regional Spatial Strategy for Yorkshire and Humberside

- 4.37 Regional Spatial Strategy (RSS) for Yorkshire and Humberside was published by Government Office for Yorkshire and the Humber in 2004 following a selective review of Regional Planning Guidance (2001). The RSS forms part of the development plan for the purposes of determining planning applications.

- 4.38 The RSS confirms that the region's commitment to sustainability is *'absolute'* (para 1.7). The RSS establishes four central objectives of sustainable development including *'the prudent use of resources'* and *'promoting the sustainable management of waste'* (para 3.6). A number of areas are identified as contributing toward this objective, including *'reducing resource consumption and encouraging use of renewable energy'* (para 3.6).
- 4.39 The RSS goes on to outline a series of themes that contribute to achieving the core objectives. These include Theme 4 – Conserving and Enhancing Natural Resources. This is to be achieved by, amongst other things, *'seeking to reduce greenhouse gas emissions and address impacts of climate change'* (para 3.13).
- 4.40 The RSS establishes a number of policies directly relevant to the Blackburn Meadows Renewable Energy Plant proposals.
- 4.41 Policy S1 – Applying the Sustainable Development Principles confirms that:
- 'Development plans and major strategies, proposals and programmes of regional stakeholders should be designed to achieve sustainable development and pursue the key objectives of RSS'*.
- 4.42 Policy S2 – Regeneration Priority Areas confirms that South Yorkshire and the Coalfields are the first priority for regeneration in the region.
- 4.43 Policy S5 deals with climate change. Local and regional authorities and agencies should:
- 'a) include policies and proposals in their development plans, local transport plans, strategies and investment programmes to help reduce the Region's greenhouse gas emissions by at least 20% below 1990 levels by 2010 and at least 25% below 1990 levels by 2015'*.
- 4.44 Policy S6 deals with the sustainable use of physical resources. Local and regional authorities should, amongst other things:
- 'e) include policies and proposals in development plans to help achieve the regional renewable energy capacity targets set out in Policy R12. These should ensure that at least 9.4% of electricity consumed in Yorkshire and the Humber is from renewable sources by 2010 and 22.5% by 2020'*.
- 4.45 Policy E3 deals with planning the overall provision of employment land.

- 4.46 There is to be good (but not excessive) range of sizes and qualities of general employment land for sub-regional and local development, well integrated with urban industrial areas.
- 4.47 Para 5.36 notes that Policy E3 sets out the criteria for local planning authorities to use in estimating the overall amount of employment land that may be required in their area. This should also be informed by the findings of a regional employment land survey.
- 4.48 Policy R5 Waste Management Strategic Principles confirms that local authority should seek to identify the combination of facilities and other waste management options based on the following optional principles:
- The waste hierarchy;
Regional, sub regional and local self sufficiency, at the lowest practicable level for the waste stream;
The proximity principles;
The objectives and targets of the Regional Waste Management Strategy.
- 4.49 Policy R10 Energy from waste provides for waste to energy plants, subject to, amongst other things, the removal of recyclable and compostible material.
- 4.50 Policy R12 deals with Energy Generation Transmission and Supply. The policy establishes targets for installed renewable energy generation capacity by 2010. The target for South Yorkshire is at least 100MW. A regional target for 2020 of at least 1850MW is also established.
- 4.51 Development plans are also to 'maximise' the use of renewable energy resources, including technologies such as biomass.

The Yorkshire and Humber Plan. The Draft RSS Incorporating the Secretary of State's Proposed Changes (2007)

- 4.52 This draft of the RSS incorporates the Secretary of State's proposed changes to RSS made in the light of the Panel Report into the Examination in Public of the draft RSS. The draft RSS has been published for consultation and carries considerable weight. The consultation period ends on 21st December 2007. When finalised, the new RSS will replace the existing RSS, published in 2004.
- 4.53 Table 3.2 of the draft RSS confirms the 'Spatial Vision and Headline Outcomes'.

'In Yorkshire and the Humber over the next 15 to 20 years there will be more sustainable patterns and forms of development, investment and activity, and a greater emphasis on matching needs with opportunities and managing the environment as a key resource'.

4.54 Policy YH2 deals with Climate Change and Resource Use. Plans, strategies and investment decisions are to help reduce greenhouse gas emissions by, amongst other things, *'increasing renewable energy capacity and carbon capture'*.

4.55 Policy E1 deals with Creating a Successful and Competitive Regional Economy. In order to create a more successful and competitive regional economy, plans, strategies, investment decisions and programmes should help to deliver amongst other things:

'Opportunities for business relating to the region's unique environmental assets and challenges, including sustainable construction, renewable energy, resource and waste efficiency and environmental technologies and the low carbon economy'.

4.56 Policy E3 considers Land and Premises for Economic Development. Table 14.6 of the Policy suggests that at 2006, there is 380 hectares of employment land allocated in Sheffield. This is contrasted with an estimated potential net change in industrial and storage and distribution uses between 2006 and 2021 of around 80 hectares.

4.57 The table confirms that there is a need to review allocations in South Yorkshire taking account of the restructuring of the Sheffield economy, the limited net increasing in expected land requirements and the land requirements arising from relocations and the *'redevelopment of historic employment sites for alternative uses as part of the 'transformational agenda'*.

4.58 At paragraph 14.15 the RSS underlines the scope for review, stating *'at a simplistic level ... the region has more employment land allocated than is likely to be required in the future'*.

4.59 Policy E5 provides for the safeguarding of employment land. The policy provides for Local Development Framework (LDF) to define criteria or areas where it is considered necessary to offer special protection to designated employment sites. This approach can be applied where it can be shown that:

- *It is necessary to safeguard employment land on the basis of the demonstrable level of competing demand from other land uses, and*

- *The employment land so identified is necessary to support policies YHS, YH6 and YH, and*
- *A review of employment land has been carried out in accordance with policies E1-E4 or the sites are part of an area subject to an agreed masterplan’.*

4.60 As referred to in Policy E3 of RSS and Policy E5 of Draft RSS, Sheffield City Council has undertaken an Employment Sites Survey and Employment Land Assessment. In the opinion of the local authority an appropriate supply of land exists in the City, taking account of existing allocations, commitments and those proposed through the LDF.

4.61 Policy ENV5 considers Energy. The policy commits the region to maximising improvements to energy efficiency and increases in renewable energy capacity. This is to be done by, amongst other things:

‘Providing for new efficient energy generation and transmission infrastructure in keeping with local amenity and areas of demand’.

4.62 Policy also established minimum targets for renewable energy capacity. South Yorkshire is to achieve at least 47MW of installed grid-connected renewable energy capacity by 2010 and 160MW by 2021.

4.63 Table 15.12 translates these sub-regional targets to illustrate district level targets. Illustrative targets for Sheffield at 2010 and 2021 are 11MW and 52MW respectively.

4.64 Policy ENV12 deals with Regional Waste Management Objectives. Plans, Strategies, investment decisions and programmes should aim to reduce, reuse, recycle and recover as much waste as possible.

4.65 Local Authorities should support the urgent provision of waste management initiatives based on, amongst other things:

*‘1. Moving the management of all waste streams up the waste hierarchy....
4. Managing waste at the nearest appropriate location, where necessary by seeking agreement with neighbouring authorities,’*

- 4.66 Policy ENV13 deals with the provision of Waste Management and Treatment Facilities. Waste Planning Authorities should ensure that adjacent sites and facilities are available to manage forecast quantities of waste.
- 4.67 Waste Management authorities are to take account of, amongst other things, the need to increase the capacity of treatment and recovery facilities, including energy from waste by 2020.
- 4.68 Annex C of the Policy develops the capacity targets for each authority area within the region.
- 4.69 Annex C confirms the requirements for treatment capacity (ie other than land fill or recycling) in Sheffield as follows:

	Tonnes per year		
	2010	2015	2021
Municipal waste	67	133	171
Commercial and Construction	452	453	455

- 4.70 Policy ENV14 deals with the Strategic Locational Criteria for Waste Management Facilities. This policy establishes a number of relevant criteria:

'A Waste should be managed on the site where it arises or if not possible at the nearest appropriate location....

C Facilities should be located in accordance with the Core Approach and the proposed distribution of housing and economic growth.

E In all areas, identification of sites for facilities should also take account of the following priority order:

Established and proposed industrial sites which have the potential for the location of waste management facilities...

Previously developed land.....

Redundant farm buildings and their curtilages.'

Sheffield Unitary Development Plan

- 4.71 The Unitary Development Plan (UDP) was adopted in March 1998. The majority of policies and all those relevant to this application have been saved until such time as the Sheffield Development Framework is adopted.
- 4.72 The UDP allocates the core of the application site as Proposed Industrial and Business site. The south west corner of the site is allocated as Fringe Industry and Business Areas. These allocations will be considered again in this section in the context of relevant policies.
- 4.73 Part I of the UDP establishes a number of strategic policies. Policies relevant to the Blackburn Meadows Renewable Energy Plant and E.ON UK's Blackburn Meadows landholding are:

SP1 A City for People

- 4.74 *'A balance will be struck between competing land uses, and between new development, conservation and transport, which would*

(b) meet the needs of the present without compromising the ability of future generations to meet their own needs.

(f) promote the re-use of urban land for development wherever practicable while allowing greenfield developments on allocated sites'

BE4 Environmental Improvements

- 4.75 *'Priority for environmental improvements will be given to areas where the environment is unsatisfactory in:*

(f) the MI Corridor ...'

IB2 Locations for Industrial Development

- 4.76 *'New industrial development will be promoted in suitable locations, particularly near the MI, Strategic Roads, bus and Supertram Routes, railways and City Airport.*

The main locations will be:

.... (b) the Lower Don Valley'

- 4.77 Part II of the UDP develops the detail of these strategic policies through further policy and justification.
- 4.78 Policy BE2 Views and Vistas in the Built-up Area proposes that '*new development will be expected to respect the skylines, roofscapes and views that are particularly visible within the city*'.
- 4.79 Policy BE2 Building Design and Siting proposes that '*Good design and the use of good quality materials will be expected in all new and refurbished buildings and extensions*'.
- 4.80 BE6, Landscape Design states that '*good quality design will be expected in new development*'
- 4.81 Policy BE9 Design for Vehicles requires new developments to provide safe, efficient and environmentally acceptable site layout for all vehicles (including cycles) and pedestrians.
- 4.82 Policy GE20 deals with Flood Defence. Development will not be permitted where flooding risks to it or existing development would not be overcome by suitable on-site protective measures.
- 4.83 Policies GE22, GE23 and GE24 deal with pollution, air pollution and noise pollution.
- 4.84 Policy GE27 considers alternative energy sources. '*The development of alternative energy sources will be permitted where it would not significantly harm the natural or built environment nor create unacceptable living conditions for nearby residents*'.
- 4.85 E.ON UK's Blackburn Meadows site is identified as a 13 hectare site to be developed in accordance with policy IB6. The preferred uses defined in policy IB6 are:
- Business B1
General Industry B2
Warehouses B8 (excluding open storage)
- 4.86 Policy IB8 identified industrial and business sites. On these sites only the preferred uses set out in other relevant policies will be permitted, provided that they comply with policy IB9.

4.87 Policy MW3 deals with Waste Management. When catering for waste materials, all recycling and disposal options will be examined so that, amongst other things, sufficient waste, recycling and disposal sites and facilities will be available.

Draft Core Strategy Sheffield Development Framework

4.88 The Draft Core Strategy was submitted to the Secretary of State in September 2007.

4.89 The Core Strategy, once adopted, will provide the overall spatial strategy for the city. The key diagram to the draft core strategy identifies the general location of Blackburn Meadows as one for manufacturing, distribution/warehousing and other non-office businesses (Policy SB4).

4.90 The overall vision outlined in the core strategy is centred on the themes of transformation and sustainability. Part 6 of the vision states that Sheffield is to be a city that *'will respect the global environment, by reducing the city's impact on climate change and by using resources and designing sustainability'*.

4.91 Objectives to underpin this part of the vision include:

'S11.2 Renewable energy (including solar and wind power and biomass) generating in a variety of schemes and by new buildings in excess of regional targets.'

'S12.4 Waste reduces, re-used, used for energy, composted or recycled and land requirements for disposal met but minimised.'

4.92 The vision and objectives are translated into a Spatial Vision. The Spatial Vision for the Lower Don Valley is one that complements the city centre as a primary location for employment supported by a mix of related uses and providing for developments not appropriate in the city centre.

4.93 The vision and objectives are supported by a series of city-wide spatial policies. Policy option SB1 Land for Employment and Economic Development proposed provision to be made for 43.5 hectares of land per year for new, expanding and relocating business and industry. This includes 31 hectares for general industry and storage/distribution. A 5 year supply of land in each business/industrial category is to be maintained.

- 4.94 Preferred Option SB4 deals with locations for manufacturing, distribution/ warehousing and other non-office business uses. This confirms the locations for such uses, including the Lower Don Valley.
- 4.95 The Environment section of the draft core strategy confirms that Flood Risk is an environmental issue with spatial implications. However it is noted that flood risk does not affect the strategic emphasis on employment uses in the valleys, including the Lower Don Valley.
- 4.96 Preferred Policy Option SE4 confirms that action will be taken to protect air quality in all areas of the city. Further action will be taken to improve air quality across the built-up area, and particularly where residents in road corridors with high levels of traffic are directly exposed to levels of pollution above national levels. The Meadowhall Centre area is noted, at para 11.12, as one location where air quality currently fails to meet national targets.
- 4.97 Preferred Policy Option SE5 deals with Renewable Energy Generation. Para 11.14 confirms that renewable energy generation is a key part of achieving strategic aims of combating climate change.
- 4.98 Preferred Policy Option SE9 states that '*Renewable Energy capacity in the city will exceed 12MW by 2010 and 60MW by 2021*'.
- 4.99 Preferred option SW1 deals with waste management objectives. The City's waste is to be managed more sustainably by, amongst other things:

'E Permitting a range of additional treatment facilities, mainly in industrial areas, sufficient to meet the regional apportionment for commercial and industrial waste together with requirements for other waste streams where the city is best placed to meet local and wider needs; and

F Avoiding the unnecessary use of greenfield land when identifying sustainable sites/areas and permitting other waste development.'

Sheffield Development Framework Preferred Options for City Sites (2007)

- 4.100 The City Sites document is intended to identify those sites in the city that are allocated for specific uses.

- 4.101 The application site is part of Site 613. The preferred option for this site is for allocation for industrial uses, (to be dominated by use classes B2 and B8). The site is also identified as a potential park and ride location.
- 4.102 Site 666 reserved land for the Fixed Link Road proposal. This route is adjacent to the proposed Renewable Energy Plant, within the application site owned by E.ON.

Sheffield Development Framework Preferred Options for City Policies (2007)

- 4.103 The Preferred Option for City Policies Development Plan Document provides guidance relevant to the consideration of new development in the city.
- 4.104 The preparation of the document is at an early, if substantive stage. Option policies of direct relevance to the Blackburn Meadows Renewable Energy Plant proposal are considered below.
- 4.105 Policy PB5 deals with Development in Industrial Areas (as E.ON's Blackburn Meadows site is allocated in the City Sites preferred options).
- 4.106 In such areas general industry (B2) and storage and distribution (B8) but excluding open storage will be the preferred use. Other uses, such as lorry parks and waste management facilities will be acceptable. 70% of the uses of any such site are to be for B2 or B8.
- 4.107 Preferred option Policy PR1, Development at Risk of Flooding considered flood risk. In areas at risk of flooding from rivers and stream, development will only be permitted where:
- 'a adequate on and off site flood protection and warning measures are provided, and*
- b the risk of flooding or water pollution both on-site and further downstream in Sheffield or beyond would not be increased'.*
- 4.108 Policy Preferred Option PR6 Air Quality states that development will not be permitted if it would cause deterioration in air quality that would have an unacceptable impact.
- 4.109 Preferred option PW3 established the criteria for permitting waste management development. Waste management facilities will be permitted where they would, amongst other things:

'C Not generate levels of traffic that would make roads unsafe or harm the character of the immediate area or areas along the routes used; and

D Use sustainable alternatives to road transport such as canal, rail or pipeline facilities, wherever practicable and beneficial; and

E Use previously designated industrial areas in preference to other locations.'

Renewable Energy Scoping and Feasibility Study for Sheffield, Final Report, Sheffield City Council (September 2006)

- 4.110 A Scoping and Feasibility Study on Renewable Energy in Sheffield was commissioned by Sheffield City Council in 2006 to better understand the opportunities for renewable energy across the City.
- 4.111 The study assessed the renewable energy resource for wind, biomass, hydro, solar and heat pumps and considered a range of sites for the generation of power by wind, biomass and hydro. The study has been used to inform policy in the draft Sheffield Development Framework 2007. The study also provides guidance on dealing with planning applications for renewable energy.
- 4.112 Of the range of sites considered, the study identifies a number of suitable sites within the City that have potential for the installation of renewable energy technologies. The study identified E.ON's Blackburn Meadows site as seeming a *'very suitable'* (Table 9, *Renewable Energy Scoping and Feasibility Study*) location for a biomass generator.
- 4.113 Drawing on the companion guide to PPG 22 the study confirms the key development control matters in considering biomass energy regeneration proposals as including:
- The positive benefit of the proposed Renewable Energy Plant to the local economy
 - Visual intrusion
 - Noise from traffic and plant operations;
 - Any effects on health, local ecology or conservation from airborne and water borne emissions. (A biomass energy plant has significantly lower harmful emissions than a similar fossil fuel power stations but must meet UK and European Standards and ensure necessary pollution control measures are in place);
 - Traffic to and from the site in order to transport biomass fuel and subsequent by-products; and
 - Carbon mitigation

4.114 These factors are have been positively addressed in the proposed renewable energy plant.

Development Plan Policy – Assessment

4.115 RSS confirms that South Yorkshire is a priority for regeneration and investment. The UDP notes that the M1 corridor is one of a number of areas in the City that is a priority for environmental improvement.

4.116 The development is a major investment that will, amongst other things bring about the re-use of a currently derelict, brownfield site in the M1 Corridor.

4.117 The extent and emerging Development Plan is very supportive of renewable energy generation proposals and for the development of approaches to drive the management of waste up the waste hierarchy. The proposed Renewable Energy Plant will make a significant contribution towards meeting renewable energy generation targets. The Scoping and Feasibility Study undertaken for Sheffield City Council confirms the potential of E.ON's Blackburn Meadows site.

4.118 The Development Plan and emerging policy identify the site for industrial and business uses.

4.119 A Renewable Energy Plant is a sui-generis use, not covered by the Use Classes order, however that the nature of the proposed development is comparable with industrial use. Further, the development will generate levels of direct and indirect employment consistent with an industrial / distribution use.

4.120 The Supplement to PPS 1 confirms that innovation in renewable energy generation should not be stifled simply by rejecting proposals solely because they are outside areas identified for energy generation

4.121 The emerging RSS, to which significant weight can be attached, confirms the established industrial locations are the first priority for the location of facilities involved in waste management. This is reflected in the emerging LDF.

4.122 It is therefore considered that the existing policy allocation of the Blackburn Meadows site does not preclude its use for a Renewable Energy Plant as proposed.

- 4.123 The Development Plan requires a range of environmental and other considerations to be taken into account in determining development proposals. These are reflected in the development of the proposals for Blackburn Meadows Renewable Energy Plant and in the preparation of this Environmental Statement which support this application.
- 4.124 Notwithstanding the supportive context of national planning guidance and the development plan, a number of issues have been raised in relation to the proposed development. These are considered in the next section of this planning statement and in so doing the opportunity is taken to underline the benefits of the scheme.

Planning Issues, and the Benefits of the Proposal

5.1 This section of the report considers a number of issues raised in connection with the proposed development, and in so doing takes the opportunity to set out the key benefits of the proposal.

5.2 The matters considered therefore are:

- Flood Risk
- Site Selection and Availability
- The Supply of Fuel
- The extent of Carbon Savings
- The opportunities to utilise Heat from the proposals
- The relationship with the existing Blackburn Meadows Primary Sub-station
- The relationship with the Fixed Link
- Visual Appearance
- Rail and Canal Access
- Air Quality
- Loss of Employment Land
- Community Benefit

Flood Risk

5.3 The site is liable to flooding. A flood risk assessment has been prepared and submitted as part of this application. The Environment Agency has confirmed as acceptable the findings of the earlier draft flood risk assessment. The proposal is to raise part of the site out of the flood risk area and give over much of the remainder of the site the flood mitigation and compensation. The Renewable Energy Plant will therefore be protected from flood risk to

an appropriate level. The proposed flood works will not increase the risk of flooding elsewhere in the Don Valley area.

Site Selection

5.4 A sequential test undertaken as part of the Flood Risk Assessment supporting this application has demonstrated that there are no other sites in the Sheffield and Rotherham area that are available or suitable for the proposed Renewable Energy Plant or are able to offer comparable potential advantages in terms of the use of heat

The Supply and Source of Biomass Fuel

5.5 A report by TRADA Technology 2006 commissioned by E.ON considered an area of 50 miles around the Blackburn Meadows site. Within that area likely sources of fuel would include:

- End of life consumables (furniture etc through civic amenity (CA) sites and bulky waste collections)
- Construction and demolition (C&D)
- Commercial and industrial wood waste (wood processing, furniture, packaging etc,)

5.6 Using a variety of reference sources and research the report concludes that between 800,000 and 2,491,000 tonnes of wood waste are generated within 50 miles of Blackburn Meadows each year. The proposed Renewable Energy Plant, when built, will require approximately 180,000 tonnes of wood waste per year.

5.7 The report also concluded that current projections suggest waste will continue to grow, for example the current estimates for growth rates in Civic Amenity sites (Excelar, 2002) suggest that levels will double in less than 20 years. A developed market for wood waste would probably attract additional material if competitive and offering a steady demand. Increases in landfill tax will continue to ensure that people are keen to seek alternative options to landfill and thus stimulate segregation in all quarters.

5.8 There is therefore a strong, sustainable supply of waste material within 50 miles of the proposed Blackburn Meadows site which is likely to grow in future through the increase in the waste stream and waste recovery and in the development of the biomass market as a consequence of this and other projects.

The Extent of Carbon Savings

- 5.9 E.ON is developing a portfolio of renewable energy capacity utilising a variety of sources. At Blackburn Meadows E.ON intend to utilise biomass and in particular waste wood as fuel. Waste wood has been selected as the primary fuel in this instance due to its contribution to tackling greenhouse gas emissions and its availability in the region.
- 5.10 The Technical Annex to the Companion Guide to PPS 22 'Planning for Renewable Energy' confirms the role of biomass in renewable energy generation and defines the material regarded as potential biomass sources. This includes waste wood.
- 5.11 Paragraph 4 of the Technical Annex confirms that *'.....biomass differs from most other sources of renewable energy to the extent that the fuel can be grown rather than harnessed, and it gives off carbon dioxide when burned. However, these fuels are regarded as 'carbon neutral', because the carbon released on combustion is only that which was absorbed during crop growth – the gas is simply recycled. So, when it is used in combustion in place of fossil fuels, a net reduction in carbon emissions is achieved.'*
- 5.12 The Waste Strategy for England 2007, prepared by Defra confirmed the merits of recovering energy from waste wood. The Strategy refers to *Carbon Balances and Energy Impacts of the Management of UK Wastes*, report for Defra (March 2007) which estimated that of the 7.5 million tonnes of waste wood arisings in the UK annually, the vast majority (6 million tonnes – 80%) is landfilled, 1.2 million tonnes (16%) re-used and recycled, with energy being recovered from just 0.3 million tonnes (4%).
- 5.13 A report on behalf of Defra, entitled 'Carbon Balances and Energy Impacts of the Management of UK Wastes' (March 2007) confirmed that waste wood is one of a number of materials that offer significant opportunity for greenhouse gas and fossil energy savings over the period 2005-2031 (the timescale of the assessment). This is in part based on the greenhouse gas impact (particularly of methane generation) of sending material to landfill.
- 5.14 Importantly, the report suggests that the recycling of wood (for other uses) may have a net greenhouse gas effect due to the relatively low embodied energy of virgin wood (i.e. less energy is required to grow a replacement tree than to recycle waste wood material to new uses).
- 5.15 The use of waste wood as a biomass energy source will therefore have a very positive effect in terms of greenhouse gas and fossil energy savings.

Use of Heat

- 5.16 E.ON is committed to developing options for CHP at its proposal for a Renewable Energy Plant at Blackburn Meadows. However the development and implementation of a CHP option depends on existing or potential developers in the locality being interested receiving heat and/or power, the economics of a CHP scheme, and the ability to install local infrastructure to connect those developments to Blackburn Meadows.
- 5.17 The Department for Business, Enterprise and Regulatory Reform (BERR) has recently published its decision document on the reforms proposed within the 2007 Energy White Paper. This paper proposed additional support to biomass CHP schemes by granting additional ROCs (Renewable Obligation Certificates) to schemes which meet specified requirements. The Bill has been introduced to Parliament and is expected to have Royal Assent by Summer 2008.
- 5.18 E.ON UK has completed a study to help identify potential local customers of heat and/or power. This study identified several potential customers local to the proposed development who have initially shown interest in receiving heat, or heat and power, from the proposed development. These are:
- Yorkshire Water Sewage Treatment Works
 - Meadowhall Centre Ltd
 - Magna Science Adventure Centre
 - Ordic Investments
 - Veolia Environmental Services
 - Guests & Chimes
- 5.19 There are also three potential developers who are interested in receiving heat and/or power from the Renewable Energy Plant:
- Future Energy Yorkshire- pellet mill
 - British Land
 - Veolia Heat expansion
- 5.20 Heat and/or power supply from Blackburn Meadows is technically feasible. However, until the specific requirements from potential customers are known it is not possible to finalise the design of any CHP component of the proposed biomass plant. However, in the plant tender enquiry documentation submitted to potential bidders for the construction of the plant, E.ON specified a level of heat offtake broadly equivalent to temperature and pressure

that would be required for a potential pellet mill. A separate study has also been undertaken to identify the required pipework and infrastructure to supply a pellet mill and a district heating scheme of the same capacity.

- 5.21 Assessments to-date show that a heat connection to Veolia's city heat distribution ring would be the preferred choice of heat customer. Furthermore, this adds to potential of supplying along the route, such as the development proposed by British Land. Further detailed discussions are continuing with both Veolia and British Land.
- 5.22 Until potential customer requirements are known it is not possible to give a firm commitment that a CHP option at Blackburn Meadows can be economically developed. However, the plant design and layout will be flexible to be able to accommodate the initial CHP's options identified to-date.

Blackburn Meadows Primary Sub-station

- 5.23 As noted in pre-application discussions with Sheffield City Council and the Environment Agency the proposed Renewable Energy Plant will access the distribution network via the Blackburn Meadows Primary Substation.
- 5.24 The substation is owned by Yorkshire Electricity (YEDL) and held on a long lease from E.ON UK.
- 5.25 In light of the extreme June 2007, flood event it is understood that the City Council and Environment Agency require the existing standard of flood protection to the substation to be improved to enable the proposed Renewable Energy Plant development to be acceptable. This improvement is to address the residual risk at the substation over and above the 100-year flood event plus climate change. E.ON is in discussion with YEDL over the timescales and scope of any works they may undertake as part of the connection contract agreement with E.ON UK to connect the Renewable Energy Plant to the distribution network. The form of the works will be confirmed and agreed with YEDL in due course.
- 5.26 To facilitate the approval of the application for the Renewable Energy Plant it is proposed that the matter of flood defences to the substation is dealt with via a 'Grampian' condition on an approval, linking the operation of the plant to the improvement of flood defence works to the substation. It is understood that in principle this is acceptable to both the City Council and the Environment Agency.

The Fixed Link

- 5.27 Sheffield City Council intend to promote the construction of the 'Fixed Link' highway through part of the Blackburn Meadows site to connect Sheffield Road with Meadowhall Lane. This is understood to have benefits for local accessibility and public transport. The Fixed Link is not required to serve the Renewable Energy Plant.
- 5.28 In submitting the application for a Renewable Energy Plant at Blackburn Meadows, E.ON notes the proposals by Sheffield City Council for the development of a Fixed Link on land in the ownership of E.ON. E.ON supports in principle the development of the road for the purposes of improving accessibility in the local area as well as facilitating public transport improvements. E.ON, as part of the application, has confirmed that it will not undertake development within the area of the proposed alignment of the proposed Fixed Link within the Blackburn Meadows site (save for flood management and associate landscaping). As such E.ON is able to assist in safeguarding the route in the Blackburn Meadows application site from development.
- 5.29 Notwithstanding that, E.ON consider that matters related to the transfer of the land subject to an agreed alignment to the Highway Authority or its implementation are not reasonably related to this development and are not required to be resolved to enable the application to be positively determined. It is therefore proposed that the details of the transfer of land for the construction of the Fixed Link are considered outside of this application. E.ON is able to enter into discussions on this matter at the earliest opportunity.

Visual Appearance

- 5.30 E.ON acknowledge the important location of Blackburn Meadows and is committed to delivering a development which meets its operational requirements and sustainability objectives whilst adding to the built and natural character of this part of the Lower Don Valley. The Lower Don Valley is predominantly are mixed industrial area and the proposed development is consistent with that established character. The local and wider area is not visually sensitive to new development.
- 5.31 In developing a detailed scheme in conjunction with its primary contractors E.ON intend to adopt the following design and development principals to be confirmed through the approval of the outline planning application. E.ON's design and development principles for the project are as follows:

- A development that responds to the landmark location of the site and the operational requirements of a renewable energy plant.
- To included, subject to technical feasibility and approval of the design strategy by the City Council, green roofs on a number of buildings.
- To construct all buildings to achieve BREEAM good standard (or relevant equivalent) whilst striving where possible for very good and/or excellent.
- To adopted a sustainable drainage system that achieves run-off from the site to the River Don equivalent to green field run-off. This will incorporate green roofs and rainwater harvesting and where appropriate permeable paving materials.
- To respond to the alignment of the proposed alignment of the Fixed Link as shown on the Framework Proposals Map (Preferred 2007).
- To incorporate an approach to public art within the scheme, principally through the design and treatment of buildings and landscaping.
- To make use of the cladding materials referred to in this statement subject to affordability, technical feasibility and the overall design strategy.
- To develop the landscape quality and bio-diversity of the open areas of Blackburn Meadows.

5.32 The primary contractor appointed by E.ON will be required to retain architectural and design advisors. However E.ON will retain an executive position on design through the detailed planning application process.

5.33 E.ON will appoint a reputable UK architect and design practice to advise E.ON and the contractor's design team.

5.34 E.ON, and its design advisors, will 'sign-off' any detailed proposals or drawings prior to issue to the City Council for comment or acceptance.

Use of Rail and Canal

5.35 The scope for using the canal and rail for fuel supply has been fully considered by E.ON as part of project development.

5.36 The South Yorkshire Navigation canal runs downstream past the north-eastern part of the Blackburn Meadows site. The full course of the South Yorkshire Navigation runs into Sheffield from the major inland port at Goole. It already carries substantial amounts of freight. However, consultations with British Waterways have revealed that a critical section, for access to Blackburn Meadows, was de-classified as a freight route some 20 years ago. This section begins some 6-7km from Blackburn Meadows.

- 5.37 Consultation with British Waterways has revealed that the cost of the remedial works required for re-opening this section of the navigation to freight is un-economic. The large scale dredging operation and the replacement of the existing, traditional locks are the most prohibitive cost elements.
- 5.38 The closest existing wharf to Blackburn Meadows is at the steelworks at Rotherham. If fuel were shipped there it would need to be transported to Blackburn Meadows by road. This would be un-economic and offer no significant environmental advantages as there would be no reduction in HGV road traffic local to the proposed development site.
- 5.39 Two options for rail access have been considered. These are the provision of a new rail siding within or immediately adjacent to the proposed development site, or the transshipment through existing rail freight terminals close to Blackburn Meadows.
- 5.40 The Blackburn Meadows site adjoins the existing Sheffield to Rotherham freight rail line. It has been confirmed by Network Rail that the track bed of a long-closed section of the railway adjacent to the site remains in their ownership and could offer the potential for the creation of a dedicated facility linked to the existing freight line.
- 5.41 Indicative schemes have been considered, to develop a rail connection to the Network Rail system. These have been reviewed to consider the impact on the proposed site layout, the means of connecting the off-loading facility to proposed biomass plant and the impact on the potential for other developments on the site. Indicative costs have also been considered.
- 5.42 A sizeable area would be required next to the siding for discharging machinery to occupy and operate upon. The land requirement for this platform may reduce the proportion of the Blackburn Meadows site that is required by Environment Agency to be allocated as flood plain.
- 5.43 During recent consultations Sheffield Wildlife Trust contended that some of the area proposed for a possible rail freight siding would encroach on an existing otter habitat.
- 5.44 Sheffield City Council proposes a scheme for a fixed link route to run across the Blackburn Meadows site. The existing configuration of this scheme compromises options for a rail freight siding. Any conflict between the two proposals would need to be resolved.

- 5.45 The alternative of using an existing off-site rail freight facility has also been considered. The closest is at the Rotherham Masborough Rail Terminal. Initial discussions indicate that the terminal has the capacity to handle the likely throughput required by the biomass plant. However, any use of an off-site facility will require road transport between that facility and Blackburn Meadows which would be costly and negates the potential environmental benefits of rail transport.
- 5.46 Notwithstanding the above any scope for utilising rail economically is also dependant upon the fuel supplier having effective access to rail. This is far from certain and can only be determined through the tender process for suppliers.

Air Quality and Pollution

- 5.47 The potential pollution impacts such as air, dust noise odour and waste and management of waste are all considered in detail in the Environmental Statement which accompanies this application.

Loss of Employment Land

- 5.48 E.ON do not consider that the use of part of the site at Blackburn Meadows for a Renewable Energy Plant is contrary to the City Council's objective of retaining a robust supply of employment land.
- 5.49 The site is allocated for employment use in the extant and emerging development plan. However the emerging Local Development Framework also identifies the potential for park and ride on the site, whilst the proposed Fixed Link, in severing the southern part of the site will significantly reduce the amount land available for development on the site. The proximity of the Blackburn Meadows Sewage Treatment and odour pollution that causes severely restricts the suitability of the site for high quality and / or higher job density development.
- 5.50 The Renewable Energy Scoping and Feasibility Study for Sheffield on behalf of Sheffield City Council (September 2006) also identifies the site as suitable for a Biomass Renewable Energy Plant.
- 5.51 E.ON do not share the view that the site is required to meet the overall employment land supply requirement in the City. As noted in the emerging RSS '*at a simplistic level ... the region has more employment land allocated than is likely to be required in the future*'. It is presumed this matter will be considered further through the plan preparation process.

5.52 In any event, the Supplement to PPS 1 confirms that innovation in renewable energy generation should not be stifled simply by rejecting proposals solely because they are outside areas identified for energy generation

5.53 In developing the site for the proposed use a number of employment benefits will be realised, namely:

- The development of the application site for an industrial type use with associate flood mitigation and landscaping;
- The creation of up to 40 on-site jobs, a third of which will be graduate entry level;
- The creation of a significant number of in-direct jobs and the fostering of a waste wood supply chain in the region.
- Reinforcing security of energy supply to the benefit of business and others;
- The reclamation of an important site in the Don Valley, fostering further investor and business confidence;
- The provision of renewably generated heat to local business through established and proposed heat distribution networks;
- Facilitating the development of the Fixed Link Road, which is understood to be required to provide for other major development projects, including employment, in the wider area.

Community Benefit

5.54 E.ON proposes to establish a community fund to be managed in conjunction with the local community and Sheffield City Council. E.ON will finance the fund to the value of £1,000, per annum, for every MW generated by the site. The development is proposed as a 25 MW plant, thus a potential £25k per annum is expected in the fund.

5.55 It is not proposed to have fixed educational exhibition space at the facility. However E.ON will have a visitor facility, which can accommodate school and other planned visits.

6.0 Summary and Conclusions

- 6.1 The Blackburn Meadows Renewable Energy Plant will provide a clean, 'renewable' electrical generating capacity of approximately 25MW, sufficient to provide for the needs of approximately 40,000 homes and is expected to result in savings of at least 80,000 tonnes of carbon dioxide annually. Strong opportunities also exist to make use of heat creating further carbon savings. The plant will utilise renewable biomass fuel. This will be predominantly waste wood which would otherwise be sent to landfill, releasing greenhouse gasses.
- 6.2 The Environmental Statement that accompanies this application demonstrates that the environmental impact of the development are acceptable and where possible those impacts that there are have been mitigated against through appropriate measures. The site is suitable for the proposed use.
- 6.3 National, regional and local planning policy is overall, supportive of the development. The development will assist in addressing the pressing issues of climate change and assist in achieve regional and City renewable energy generation targets. The proposal will also divert significant amounts of wood from landfill.
- 6.4 The proposed Renewable Energy Plant will therefore realise numerous benefits, including:
- The provision of renewable energy supply, addressing national, regional and local objectives;
 - Diverting waste wood from landfill;
 - Bringing about the re-use of a vacant, brownfield site in an important location for Sheffield;
 - Facilitate the delivery of the Fixed Link to the benefit of the wider area and community;
 - Providing renewably generated heat for established and proposed heat distribution networks;
 - Creating a significant number of direct and indirect jobs;
 - Creating a platform to establish a local Community Fund to deliver sustainable project in Darnall and Tinsley

- Fostering the enhancement of the landscape and bio-diversity of large parts of the site;
- Developing a quality, well design building in a green setting on an important site;
- A educational / visitor resource and renewable show case for the City;

6.5 It is therefore considered that this application can be positively determined by the local planning authority, with appropriate conditions.
