CONTENTS

Introduction 1
Overview 1
Rationale 2
Requirement for Environmental Impact Assessment 2
Structure of Submission 3
Project Team 5
Publication 5
Site Description 6
Location 6
Surrounding Area 6
Geology 7
Topography 7
Land Quality 7
Access 8
Surrounding Road Network 8
Landscape and Visual 8
Nature Conservation 9
Non-statutory Sites 9
Cultural Heritage/Archaeology 9
Potentially Sensitive Receptors 10
Description of Development 11
General Description 11
Process Description 12
Details of venting/odour abatement 13
Anaerobic Digestion (AD) 20
Site Construction and Design 20
Construction Period 22
Highways 22
Hours of Operation and Staffing 24
Parking 24
Materials 24
Landscaping 24
Surface Water Management 25
Lighting 25
Grid Connection 25
Review of Planning Policy 26
National Policy 26
PPS 10 28
National Planning Policy Framework (NPPF) 2012 32
Regional Policy 33
Local Policy 34
Summary 38
Need 39
Renewable Energy 39
Waste Recovery 41
Recent Appeal Decisions 42
Summary 43
Climate Change 44
Introduction 44
BREEAM Assessment 44

Renewable Energy Generation 44
Surface water management – attenuation features to accommodate climate change and flood risk. 44
Design and Materials 45
Climate change impacts of traffic generation 46
Summary 46
Potential Environmental Effects and Summary of Mitigation Measures 47
Traffic and Transport 47
Air Quality 49
Noise 51
Water Environment 52
Land Quality 56
Landscape 57
Ecology 59
Cultural Heritage 62
Benefits of the Development 63
Conclusions 64

Figures

Figure 1 – View from the application site to the Micheldever Railway Station;

V1 Appendices

Appendix A - Planning Application Forms and Certificates;
Appendix B – Planning Application Drawings; (see Planning Drawings Schedule below)
Appendix C – BREEAM Statement; and
Appendix D – Statement of Community Involvement

Planning Drawings Schedule (Appendix B)

Drawing 00-01Site Location Plan
Drawing 05-01Existing Site Sections
Drawing 10-01Site Layout Plan
Drawing 10-02GA Plan Level 00
Drawing 10-03GA Plan Level 01
Drawing 10-04GA Plan roof level
Drawing 20-01GA Sections
Drawing 20-02GA Site Sections
Drawing 30-01GA Elevations

PLANNING AND SUSTAINABILITY STATEMENT

INTRODUCTION

Overview

1.1 This document comprises a Planning and Sustainability Statement and has been prepared by SLR Consulting Limited (SLR) on behalf of Clean Power Properties Limited and Network Rail Infrastructure Limited (the applicant).

1.2 This Statement is part of a package of documents being submitted to Hampshire County Council in support of a planning application in respect of land at Micheldever Rail Sidings, to the north of railway station at Micheldever Station, and to the south of the A303, in Hampshire.

1.3 The planning application is for the construction and operation of an Energy Recovery Centre. The Energy Recovery Centre (ERC) would incorporate both Advanced Conversion Technology (ACT) and an Anaerobic Digestion (AD) facility at the Micheldever railway sidings,

1.4 The development of the Energy Recovery Centre would consist of the following:

- a 8MWe Pyrolysis Advanced Conversion Technology (ACT) plant with front end autoclave plant, which would require 100,000tpa of non hazardous Municipal Solid Waste (MSW) and Commercial and Industrial (C&I) Waste; and
- a 2MWe AD facility which would require approximately 54,000tpa of organic, digestible waste (food waste, green waste etc).

1.5 The proposed ERC is located at National Grid Reference SU 51981 43525 and consists of approximately 3 Hectares (6 acres) to the north of Micheldever Station and to the south of the A303, and is referred to in this document as the application site. It comprises previously developed land which was used for the storage of fuels as part of a rail served oil terminal. Land immediately adjoining the application site on its western boundary is identified in the Draft Hampshire Minerals and Waste Plan as potentially suitable for use as an aggregate rail depot and as having some potential for waste uses.

1.6 The site location is shown in Drawing 00-01 “Site Location Plan”.

1.7 This Statement aims to provide the Local Planning Authority (i.e. Hampshire County Council) with further information that does not fall within the scope of the Environmental Statement (see paragraph 1.11 below). In his respect, it considers the proposed development in the light of planning policy, the need for the development and finally considers the development in terms of sustainability issues. Coupled with the Environmental Statement, this document is intended to provide the Local Planning Authority (LPA) with sufficient information to determine the planning application. Unlike the Environmental Statement, this statement is not a mandatory requirement and

there are no statutory or regulatory guidelines governing the content of a Planning and Sustainability Statement.

Rationale

1.8 The potential for residual municipal, industrial and commercial waste streams to contribute to renewable energy generation is well recognised in the UK; documents such as "Meeting the Energy Challenge", "Government Review of Waste Policy 2011; "National Policy Statements on Energy and Renewable Energy" and the "UK Renewable Energy Roadmap". Moreover, the Government supports the diversion of waste from landfill, clearly stating in the recent review of waste policy that landfill is "clearly wrong" (the emphasis appears in the document). In addition the 2011 review identified a set of Principal Commitments for the Government to follow as part of a more sustainable approach to the use of materials. They included the following that are considered relevant to the proposed development:

- Prioritise efforts to manage waste in accordance with the waste hierarchy and reduce the carbon impact of waste;
- Support energy from waste where appropriate and for waste that cannot be recycled; and
- Work to overcome the barriers to increasing the energy from waste which anaerobic digestion provides.

1.9 The Draft Hampshire Minerals and Waste Plan (2011) has the long term aim of diverting 95% of non hazardous waste from landfill. In order to divert more waste from landfill, the Plan recognises that a range of new facilities will be required by 2020 for additional non hazardous recycling capacity per annum of at least 290,000 tonnes and recovery capacity per annum of at least 390,000 tonnes. The proposed development would therefore deliver part of this new capacity that is required.

1.10 Network Rail Limited has undertaken a review of their land and identified a number of sites throughout the UK which are no longer required for operational purposes and could therefore be used for redevelopment. As part of this review, the Micheldever Station site was identified as being suitable for redevelopment. Network Rail has confirmed that the Site is no longer required for operational purposes and is therefore seeking to regenerate the Site with development.

Requirement for Environmental Impact Assessment

1.11 For any development it is important to establish if an Environmental Impact Assessment (EIA) is required at the outset. The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (hereafter referred to as the EIA Regulations) implement Council Directive No 85/337/EEC (as amended) on the assessment of the potential effects of specified development proposals on the environment.

1.12 Prior to the granting of a "development consent", which includes the grant of planning permission under the Town and Country Planning Act, in respect of

any proposal to which the EIA Regulations apply, an EIA is required. Responsibility for compiling information regarding the significant environmental effects lies with the developer, and the information is presented as an 'Environmental Statement'.

1.13 As such, a comprehensive Environmental Statement has been prepared by SLR and should be read in conjunction with this Planning Supporting Statement and associated documents.

1.14 In March 2012 a written request was submitted to the Local Planning Authority, Hampshire County Council (HCC) , for its opinion as to the information to be provided in the Environmental Statement (refer to Technical Appendix 1 – Volume 2B)

1.15 The main purposes of the Scoping exercise were to:

- focus the EIA on the environmental issues and potential impacts which need the most thought and attention;
- to provide a means to discuss methods of impact assessment and reach agreement on the most appropriate way forward; and
- to identify those which are unlikely to need detailed study.

1.16 In May 2012 HCC issued their scoping opinion (refer to Technical Appendix 2 – Volume 2B).

Structure of Submission

Volume 1

1.17 Planning and Sustainability Statement (this document), including:

- An introduction to the project and planning application;
- A description of the site and surrounding area;
- A description of the development;
- A commentary on planning policy;
- Need;
- Potential Environmental Effects and Summary of Mitigation Measures;
- Benefits of the Development; and
- Conclusions

1.18 The Planning and Sustainability Statement also comprises the following appendices:

- Appendix A: Planning Application Forms and Certificates (SLR);
- Appendix B: Planning Application Drawings and Site Master Plan;
- Appendix C: BREEAM Statement (SOL); and
- Appendix D: Statement of Community Involvement (Indigo Public Affairs Ltd)

Volume 2A

1.19 The following Environmental Statement Chapters consist of the following:

- Chapter 1: Introduction;
- Chapter 2: Site Description;
- Chapter 3: Description of the development;
- Chapter 4: Planning Policy considerations;
- Chapter 5: Alternatives;
- Chapter 6: Traffic;
- Chapter 7: Air Quality;
- Chapter 8: Noise;
- Chapter 9: Hydrology and FRA;
- Chapter 10: Land Quality;
- Chapter 11: Landscape;
- Chapter 12: Ecology;
- Chapter 13: Cultural Heritage;
- Chapter 14: Socio Economic;
- Chapter 15: Cumulative Impacts; and
- Chapter 16: Summary and Conclusions

Volume 2B

1.20 The following Technical Appendices should be read in conjunction with the Environmental Statement as necessary.

- Technical Appendix 1: Scoping Request from SLR Consulting to Hampshire County Council; (March 2012)
- Technical Appendix 2: Scoping Opinion from Hampshire County Council to SLR Consulting; (May 2012)
- Technical Appendix 3: Summary of Scoping Issues – SLR Consulting;
- Technical Appendix 4: Tree Survey;
- Technical Appendix 5: Not used;
- Technical Appendix 6: Traffic Assessment Appendices;
- Technical Appendix 7: Air Quality Appendices;
- Technical Appendix 8: Noise Appendices;
- Technical Appendix 9: Hydrogeology and Hydrology Appendices inl. FRA;
- Technical Appendix 10: Land Quality Appendices;
- Technical Appendix 11: Landscape and Visual Appendices; (incl. drawings and visualisations)
  - MS 11/ 1 -Landscape Designations Plan;
  - MS 11/ 2 -Landscape Character Plan; (National)
  - MS 11/ 3 -Landscape Character Plan; (Local character areas)
  - MS 11/ 4 –Topography;
  - MS 11/ 5 -ZTV for Building only;
  - MS 11/ 6 -ZTV for 25m Stack;
  - MS 11/ 7 –Viewpoint 1 and 2;
  - MS 11/ 8 - Viewpoint 3 and 4;
  - MS 11/ 9 - Viewpoint 5A and 5B;
  - MS 11/ 10 - Viewpoint 6, 7A and 7B;

  - MS 11/ 11 - Viewpoint 8 and 9;
  - MS 11/ 12 - Viewpoint 10A and 10B;
  - MS 11/ 13 - Night viewpoint 5 and 6;
  - MS 11/ 14 – Night viewpoint 9A and 9B;
  - MS 11/ 15 – Landscape Masterplan;
- Technical Appendix 12: Ecology Appendices; and
- Technical Appendix 13: Cultural Heritage Appendices

Volume 3

1.21 A Design and Access Statement

Volume 4

1.22 A Non Technical Summary to the Environmental Statement is provided as a stand-alone document.

Project Team

1.23 This statement has been prepared by SLR. SLR is a multi-disciplinary environmental consultant to the minerals and waste management industries, and also provides advice to local authorities and the Environment Agency on strategic issues. SLR is a registered Environmental Impact Assessor Member of the Institute of Environmental Management and Assessment (IEMA) and has achieved the EIA Quality Mark awarded by IEMA.

1.24 In preparing this planning application and ES, SLR has drawn upon the expertise of an in-house team of specialists comprising planners, landscape architects, ecologist, hydrogeologists and environmental scientists for the majority of the technical assessments.

1.25 SLR has also worked closely with the management teams and other consultants used by Clean Power Properties Ltd in a detailed and iterative process, to ensure that the working scheme is feasible as well as optimising environmental protection.

Publication

1.26 Paper copies of the application package can be obtained from SLR Consulting Ltd at the following address;

Treenwood House
Rowden Lane
Bradford on Avon
Wiltshire
BA15 2AU

1.27 The Planning Supporting Statement, along with the other Volumes, is available in both paper copy and CD at a cost of £220 and £5 respectively. An electronic copy of the NTS (which accompanies the Environmental Statement) is available free of charge upon request.

SITE DESCRIPTION

Location

1.28 The application site consists of approximately three hectares to the north of Micheldever Station and to the south of the A303.

Figure 1 - View from the application site to the Micheldever Railway Station

1.29 The application site comprises previously developed land with fuel tanks which were part of the rail served oil terminal. This development is responsible for the change in levels across the site which vary from 141-140m AOD adjacent to the Overton Road to around 125m to 131m AOD where the fuel tanks are located. Land immediately adjoining the site is identified in the Draft Hampshire Minerals and Waste Plan as potentially suitable for use as an aggregate rail depot and as having some potential for waste uses.

1.30 Micheldever Oil Terminal SINC lies within the site. It has been designated for its species-rich unimproved chalk grassland and was last surveyed in 1992 (it was designated in 1995).

Surrounding Area

1.31 The site is situated within a predominately rural setting, being sparsely populated but with some residential properties immediately surrounding the site. The nearest residential property is Western Farm at 80m to the south

east, with a small settlement at Micheldever Station (with a recreation ground), at 530m south of the site.

1.32 There are other properties along the north side of A303 (including Coxford Farm, The Boundary, Holinshea, The Beeches, Woodlands, The Pines and Cobley Wood House), although vegetation is indicated along the roadside on the OS plan.

1.33 The largest settlement within the 5km study area is the village of Micheldever, which is located approximately 4km south of the site.

1.34 Public rights of way within the surrounding area include a footpath which runs parallel to the western side of the South Western Mail Line and is approximately 100m west of the site, although a belt of vegetation is indicated on the OS plan between the path and the railway line and site.

1.35 There is also a bridleway along the western boundary of Black Wood approximately 600m east of the site and which may have clear views. There are a number of other footpaths within the surrounding area.

1.36 The surrounding areas have a number of large industrial buildings and compounds, for example to the north of the A303, 200m north of the northern end of the site is Hampshire Grain Ltd (approximately 5 hectares with a mixture of building types and storage units), and 1km north east of the site is Popham Airfield. 180m to the east of the site and railway line is Hampshire County Council's Micheldever Depot which consists of a storage building and compound.

Geology

1.37 The site is situated over Cretaceous chalk of the Lewes, Seaford and Newhaven Chalk formation. No superficial geology is recorded at the site. There are no recorded areas of artificial (made ground) deposits in the vicinity of the site.

Topography

1.38 The site has two distinct levels. Natural ground level adjacent to the Overton Road is between 140-141m AOD. The site then drops to a level of between 125m and 130m AOD resulting from the construction works undertaken to install the fuel tanks associated with the former oil terminal use of the site.

Land Quality

1.39 The application site comprises former underground fuel tanks associated with the rail served oil terminal. With respect to ground conditions and land quality it is concluded that with appropriate mitigation measures (development/implementation of a remediation strategy), there will be no significant residual impacts or cumulative effects associated with the proposed redevelopment.

Access

1.40 The existing access from the former oil terminal site is to the south of the application site and joins New Road which is a short residential road before joining the Overton Road. This existing access is not considered suitable for use by heavy goods vehicles and a new access directly on to the Overton Road is proposed as part of the planning application.

Surrounding Road Network

1.41 Main transport routes include the A303 which is immediately north of the site and runs from the M3 in the east to Andover in the west. Another main corridor is the M3 itself which runs north-east from Basingstoke to Winchester in the south west, and is 2km away at its nearest point. The A33 runs parallel to the M3 converging with the A30 outside the study area to the north east.

1.42 Other transport facilities within the study area include the "South Western Mail Line" which joins the settlements of Basingstoke in the north-west to Winchester in the south and is immediately to the west of the site.

Landscape and Visual

1.43 The site is not located within a national landscape designation (National Park or AONB), nor is it located within a local landscape designation. The East Hampshire AONB is located approximately 10km to the south-west of the site at its nearest point.

1.44 The site is situated approximately 2km north-west of Stratton Park which is identified on English Heritage's "Register of Parks and Gardens of Special Historic Interest in England" as Grade II (Reference GD1864). However the citation for this designation also identifies that the "Intermittent tree belts, including screen planting alongside the M3 and woodland within the site, restrict views into the park to glimpses from the lanes to the south and south-east." This vegetation is also likely to restrict views from the park of any development within the site.

1.45 Outside the study area, at approximately 6km south-east of the site, lies The Grange Park, also identified by English Heritage on the "Register of Parks and Gardens of Special Historic Interest in England" (Grade II* Reference GD1229)" situated of the site, again however English Heritage also identify the enclosed nature of the site. The citation for this designation refers to "The western and eastern boundaries abut roads (Northington Road to the west, the B3046 and a minor lane to the east) but are enclosed from these by broad tree belts.

1.46 A further tree belt encloses the northern boundary from a public footpath running along most of its length while to the south". This vegetation, along with distance, is also likely to restrict views from the park of any development within the site.

Nature Conservation

1.47 The River Itchen SAC is within 10km of the proposed development site but significant effects on this designation are considered unlikely. Three Sites of Special Scientific Interest were identified within 10 km. These are:

- Micheldever Spoil Heaps SSSI Lying to the north of the site and abutting the northern verge of the A303, this site comprises Nineteenth century chalk spoil heaps derived from railway cuttings; the substrates exhibit various stages of colonisation by a range of plant communities. The site is considered of exceptional botanical importance as it supports many rare plants and species localised in their distribution; for example thrift Armeria maritima occurs in highly atypical habitat here and there are exceptionally populations of the nationally scarce species fly orchid Ophrys insectifera.
- River Test SSSI The River Test lies some 5.5km west of the site at its closest point. It is an extremely species-rich lowland chalk stream with a characteristic flora and a high diversity of invertebrates, a range of riparian birds, as well as strong populations of the fish species bullhead Cottius gobo, brook lamprey Lampetra planeri, brown trout Salmo trutta and grayling Thymallus thymallus. Runs of the European protected species salmon Salmo salar also occur.
- Bere Mills Meadows, SSSI This site lies adjacent to the River Test, some 5.75km north-west of the proposed development site. It comprises a group of damp, unimproved herb-rich neutral grasslands on the flood plain of the upper Test valley. These meadows have an extensive frontage along the River Test and provide a linear habitat that is particularly valuable for birds and invertebrates and represents a type of vegetation formerly widespread in the chalk stream valleys but now much diminished through extensive agricultural improvement, flood control and neglect.

Non-statutory Sites

Micheldever Oil Terminal SINC

1.48 This SINC site lies within the proposed development site. It has been designated for its species-rich unimproved chalk grassland and was last surveyed in 1992 (it was designated in 1995).

Other sites

1.49 A number of non-statutory designated sites are located within 2 km of the site boundary with the majority comprising woodland, including a large amount of ancient semi-natural woodland, as well as semi-improved grasslands, including species-rich unimproved grassland.

Cultural Heritage/Archaeology

1.50 No World Heritage Sites are located within 2km of site. The nearest is the southern component of the Stonehenge, Avebury and Associated Sites WHS 37km to the west.

Scheduled Monuments

1.51 There are no Scheduled Monuments within 500m of the site. A single monument is recorded within the wider 2km study area; Popham Beacons Round Barrow Cemetery, situated on higher ground (160m AOD) 0.6km to the north east of the site comprising a line of 5 upstanding Bronze Age barrows to the west of Popham Airfield. This asset is separated from the site by the line of the A303, with intervening housing and woodland.

Listed Buildings

1.52 There are no Listed Buildings within 500m of the site.

1.53 Within 2km there are 10 Listed Buildings, the majority concentrated at Warren Farm and Micheldever Station. These are all Grade II listed.

Potentially Sensitive Receptors

1.54 A review of the application site location and surrounds has identified a number of receptors which could be sensitive to the construction and operation of the environmental effects of the development. These include;

- existing residents of properties to the north, east and south;
- designated nature conservation/ecological sites and protected flora and fauna on the site and surrounds;
- construction site workers; and
- future site workers and employees

DESCRIPTION OF DEVELOPMENT

General Description

1.55 The proposed development would consist of the following:

- a 8MWe Pyrolysis Advanced Conversion Technology (ACT) plant with front end autoclave plant, which would require 100,000tpa of residual non hazardous Municipal Solid Waste (MSW) and Commercial and Industrial (C&I) Waste; and
- a 2MWe AD facility which would require approximately 54,000tpa of organic, digestible waste (food waste, green waste etc).

1.56 The proposed purpose designed waste reception and processing building is 130 metres long and 40 metres wide. It is 9 metres high to the ridge.

1.57 Auxiliary and support infrastructure would include;

- weighbridge and offices – for monitoring and recording all wastes coming onto and leaving the site;
- a gasmeter for gas storage (6m diameter and 9m high);
- a stack for the pyrolysis ACT plant (20m high and max 120cm diameter);
- gas engines;
- a stack for each of the 3 engines (20m high and max 100cm diameter) arranged in a group within an architecturally designed enclosure;
- an emergency flare;
- an electricity sub station (5m by 3 m and 3 m high)
- two AD digester tanks (20m diameter) and two AD digestate tanks (25m diameter) all 9.5m high;
- 250m2 of solar panels situated on the roof; and
- new access road and car parking for visitors and staff.

1.58 Buildings and operational areas would be situated on an impermeable concrete pad. A significant amount of water from the operations would also be re-circulated through the process. There would be no discharges to controlled waters. Rainwater falling onto buildings would be harvested for use in steam generation.

1.59 The above has been summarised into the following description of development:

1.60 “The construction and operation of a 8 MWE Pyrolysis Advanced Conversion Technology (ACT) plant including a 2 MWE Anaerobic Digestion Plant associated office, visitor centre, with new access road and weighbridge facilities, solar panels, associated landscaping and surface water attenuation features”

Process Description

ZONE 1 - Waste reception

1.61 Vehicles would enter the site via the main entrance roadway from Overton Road over a weighbridge in accordance to the vehicle movement plans (refer to Dwg 10-01). Vehicles would be directed from the weighbridge to the relevant reception areas for each of the wastes. The reception of all non hazardous wastes and appropriate biomass containing commercial waste would take place within the main waste reception area.

1.62 The waste reception area is a purpose built, sealed internal reception area which would be operated under negative pressure in order to mitigate potential odour dispersion impacts.

1.63 Vehicles would access the internal waste reception and dispatch areas of the internal waste reception area (refer to Drawing 10-01) by a number of doorways, comprising externally mounted heavy duty metal roller shutter doors (for overnight site security), with internally mounted rapid-closing heavy-duty polyethylene roller shutters to permit access in and out of the building by vehicles during normal working hours.

1.64 The reception area would comprise a number of sealed isolated bays fitted with push floor transfer system.

1.65 The physical reception area would be designed in order to accommodate Rear End Loader (REL) vehicles (which would form the typical ‘bin wagon’ vehicles used for domestic and commercial waste collection) and comprise of an initial holding bay and associated transfer systems.

1.66 Wastes would initially be discharged onto the reception area and undergo initial inspection, prior to being transferred directly into the loading system of the autoclave for steam sterilization.

1.67 The waste reception area and loading system would comprise of the following:

- weighbridge (capable of taking the full range of delivery vehicles);
- in-feed ferrous magnet (for the removal of oversized metals);
- in-feed shredder (capable of shredding c.30 Tonnes per hour);
- grab crane (capable of lifting c.4 Tonnes of waste per grab);
- in-feed conveyor system (capable of delivering full load to autoclave in approx 15 minutes);
- in-feed weighing system (to register accurate batch weights);
- hydraulic moving floor; and
- segregation area for rejected / quarantined waste.

1.68 Once unloaded, vehicles would be inspected and returned to the weighbridge.

1.69 Any wastes which do not conform to the requirements of the site, i.e. contain specific hazardous contaminants (oil, solvents, car batteries, WEEE etc), exceed the size requirements etc, would be segregated and isolated / quarantined. All non conforming wastes would be rejected in accordance with the site waste rejection procedures.

1.70 In addition a dedicated internal reception bay would be provided for the Anaerobic Digestion plant and all pure biomass matter would be macerated, blended and pumped directly to the digestion tanks.

1.71 A figure showing the Waste Reception and Processing Building Layout is provided in Drawing 10-01.

Details of venting/odour abatement

1.72 The Waste Reception and Processing Building would be operated under negative pressure system, drawing air from within the building and extracted to the main engine room for use as combustion air. All air would be treated by ultra-violet (UV) odour treatment plant.

1.73 This system would use conventional steel ductwork and extractor fans to maintain a slight negative pressure (nominally maintained at approximately -50 Pa) through the building, thus minimising the potential escape of odour from the building.

1.74 The building would also incorporate vapour capture and extraction canopies over the doors of the steam sterilisation units.

ZONE 2 - Steam Sterilisation and Segregation

1.75 The use of the Autoclave in the waste treatment system is key to the preparation of a homogenous biomass feedstock, the autoclave process also sterilises and cleans all of the recyclable materials ensuring that any possible waste contamination or pathogens are removed.

1.76 The Autoclaves would be constructed and operated in compliance with the UK boiler and pressure vessel regulations. A high level of safety has been designed into the vessels and operation is monitored both on site and from a remote location on a 24 hour a day basis.

1.77 Each Autoclave would be approximately 18 -20 metres long x 4 metres wide and would be loaded via an Archimedes screw. The Autoclaves are designed to operate on a 24 hour a day basis and the maintenance schedules would allow for at least one Autoclave operating at all times.

1.78 The steam sterilisation units comprise sealed, rotating stainless steel drums with a superheated steam injection system. They provide two methods of waste treatment, these being;

- Steam sterilisation of wastes; and

- Physical agitation, resulting in homogenisation of treated waste, removal of labels and print.

1.79 Wastes would be transferred from the reception hopper into the steam sterilisation area. The hoppers are effectively telescopic conveyors which load directly into the entry door of the autoclave.

1.80 The two autoclaves would be located in the approximate centre of the building. Each unit has an operating capacity of approximately 20 tonnes. When loaded, the autoclave units are sealed and the sterilisation process begins.

1.81 Each unit is rotated slowly (along the long, horizontal axis) at a rate of approximately 10 revolutions per minute.

1.82 Internal helical fins turn, mix and break up the waste. The movement of waste within the unit as it rotates also contributes to the breaking up and compression of wastes.

1.83 Each vessel would be mounted upon a heavy-duty steelwork structure, which is mechanically driven to position the vessels for loading, unloading and rotation during the autoclaving / pressure-cooking period. The mechanical system also drives the rotational mechanism of the vessels. An automatic control system dictates the sequenced operation and controls the steam pressurisation, steam venting and vessel depressurisation procedures via a steam distribution system.

1.84 Steam for the treatment would be supplied from a heat recovery steam generator (HRSG) system connected to the pyrolysis unit. Steam would be delivered to the steam storage system charged to 16 Bar and dry saturated steam at 5 Bar is supplied to the relevant Autoclave via a steam distribution system under the supervision of the central control system. Pressurised steam (c. 140 – 160°C) is introduced into the units, at approximately 5 bar, which effectively sterilises all materials within the autoclave vessel.

1.85 The autoclaving process reduces the original volume of the waste materials by approximately 80%. The other components within the waste are clean and sanitised, plastics shrink and form a generally spherical shape due to the temperature within the autoclave.

1.86 The sterilisation phase would be carried out at 160oC (for a duration of approximately 1 hour), after which the waste would be reduced to a loose mixture of glass cullet, plastic fractions, metal and sterilised organic residue.

1.87 Throughout the sterilisation process the autoclave is rotated, ensuring that mixing and homogenisation of the waste materials occurs. The rotation, sterilization and mixing at high temperature and pressure facilitates the conversion process of the biomass into cellulose fibres. At this temperature any oil or volatile content present in the waste feedstock is volatilized and captured within the steam.

1.88 Following completion of the process cycle the autoclave would be automatically depressurised. The exhaust steam is condensed and all waste heat is recovered through a large plate heat exchanger. The condensate is then processed by the main water treatment system and reused as boiler feed water.

1.89 When the autoclave doors are opened flash steam vapour (c.90 – 100°C) would be released and extracted by the autoclave door hoods. This steam is also condensed by passing through the plate exchanger and the water is subsequently reprocessed through the water treatment plant.

1.90 Once the steam has been evacuated from the autoclave chamber, the doors are opened to permit discharge of treated wastes. Discharge is driven by the rotation of the cylinder and the internal fins.

1.91 The treated waste is discharged from the autoclave and onto a moving floor conveyor for transport to the segregation area.

Autoclave Ancillary Plant

Water Treatment Plant

1.92 All process water used by the plant is recycled and recovered within the central water treatment and recovery plant. The plant has been designed to recover all grey water as well as utilise all water from the building operations, internal drains and rain water.

1.93 The system has been designed such that all process and chemical tanks are located with secondary containment bunds, fitted with level gauges and alarms. The system will be fully automated and will operate continuously.

1.94 The system has been designed to be closed loop and comprises the following:

- process drain storage tank;
- steam condenser;
- condensed water storage tank;
- transfer pumps;
- pH monitoring and correction;
- separation of flocculated suspended solids;
- sludge storage tank;
- clarified water storage tank;
- sand and carbon filtration;
- reverse Osmosis for removal of trace metals and salts;
- clean process water storage tank; and
- grey water storage tank.

1.95 The treatment plant would provide clarified, deionised water for supply to the main clean water storage tank. All flocculated suspended solids would be pumped and re-introduced to the Autoclave.

1.96 The discharge from the defined unit would be used to provide grey water for process wash down, floor cleaning and vehicle wash etc.

Autoclave Steam Production

1.97 Steam would be generated in the pyroliser heat recovery steam generation ('HRSG') plant. When in normal operation all the necessary heat requirements would be provided through the rejected heat of the pyrolysation process. This plant also has the capability to generate steam independently by the use of a number of gas oil burners.

1.98 All of the steam generated by the plant would be fed to a steam accumulator.

1.99 The typical water consumption would be between 3.5 and 4.5m3 of water per batch of waste.

1.100 Recovered steam (approximately 20-25% of input) would be condensed to water and passed through a water treatment plant before being passed back into the steam generation plant.

Secondary Steam Capture

1.101 All steam released from the main door autoclave during unloading would be extracted via stainless steel ductwork and passed through condenser/reheater to a chilled water condenser. All condensate would be collected, cleaned in the water treatment plant and reused as boiler make up water.

UV Odour Extraction and Control

1.102 All air within the main reception areas would be extracted for use as combustion air within the CHP and pyrolisation units. All extracted air would be treated through the use of an ultra violet ('UV') treatment plant prior to intake into the engine and burner combustion fans.

1.103 Standby (emergency) odour control plant has been specified for use during periods when the plant combustion systems are not operational.

Segregation

1.104 Standard waste segregation equipment would be used within the facility to split the wastes into separate streams.

1.105 The steam sterilised waste stream would be passed by conveyor into the allocated segregation area above the sterilisation units.

1.106 Sterilised waste materials discharged from the autoclave would be discharged onto a moving floor and transferred to the sorting/segregation plant by means of a conveyor plant.

1.107 The sorting and segregation plant comprises the following:

- process Conveyor system to deliver material from the moving floor to the separation systems;
- process separation to remove textiles;
- trommel system;
- process ferrous magnet and ferrous bailing system for removal and segregation of ferrous materials;
- process Eddie current separator and Non ferrous bailing system for removal and segregation of nonferrous materials;
- process plastic separation (manual picking and classification);
- fibre separation via air classification system;
- fibre drying to reduce moisture content of the fibre from 30-40% to below 10%;
- fibre storage system to maintain dry fibre in a storage hopper for release to the pyrolysis in-feed system; and
- pyrolysis in-feed conveyors (capable of delivering 4 tonnes of fibre per hour to each of the Pyrolysis units).

1.108 The facility would be capable of producing many segregated waste streams through the steam sterilisation process, comprising glass cullet, plastic fraction, metal fragments (aluminium and steel, primarily from domestic cans) and sterilised fibre.

1.109 Rejects would largely comprise stones, textiles and large wood fragments, which would be removed from the waste stream manually (via a picking station). Other segregated waste streams would be brought in via the skip waste / kerbside reception area, producing segregated loads of glass, paper and card, plastic and green waste.

1.110 Segregated materials would be bulked in designated bays throughout the facility to await dispatch.

1.111 The main output of the autoclave process would be a clean sterile biomass fibre.

1.112 The biomass fibre material has a very low level of moisture and correspondingly high biomass content. The biomass fibre is a non hazardous ‘fluffy’ peat like material that is then suitable for pyrolysis.

1.113 The material handling systems would be controlled by the central control system and would meet all required safety standards.

ZONE 3 - Pyrolysis

1.114 The waste reception and processing building also comprises a purpose built pyrolysis section (Zone 3) which houses the pyrolysis plant and ancillary equipment. The pyrolysis plant would only process sterile, stable biomass and the building is not required to be airtight or subject to odour control / mitigation measures.

1.115 Other than for equipment maintenance access, there would be no requirement for vehicles to enter this building.

1.116 The installation uses a proprietary pyrolysation system to pyrolyse the biomass fibre produced by the autoclave process. The systems designers have specifically designed the upstream autoclave process to produce a conditioned biomass feedstock that is ideally suited to pyrolysis. Likewise, the pyrolysis process has been designed and proven to operate on the biomass fibre produced by the autoclave.

1.117 Zone 3 would house three or four pyrolyser units and each unit would be capable of simultaneously receiving a minimum of 3-4 tonnes of dry fibre. Each pyrolysis unit consists of a number of component parts which are described below.

1.118 The pyrolysis process and associated upstream fuel preparation processes have been designed in a manner that minimises any contaminants and ensures that all impurities are retained in the solid by-products (char) of the pyrolysis stages.

1.119 Once inside the fibre is subjected to heat in an oxygen free environment and a chemical transformation takes place which releases synthesis gas from the fibre and produces a charcoal solid.

1.120 Within the tube retort is a specific vane design that progressively advances the feedstock in an auger fashion alongside the inside of the chamber.

1.121 The even temperatures applied to the external retort produce consistent internal temperatures, subsequently creating consistent gas quality. The gas produced by the retort is then cooled and further cleaned in a dedicated gas clean up line.

1.122 The charcoal is removed at the back end of the retort, where it is pulverized and stored in a storage hopper. The carbon is then used to fuel the vortex burner unit by means of two primary air fans which blow the charcoal to two charcoal burners. The vortex burner in this application forms the thermal oxidiser for the retort, and utilizes the rejected combustion gas heat as a means of providing heat to the primary chamber in order to indirectly heat the retort.

1.123 The flue temperature and retention time within the thermal oxidizer and associated ducting has been designed to ensure that the minimum WID requirements are achieved.

1.124 The charcoal is a very clean burning fuel and contains impurities. Any ash or impurities from the charcoal combustion are molten into a vitrified slag due to the elevated temperature within the thermal oxidiser, the ash is maintained in a molten state by a burner located in the ash pit of the vortex. This molten slag is then removed from the base of the vortex and cooled to a solid vitreous slag which is removed and can be used as a construction material.

1.125 The combustion products/gases discharged from the thermal oxidizer are routed to the primary chamber to indirectly heat the pyrolysis retort. Upon exiting the main chamber, the gases are routed to the heat recovery steam

boiler where steam is generated at c.15 - 20 Bar. This steam is used to charge the autoclave steam accumulator.

1.126 Each of the heat recovery steam boilers are equipped with a feed water tank and associated ancillary equipment. Steam from these the recovery units will maintain the steam load for the autoclave plant. Any excess steam is directed to a heat exchanger and condenser.

1.127 All combustion products then exit the heat recovery boiler and are passed through a ceramic filtration system.

1.128 The filtration unit removes all particulate materials to below 5mg/m3 prior to discharge to atmosphere. NOx abatement plant with a maximum potential reduction efficiency of 95% would be fitted and EU Directive 2000/76/EC on the Incineration of Waste (known as the Waste Incineration Directive) requires flue gases to be retained at temperature of 850°C for a period of 2 seconds.

1.129 The gas produced by the retort is cooled and cleaned and then stored in a gas storage unit which is sized to allow a minimum of 6 hours operation for the gas fired engines.

1.130 All emissions from the pyrolysis plant would be monitored using continuous emissions monitors (CEMS) located on an exhaust stack

1.131 The CEMS would be WID compliant and monitor particulates, NOx, carbon monoxide, and VOCs (through surrogate monitoring of carbon monoxide). The continuous monitor would operate on a 24-hour basis and would include the facility for on-line monitoring of the gas concentrations.

ZONE 4 - Generation

1.132 Generation of electrical power would occur through utilization of gas engine generators. The maximum energy total electrical energy output would be approximately 10 MWe.

1.133 The engines can be supplied from a number of manufacturers including:

- GE Jenbacher;
- MWM Deutz; or
- Roll Royce

1.134 All proposed engines would be fitted as standard, with proprietary lean burn NOx emissions control units. These units would ensure that all NOx emissions are kept to below industry benchmarks.

1.135 The pyrolisation technology specified has been subject to an ‘End of Waste’ determination by the Environment Agency, such that the combustion of Synthesis Gas within the engines is not subject to the Waste Incineration Directive.

1.136 The biomethane produced by the AD plant would be injected directly with the syn-gas within the gas holder and burnt within the engines.

1.137 The heat generated by the gas engines is utilised for drying of the Biomass fibre by means of a heat exchange system and the rating of the exchangers are specified by the engine supplier.

1.138 Each of the engines would exhaust to atmosphere via a dedicated stack 20m in height.

Anaerobic Digestion (AD)

1.139 The AD plant would utilise a dedicated sealed reception bay within the waste reception and processing building. The AD reception bay would comprise a reception pit and feed hopper and incorporate a liquid slurry tank for the reception of liquid wastes. All solid biodegradable wastes would be macerated, separated and blended with the slurry to produce the feedstock for the AD tanks.

1.140 The AD Plant would comprise the following:

- Feedstock blending systems and associated pumps / pipelines
- Batch pasteurisation equipment
- 2 x Bunded Digestion Tanks;
- 2 x Gas Storage Tanks;
- Gas Treatment and Odour Abatement Plant;

1.141 The concrete digester tanks are insulated and heated with a heating system installed inside the walls and base.

1.142 The tanks would have a double membrane roof, to ensure stability and flexible gas storage. Both digester tanks can be fed directly from the reception area.

1.143 Each tank would be fitted with propeller mixers to ensure a homogeneous mixture for best mass transfer and to prevent floating layers or sedimentation.

1.144 The tanks would be fitted with two chemical dosing systems for the reduction of H2S in the biogas. The primary system injects a small quantity of O2 into the gas storage region of the tank (i.e. headspace beneath the membrane roofs). If oxygen injection is not sufficient to reduce the levels Ferric Sulphate would be dosed directly into the digester.

Site Construction and Design

Construction

1.145 The application site consists of two distinct levels; the higher level at approximately 140m AOD is adjacent to Overton Road from where the proposed site access would be provided. The second, lower level lies

between 125m and 131m AOD, and is where the proposed facility would be located. It is proposed to create a development platform for the energy recovery centre at around 128m AOD, which will require some earth moving operations to the existing site and platform. Excess material will be exported from the site during the construction period. Disused underground fuel tanks associated with the former oil terminal are known to exist under part of the proposed development area.

1.146 It is proposed that they will be purged and infilled with foam concrete so that they can then be retained in-situ. The proposed development can then be constructed on top using a conventional raft foundation at a level of around128m AOD.

1.147 The building will be constructed around a structural steel frame which will support the cladding between the main structural members without secondary steel.

1.148 Some lateral restraint members will be required between the main frames, both to enable erection and to maintain stability. However, these members can be designed as removable to facilitate the installation of plant and equipment by removing individual cladding panels, as of when required.

1.149 The floor slab will be generally designed to take 50kN/m2 or to accommodate plant loading as required.

Site Drainage

1.150 The construction of the energy recovery facility will introduce new buildings and hence new impermeable internal and external areas which will require capture and runoff retention and attenuation.

1.151 Furthermore, the proposed installation will give rise to a number of process effluents which although retained and recycled will still require discharge from site.

1.152 The areas of the site where new buildings will be constructed shall be underlain by an impermeable concrete pad. All run off arising from the operational areas of the site are contained and treated the water treatment plant. In addition, a significant amount of water collected within the operational area is re-circulated through the process prior to treatment and subsequent discharge. There are no discharges from the site to controlled waters.

1.153 All rainwater falling directly onto the buildings will be harvested, treated and used within the process for steam generation.

Hardstanding

1.154 All internal and external processing areas will be constructed with impermeable concrete hardstanding which will be designed in accordance to the load bearing requirements of the processing equipment and vehicles

used at the facility. Typically, all non structural concrete areas will comprise reinforced concrete hardstanding of at least 300mm thickness.

1.155 All other load bearing elements will be significantly thicker as required and determined.

Tanks and Bunds

1.156 There will be a number of tanks incorporated within the main building. All tanks will be installed with secondary containment and designed to comply with the Environment Agency Pollution Prevention Guideline Note 2 – Above Ground Oil Tanks. All storage and process tanks will be enclosed within the main processing building.

Floor Slab design, Roadways and Anaerobic Digestion Tank Bases

1.157 The floor slab, roadways and AD Tank bases will generally be constructed with a re-enforced concrete slab.

Construction Period

1.158 The site preparation and construction stage is anticipated to take place over a 18 month period (during 2013-14) with the plant being operational from 2015/2016.

1.159 Construction traffic hours would be limited to 07.00 to 19.00 hours Monday to Friday and 07.00 to 16.00 hours on Saturdays with no construction taking place on Sundays and or bank holidays unless agreed with the Local Planning Authority.

1.160 The construction phase of the project would consist of the following activities:

- Site clearance and preparation of the building surfaces at required levels, including cut and fill operations;
- Site access and highway works;
- Excavation and installation of services;
- Construction of foundations;
- Construction of concrete and asphalt surfaces;
- Erection of steelwork and cladding for buildings;
- Provision of green roof and solar panels;
- Installation of process equipment; and
- Provision of landscaping and fencing.

Highways

Access

1.161 The application site is connected to a well formed network of roads that facilitate significant traffic movements throughout the County. Indeed, the application site would connect to the A303 Trunk Road via Overton Road, whereupon onward connectivity with the M3 Motorway, A3 and A34 are

possible. Moreover, the A303 and the roads listed above form part of a network of strategically important roads within the County that are designated as the preferred 'Minerals and Waste Lorry Routes'.

1.162 Based on the proposed throughput of 154,000 tpa it is estimated that the proposed development would generate 102 HGV trips (51 in and 51 out) and 34 staff trips (17 in and 17 out).

1.163 The existing access onto New Road which currently serves the rail sidings site is not considered suitable for this level of traffic and therefore as part of the development it is proposed to construct a new priority T-junction onto Overton Road some 230 metres south of the A303 over bridge. The arrangement includes a 15 metre radius with 1:10 taper over a 25 metre section, which is designed to accommodate the swept-paths of goods vehicles turning left onto Overton Road. In addition Overton Road would be widened to 7.3 metres around the access.

1.164 All traffic would be required to enter and leave the application site from the north towards the A303. No traffic to the south would be permitted and the applicant would be willing to enter into a routing agreement to confirm this and the site access has been designed to restrict HGV access/exit to the north.

1.165 Visibility at the junction was informed from observations of vehicle speeds recorded by way of an Automatic Traffic County (ATC) located across Overton Road, in vicinity of the proposed site access. Based on these results the junction has been designed for a 50mph design speed and thus the visibility envelope created at the junction is 160 metres from a 2.4 metre set-back position. In order to facilitate visibility in the vertical dimension, it is proposed to reconstruct the part of Overton Road where a crest and hidden dip currently limit forward visibility along the road. In so doing, the proposals would help to alleviate an existing deficiency in the road network and thus afford a wider benefit to the community.

1.166 The proposed improvements would be undertaken within highway land and are proposed to be dealt with by way of a s278 agreement.

Rail

1.167 The proposed development is adjacent to the Micheldever rail sidings infrastructure which was used to serve the former oil terminal and there exists the potential for this development to benefit from rail access.

1.168 The proposed development has therefore been designed so as to not rule out the use of rail at some point in the future should suitable contracts be secured because Network Rail remain committed to increasing the amount of freight moved by rail.

1.169 However it is not possible at this stage to include details of any rail loading/unloading facilities within the planning application because in order to justify the level of investment required it would be necessary for any future operator to secure a contract from a single source to supply either a

substantial proportion of the proposed inputs or a single contract to manage the recyclate produced by the plant. At this stage in the project's life this level of information is simply not known and as the emerging Hampshire Minerals and Waste Plan identifies, the principal need for new waste recovery capacity is to manage the commercial waste stream which is more likely to come from a wide number of sources within Hampshire rather than a large single source.

1.170 In addition the site enjoys good access on to the strategic route network and there would be no highway justification for requiring rail access as to do so would unnecessarily restrict the ability of Hampshire to deliver the waste recovery and renewable energy generation capacity that is required to meet the needs of the County

Hours of Operation and Staffing

1.171 The waste management processes would take place 24 hours a day, seven days a week. Deliveries would be restricted to a 10 hour working day and take place Mondays to Fridays (08.00 to 18.00 hours) and Saturday mornings only (08.00 – 13.00 hours).

1.172 The development would employ three administration staff to work during typical office hours (9am to 5pm) and a further 28 staff would be split into four groups of seven. Each group would be made up of four sorting staff and three plant operatives, with each group working 12-hour shifts on a rotational programme of four days on/four days off. Hence, there would be 10 staff on-site during the day and seven during the night shift.

Parking

1.173 A parking area would be provided for staff and visitors in front of the main building. There would be 16 car parking spaces, including disabled spaces which would allow for shift changeovers and ensure no parking takes place on internal roads. In addition electric vehicle charging points would be provided at a 20% active, 20% passive ratio to encourage the use of electric vehicles.

Materials

1.174 The building materials have been chosen to ensure that practicality in terms of the operations is complemented by a sustainable approach to their selection and use and will be agreed with the local planning authority.

1.175 At this stage, it is proposed that the colour of the building and tanks would be similar to the colours found locally such as "red brick, flint and slate" as mentioned in the North Dever Downs Landscape Character Area.

Landscaping

1.176 A high quality landscape treatment has been provided to areas surrounding the proposed development. A key element of this has been to retain as many

of the mature trees on the site as possible within the wider constraints of the design and brief. The intention is to retain as many of the healthy mature trees as possible to provide a high quality boundary treatment onto the access road. Retaining established trees along the boundary would also form a visual screen and foreground to the buildings behind.

1.177 In addition a green roof as part of the ecology mitigation and 250m2 of solar panels would be provided on the roof space of the proposed building.

1.178 A Landscape Master Plan is located within Appendix B (Planning Application Drawings) and should be read in conjunction with this supporting statement.

Surface Water Management

1.179 The waste management plant has been designed to recover all grey water from the site and waste processing operations, as well as harvesting clean water from rainfall onto the building. A water treatment plant is proposed to process and clean water (including the condensed water from recovered steam, ready to be used within the waste management operations.

Lighting

1.180 External lighting would be required to ensure the safety of vehicles and pedestrians around the site and enhance general security. Pedestrian walkways would be lit by low level pillars and access roads would use LED cats eyes and way markers to remove the need for more typical street lighting type units.

1.181 All lighting would be inward facing and at a low level and no external lighting to the building or AD tanks would be required other than above the main doors.

1.182 There are no proposals for floodlighting or for high level lighting.

Grid Connection

1.183 An underground grid connection to the substation at Overton has been identified and the proposed route would follow public highways. It is considered that in the event this connection is installed by a statutory undertaker then the works would be permitted development, under Part 17 Class G of the General Permitted Development Order.

REVIEW OF PLANNING POLICY

1.184 This section reviews the national, regional and local planning policy which has been considered in the preparation of this planning application.

National Policies

- Waste Strategy 2007;
- Government Review of Waste Policy in England, 2011;
- EN-1 Overarching National Policy Statement for Energy (2011);
- EN-3 Renewable Energy;
- PPS10 – Planning for Sustainable Waste Management (2005); and
- National Planning Policy Framework (NPPF).

Regional Policies

- The South East Plan 2008 – Regional Spatial Strategy for the South East.

Local Policies

- Hampshire, Portsmouth, Southampton and New Forest National Park Minerals and Waste Core Strategy 2007;
- Draft Hampshire Minerals and Waste Plan (2011) not yet adopted; and
- Winchester District Local Plan Review- saved policies (Adopted 2006)

National Policy

Waste Strategy 2007

1.185 Waste Strategy 2007 sets out the Government's vision for sustainable waste management. The key objectives of the strategy are as follows (page 28, paragraph 23):

- The need to decouple waste growth from economic growth – the proposed visitor centre will include sections on the importance of waste prevention and re-use;
- To meet and exceed landfill diversion targets – the proposed development will contribute to the delivery of the waste management capacity requirements for Hampshire, as set out in the adopted Core Strategy and emerging draft Minerals and Waste Plan;
- Increase the diversion of non-municipal waste from landfill and secure the better integration of treatment of non municipal and municipal waste – the proposed development will provide capacity for Hampshire's residual commercial and industrial waste and will be available for residual municipal waste on a merchant basis should local authorities wish to use it, so it will deliver both of these objectives;
- Secure investment in infrastructure needed to divert waste from landfill – the proposed development will deliver this objective; and
- Get the most environmental benefit through increased recycling and recovery of energy from waste – the proposed development will ensure

that recycling is maximised and enable the ACT to treat only residual waste remaining after recycling has taken place and to maximise the recovery of energy by the generation of electricity.

1.186 The proposed development is therefore considered to comply with the objectives of national waste management policy.

1.187 WS 2007 (page 76, paragraph 17) also recognises that energy from waste is an essential component of a well balanced energy policy. The need for safe, secure new energy generation capacity underlines the importance of maximising energy recovery from waste that cannot be recycled.

1.188 WS 2007 (page 77, paragraph 22) also advises that on the basis of research carried out to date there is no credible evidence of adverse health outcomes for those living near to such facilities.

Government Review of Waste Policy in England, 2011

1.189 This review identified a set of Principal Commitments (page 4) for the Government to follow as part of a more sustainable approach to the use of materials. They included the following that are considered relevant to the proposed development:

- Prioritise efforts to manage waste in accordance with the waste hierarchy and reduce the carbon impact of waste;
- Support energy from waste where appropriate and for waste that cannot be recycled; and
- Work to overcome the barriers to increasing the energy from waste which anaerobic digestion provides.

1.190 The proposed development would deliver all three of these principal commitments and is therefore considered to be in accordance with the latest national waste management policy.

EN-1

1.191 Section 3 of EN-1 confirms the following:

- the UK needs all types of energy infrastructure in order to achieve energy security at the same time as reducing greenhouse gas emissions;
- it is for the industry to propose new energy projects;
- the government does not consider it appropriate for planning policy to set targets or limits on different technologies;
- applications covered by EN-1 should be considered on the basis that the government has demonstrated that there is a need; and
- decision makers should give substantial weight to the contribution projects make towards satisfying this need.

1.192 EN-1 goes on to confirm at paragraph 3.3.10 that in order to diversify and decarbonise electricity generation the government is committed to increasing dramatically the amount of renewable energy generation. Paragraph 3.4.1 confirms that the government is committed to sourcing 15% of its total energy

from renewable sources 2020 and that new projects need to come forward urgently to ensure that this target is met.

1.193 Paragraph 3.4.4 of EN-1 recognises the ability of energy from waste to deliver predictable, controllable renewable electricity which is seen as important in ensuring the security of UK energy supplies.

1.194 Finally, the NPS provides advice in Part 5 on "Generic Impacts", For landscape, paragraph 5.9.8 comments that "Virtually all nationally significant energy infrastructure projects will have effects on the landscape. … the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate". The guidance also affords a high level of protection for National Parks and AONBs (i.e. national designations). For local landscape designations, paragraph 5.9.14 states that such designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development. In determining planning applications, the key test is whether the impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.

EN-3

1.195 EN-3 acknowledges (paragraph 2.5.2) that the recovery of energy from the combustion of waste will play an increasingly important role in meeting the UK's energy needs, and the biomass fraction of waste can also contribute towards the UK's renewable energy targets. EfW also forms an important element of waste management strategies in England and Wales. The document stresses that it is not necessary to be concerned about the type of technology used.

1.196 The NPS also provides guidance in terms of the likely impacts of energy from waste schemes, and states (paragraph 2.5.43) that where a modern EfW plant meets the requirements of WID and will not exceed local air quality standards, it should not be regarded as being detrimental to health. In respect of visual impact it also states (paragraph 2.5.50) that good design will go some way to mitigate adverse landscape and visual impacts, and that the design and use of materials should reflect the local landscape context.

PPS 10

1.197 PPS 10 – Planning for Sustainable Waste Management remains the latest Government policy on planning for waste management facilities and objectives for sustainable waste management. The proposed development has therefore been considered against these objectives (paragraph 3 of PPS10) as follows:

- 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, but one which must be adequately catered for. The proposed development will help drive the management of waste up the waste hierarchy and treat waste as a resource by providing recycling and recovery capacity to treat waste remaining after recycling and

composting has taken place and using the waste to generate renewable electricity;

- Provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management facilities to meet the needs of their communities. The proposed development will contribute favourably Hampshire providing the new waste management infrastructure that is required to divert their waste from landfill and will demonstrate that they are taking responsibility for their waste and the grant of planning permission will enable the sufficient and timely provision of the recovery capacity that the adopted and emerging Waste Local Plans in Hampshire identify is required;
- Help implement the national waste strategy, and supporting targets, are consistent with obligations required under European legislation and support and complement other guidance and legal controls such as those set out in the Waste Management Licensing Regulations 1994. The proposed development will contribute to the capacity that is required Hampshire to implement the national waste strategy and supporting targets. The proposed development will enable the recycling and recovery of waste without endangering human health or having an unacceptable impact on the environment; and
- Reflect the concerns and interests of communities, the needs of waste collection authorities, waste disposal authorities and business, and encourage competitiveness. The proposed development will meet the needs of the waste collection and disposal authorities and businesses in the area and will provide a source of renewable energy generation capacity which will assist in the delivery of the Government's climate change objectives which is considered to be of benefit to all the communities within Hampshire.

1.198 Paragraph 17 of PPS10 advises that waste planning authorities need to identify sites for new waste management facilities to meet the needs of their area. The emerging Hampshire Minerals and Waste Plan does not allocate sites for new waste development but it recognises that the adjacent land does have potential for waste development and the Plan does identify a need for new waste recovery capacity to be delivered over the period up to 2020. The proposed development will therefore meet an identified need for new recovery capacity and is in a location identified as having potential for waste development.

1.199 Paragraph 20 of PPS10 advises that in looking for sites waste planning authorities should consider a broad range of locations including industrial sites and opportunities to co-locate facilities. The proposed development utilises brownfield land formerly used for rail related activities, which can be considered to be industrial in character, and provides for the co-location of facilities by providing for both ACT and AD technologies to be used.

1.200 Paragraph 21 of PPS 10 advises that waste sites should be assessed against the following criteria:

1. The extent to which they support the policies of PPS 10 – paragraph 1.196 demonstrates how the proposed development complies with the objectives of PPS10;

2. The physical and environmental constraints on development set out in Annex E of PPS10 – paragraph 1.200 demonstrates how the proposed development complies with Annex E;
3. The cumulative effect of previous waste disposal facilities on the well being of the local community including any significant adverse effects – No significant cumulative effects have been identified;
4. The capacity of the transport infrastructure, seeking where practicable to use other modes than road transport – it is considered that there is adequate highway capacity for the proposed development and it is well connected to the primary route network as well as having the potential for rail use; and
5. Finally paragraph 21 gives priority to previously developed land, which the proposed site is.

1.201 Annex E of PPS 10 sets out the main factors waste planning authorities should take into account when testing the suitability of a site for waste management purposes, as follows:

1. "protection of water resources, considerations will include the proximity of vulnerable surface and groundwater. For landfill or landraising, geology conditions and the behaviour of surface water and groundwater should be assessed both for the site under consideration and the surrounding area. The suitability of locations subject to flooding will also need particular care"

   The assessments undertaken demonstrate there would be no adverse impacts on water resources,

2. "land instability, locations, and/or the environs of locations, that are liable to be affected by land instability will not normally be suitable for waste management facilities"

   There are no stability issues at the Site.

3. "visual intrusion, considerations will include (i) the setting of the proposed location and the potential for design-led solutions to produce acceptable development; (ii) the need to protect landscapes of national importance (National Parks, Areas of Outstanding Natural Beauty and Heritage Coasts)"

   The site is remote from designated landscape areas and the ability to use the existing levels on the site to screen the built development combined with the low stack heights associated with the technology proposed means that the landscape and visual impact of the proposed development has been minimised with only the proposed new access predicted to have a localised impact on one viewpoint.

4. "nature conservation, considerations will include any adverse effect on a site of international importance for nature conservation (Special Protected Areas, Special Areas of conservation and RAMSAR sites) or a site with a nationally recognised designation (Site of Special Scientific Interest, National Nature Reserve)"

The assessments undertaken demonstrate there would be no adverse impacts on international or national nature conservation sites. It is noted that PPS10 does not go down to local conservation sites and it is considered significant that Government policy does not seek to rule out waste development on locally designated sites.

5. "historic environment and built heritage, considerations will include any adverse effect on a site of international importance (World Heritage Sites) or a site or building within a nationally recognised designation (Scheduled Monuments, Conservation Area, Listed Buildings, Registered Historic Battlefields and Registered Parks and Gardens"

   The assessments undertaken demonstrate there would be no adverse impacts on the historic environment.

6. "traffic and access, considerations will include the suitability of the road network and the extent to which access would require reliance on local roads"

   The site has good access to the strategic route network and with the further improvements proposed the assessments undertaken demonstrate that there would be no adverse impacts on the highway network.

7. "air emissions, including dust, consideration will include the proximity of sensitive receptors and the extent to which adverse emissions can be controlled through the use of appropriate and well maintained and managed equipment"

   The assessments undertaken demonstrate there would be no adverse impacts on air quality.

8. "vermin and birds, considerations will include the proximity of sensitive receptors. Some waste management facilities, especially landfills which accept putrescible waste, can attract vermin and birds, and may be influenced by the distribution of landfill sites"

   All waste handling activities will take place within buildings and the site will have a vermin management plan as part of the Environmental Permit.

9. "noise and vibration, considerations will include the proximity of sensitive receptors. The operation of large waste management facilities in particular can produce noise both inside and outside buildings. Intermittent and sustained operating noise may be a problem if not kept to acceptable levels and particularly if night-time working is involved"

   The assessments undertaken demonstrate there would be no adverse noise or vibration impacts.

10. "litter, can be a concern at some waste management facilities"

All waste handling activities would take place inside the building and a litter management system would be maintained as part of the Environmental Permit; and

11. "potential land use conflict, likely proposed development in the vicinity of the location under consideration should be taken into account in considering site suitability and the envisaged waste management facility"

The site is a previously developed site adjacent to a safeguarded site for a rail aggregate depot identified in the emerging Hampshire Minerals and Waste Plan as having potential for waste management development.

1.202 Paragraph 24 of PPS10 gives advice that planning applications on unallocated sites should be favourably considered where they are consistent with the policies of PPS10, including paragraph 21. Paragraph 1.113 of this statement demonstrates how the proposed development is considered to comply with paragraph 21 of PPS10. The proposed development is therefore considered to comply with the policies for waste management development set out in PPS10 and it should therefore be considered favourably in accordance with national waste policy.

National Planning Policy Framework (NPPF) 2012

1.203 The NPPF confirms that is does not contain specific waste policies but local planning authorities should still have regard to its policies so far as they are relevant. Key issues that have been identified as relevant include the presumption in favour of sustainable development and the approach of the NPPF to meeting the challenge of climate change by moving towards a low carbon economy and renewable energy generation.

1.204 The review of the proposed development against the policies in PPS10 above demonstrate how, by driving the management of waste up the hierarchy and recovering recyclate and energy, it accords with the objectives of sustainable waste management and can therefore be considered to be sustainable waste development.

1.205 In respect of climate change the NPPF identifies the key role the planning system has to play in supporting the delivery of renewable energy which is considered central to the economic, social and environmental dimensions of sustainable development. In helping to increase the use and supply of renewable energy local planning authorities must recognise the responsibility on all communities to contribute to energy generation and have a positive strategy to promote renewable energy with policies designed to maximise renewable energy whilst ensuring that adverse impacts are addressed.

1.206 Paragraph 111 encourages the effective use of brownfield land provided that it is not of high environmental value and paragraph 113 advises that Planning Authorities should set criteria policies against which development on or affecting wildlife areas will be judged. It advises that such protection should be commensurate with the value of the site.

1.207 Paragraph 114 continues that Planning Authorities should plan positively for the creation, protection, enhancement and management of biodiversity networks. Paragraph 118 advises that if significant harm cannot be avoided, mitigated or compensated for then planning permission should be refused.

1.208 The proposed development would re-use brownfield land which has been identified to be of local value for wildlife and whilst some habitat would be lost, new habitat, in the form of the green roof will be created and the remaining habitat will be protected, enhanced and managed as part of the proposed conservation management plan for the site.

1.209 It is therefore considered that the adverse impacts on the local nature conservation designation have been satisfactorily addressed by the mitigation proposed and that the merits of the development in terms of re-using brownfield land, diverting waste from landfill and generating renewable energy significantly outweigh the impact that remains.

Regional Policy

The South East Plan

1.210 The South East Plan is the Regional Spatial Strategy (RSS) for the South East, adopted in May 2009. It was revoked by the Secretary of State for Communities and Local Government on 6 July 2010. However that revocation was subject to challenge in the Cala Homes (South) Ltd case (2010 EWHC 2866). This challenge was decided on 10 November 2010, and the outcome was to quash the 6 July 2010 revocation.

1.211 The Secretary of State decided not to appeal that decision, therefore, the South East Plan once again constitutes part of the development plan. The intention to abolish the South East Plan, as announced on 27 May 2010, remains a material consideration. The Government is pursuing the abolition of the South East Plan through the Decentralisation and Localism Bill. However, until the abolition is confirmed, the following policies are considered to be relevant to the application;

- Policy W3: Regional Self Sufficiency;
- Policy W4: Sub Regional Self-Sufficiency;
- Policy W5: Targets for Diversion from Landfill; and
- Policy W17: Location of Waste Management Facilities.

1.212 Policies W3 and W4 deal with regional and sub regional waste self sufficiency and require waste planning authorities to make overall provision for the overall amount of waste arising in the region and then to plan for net self sufficiency within their own individual areas.

1.213 The proposed development would have the capacity to manage 100,000tpa of Municipal Solid Waste (MSW) and Commercial and Industrial (C&I) Waste and other waste with organic content and approximately 54,000tpa of organic, digestible food (food waste, green waste etc), thus making a material contribution to managing waste arising in the region.

1.214 Policy W5 sets out overall diversion targets for the diversion of waste from landfill by encouraging the re-use, recycling and thermal treatment (energy recovery) of waste.

1.215 Policy W17 is intended to ensure that waste development is located in suitable areas. It states that particular emphasis should be given to previous or existing industrial sites with good accessibility from existing urban areas or major new or planned development, as well as good transport links and compatible land use. As the application site has good access to the primary highway network and existing urban areas, it is considered an appropriate location for the waste management operation.

1.216 In summary, regional waste policy recognises the acute shortage of waste management facilities in the South East, which are required for the region to meet its landfill diversion targets. In terms of suitable sites, the policies support existing industrial or brownfield sites with good transport connections and accessibility from existing urban areas. It is considered that the proposal meets these locational criteria and provides a significant opportunity to help Hampshire and the region meet their waste management and landfill diversion targets.

Local Policy

1.217 Although work is progressing on the range of documents which will eventually replace the old style Development Plan i.e. Local Plan and Structure Plan, for the purposes of this application, the relevant policies are contained in the Hampshire Minerals and Waste Core Strategy (Adopted 2007) and the Winchester District Local Plan Review- saved policies (Adopted 2006).

Hampshire, Portsmouth, Southampton and New Forest National Park Minerals and Waste Core Strategy 2007.

1.218 The Hampshire Minerals and Waste Core Strategy contains the following policies, which are considered relevant to this planning application:

- S5 Capacity Requirements;
- S16 Location of Waste Management;
- S17 Co-location, Systems and Infrastructure;
- DC1Sustainable Minerals and Waste Development;
- DC2 Sites with International and National Designations;
- DC3 Visual Impact on Landscape and Townscape;
- DC4 Heritage
- DC6 Highways;
- DC7 Biodiversity;
- DC8 Pollution, Health, Quality of Life and Amenity;
- DC10 Water Resources;
- DC11 Flooding; and
- DC13 Waste Management and Recycling (including Aggregate Recycling Facilities).

1.219 Policy S5 confirms the need for new waste recovery capacity in Hampshire and this is considered further in the section on Need in this statement.

1.220 Policy S16 provides guidance on the location of new waste facilities and seeks to provide capacity within areas of planned areas of major new development or within the North East Hampshire and South Hampshire areas shown on the Key Diagram.

1.221 The proposed site does not fall within either of these areas but paragraph 24.7 of the Core Strategy recognises the potential for permission to be granted outside of these areas on windfall (unexpectedly available) brownfield sites with good access to the proposed minerals and waste lorry routes.

1.222 The proposed site is a brownfield site with excellent access to the A303 and as such is considered to comply with the approach outlined for dealing with such windfall sites. Paragraph 24.8 of the Core Strategy goes on to recognise the benefits of integrated resource recovery facilities and that the co-location of suitable minerals and waste facilities should be encouraged.

1.223 The location of the proposed site adjoining the allocated rail aggregate depot site offers this potential and the proposed development provides the opportunity to deliver the suitable new access that is required for this allocation. The proposed development is therefore considered to comply with policy S17 and could offer further future synergies in respect of rail transport in the future.

1.224 The Core Strategy also contains a suite of development control policies against which the proposed development has been considered. Policy DC1 deals with sustainable design and as the development will be providing its own power, as well as exporting power to the grid, and will be including rainwater harvesting to capture water for the process and has been designed to maximise recycling prior to recovery taking place it is considered to comply with DC1.

1.225 In respect of DC2 the proposed development has no adverse impacts on sites of international and national nature conservation importance.

1.226 Policy DC3 deals with landscape and visual matters. But by working with the existing levels on the site and retaining perimeter vegetation off site impacts from the proposed building and stack will be minimised and no adverse impacts are considered likely. However the proposed new access will require the loss of some trees and vegetation along the Overton Road which is considered to have a local significant effect on one viewpoint.

1.227 The landscaping strategy for the site therefore proposes replacement planting and the need for the development together with the benefits of providing a new site access are considered to outweigh this local impact.

1.228 Policy DC 4 deal with heritage matters. But with the proposed development taking place on previously developed direct impacts will be limited and any further investigations required could be satisfactorily controlled by condition.

In direct impacts on offsite designations will be limited by the location of the development of the development within the site, the low stack and the retention of the existing perimeter vegetation. There is therefore considered to be no conflict with policy DC4

1.229 Policy DC6 deals with highways but the site has good access to the strategic route network and with the new access and improvements proposed no unacceptable impacts on highway safety or capacity have been identified. In addition with the proposed new access vehicles will be able to access the A303 without passing any residential properties.

1.230 Policy DC7 considers biodiversity and development likely to impact upon locally designated sites will only be permitted if the merits of the development outweigh the likely impacts. The assessments undertaken identify that the proposed development will impact on the local nature conservation interest of the site but a high level of mitigation, including the provision of a green roof and a conservation management plan for the site, has been proposed to enhance the biodiversity value of the new and existing habitats that will remain. This together with the benefits of the development in diverting waste from landfill and generating renewable energy mean that the merits of the development are considered to outweigh the impacts which complies with the requirements of policy DC7 as the need is of greater importance relative to the value of the nature conservation interest which would be lost.

1.231 Policy DC8 covers pollution, health, quality of life and amenity and again the detailed assessments on air quality, noise, traffic and landscape demonstrate that there would be no unacceptable impacts in respect of this policy. This also applies to policies DC10 and 11 on Water Resources and Flooding and the requirements of the policies are therefore met.

1.232 Finally policy DC13 confirms that waste management development will be permitted provide it re-uses previously developed land; has good access to the minerals and waste lorry route and incoming waste will be subject to pre-treatment to maximise recycling. The proposed site is previously developed land, has good access on to the A303 and incorporates pre-treatment to maximise the recovery of recyclate. It is therefore considered to comply with DC13.

1.233 The proposed development is therefore considered to comply with the requirements of the adopted Core Strategy which recognises the potential for windfall brownfield sites to come forward to meet the need for new waste management infrastructure in Hampshire.

Winchester District Local Plan Review- saved policies (Adopted 2006)

1.234 The other part of the Development Plan is the Winchester District Local Plan which confirms that the proposed site is currently designated as open countryside. The policy approach for the location of new waste development has already been reviewed as part of the Hampshire Minerals and waste Core Strategy and the approach in the Winchester Plan, notably policy CE4

is not considered relevant to waste development as it is designed to deal District matter planning applications. Other policies in respect of local nature conservation sites (CE9) and landscape character (CE5) have been considered but they do not raise any new issues on those matters to those already considered under the review of the Core Strategy.

Draft Hampshire Minerals and Waste Plan (Nov 2011)

1.235 The emerging Hampshire Minerals and Waste Plan is not yet adopted and cannot therefore be afforded full weight in the decision making process but it is considered to be material planning consideration so its policies have been reviewed.

1.236 Policy 1 deals with climate change reflecting the clear change in Government policy in the period since the adoption of the Core Strategy. As the proposed change will both divert waste from landfill and generate renewable energy it is considered to comply with the requirement to minimise the impacts of climate change.

1.237 Policy 2 covers habitats and species and seeks to protect them in accordance with the level of their relative importance. Where development will have an adverse impact it will only be permitted where its merits outweigh the likely impacts and this balancing exercise has already been undertaken for policy DC7 of the Core Strategy. Given the national need for renewable energy generation and the local need for new waste recovery capacity this is considered to outweigh the local impact on the nature conservation interest of the site, for which mitigation has been provided.

1.238 Policy 3 protects designated landscape which will not be affected by the proposed development.

1.239 Policy 4 deals with the protection of the countryside and identifies that development in the open countryside will not be permitted unless it provides for the suitable re-use of brownfield land and that the highest standards of design and operation are applied. The proposed site re-sues brownfield land and uses the latest advanced conversion technology which maximise the recovery of recyclate and energy within a purpose designed low level building with minimal stack heights. It is therefore considered to comply with the requirements of policy 4.

1.240 Policy 6 covers heritage which has been assessed and no significant adverse effects identified.

1.241 Policy 9 protects public health, safety and amenity and again the assessments on noise, air quality, traffic and landscape all demonstrate that there are no adverse impacts as a result of the proposed development.

1.242 Policy 10 deals with flooding and this has been addressed in the submitted flood risk assessment.

1.243 Policy 11 deals with traffic and the proposed new access and highway improvement works ensure that the site will have good access to the A303 without having to pass any residential properties.

1.244 Policy 12 requires a high quality design and as well as a purposed designed low level building the proposed development works with the existing levels provided on the site and retains the perimeter vegetation to ensure maximum screening is provided.

1.245 Policy 26 of the emerging Plan identifies the capacity requirements for new waste recovery capacity and this is considered further in the section on Need.

1.246 Policy 27 deals with energy from waste and requires that proposals should divert waste from landfill; either provide CHP at the start or as a minimum generate electricity and have the capability to supply CHP and provide sustainable arrangements to manage residues from the process.

1.247 The proposed development will divert waste from landfill and will generate renewable electricity as well as having CHP capability. Residues from the ACT and AD processes will be exported from the site for use as secondary aggregate and soil improver/fertiliser respectively. The proposed development therefore complies with policy 27.

1.248 Policy 28 deals with the location of new waste management development and seeks to divide waste development into separate categories, which does not sit well with the schemes such as the proposed development which are seeking to co-locate activities. However a common feature that runs through the location of all waste developments set out in the policy is the re-use of previously developed land. And in the supporting text to the policy at paragraph 5.2.64 it is recognised that larger scale enclosed facilities (requiring sites of between 2-4 ha and a throughput in excess of 100ktpa) are likely to be located either on larger industrial estates or large brownfield sites, of which the proposed site is one.

1.249 The proposed development is therefore considered to comply with the requirements of the emerging Hampshire Minerals and Waste Plan.

Summary

1.250 The proposed development is considered to comply with national, regional and local planning policies for the location of new waste management development. Local impacts on nature conservation and a single viewpoint have been considered but are outweighed by the national need for new renewable energy generation capacity and the local need for new waste recovery capacity both of which will make a significant contribution to the Government's policy on climate change which the NPPF confirms is central to sustainable development and the presumption in favour of such development.

NEED

1.251 The proposed development would provide increased capacity for both the management of waste higher up the waste hierarchy and the supply of renewable energy. The need for the development is therefore considered in energy and waste recovery terms.

1.252 A review of recent appeal decisions on energy recovery facilities is also included which confirms the above approach to considering both the energy and waste benefits of such facilities.

Renewable Energy

1.253 The Government White Paper – Meeting the Energy Challenge was published in May 2007 and at page 6 sets out that the government's long term energy challenges are tackling climate change by reducing carbon dioxide emissions and ensuring secure, clean and affordable energy.

1.254 At page 7 it identifies a need in the UK for around 30-35GW of new electricity generation capacity over the next two decades, with around two thirds of this capacity required by 2020.

1.255 Page 8 then identifies the key elements of the Government's strategy as establishing an international framework to tackle climate change, legally binding carbon targets, energy saving and providing support for low carbon technologies. Given the continuing need for energy and the need to reduce carbon dioxide emissions the need to deliver renewable/low carbon energy generation capacity, such as that proposed, is considered a crucial element of the Government's strategy and having regard to the above timescales the need to deliver that capacity is becoming increasingly urgent.

1.256 At page 16 it is confirmed that Government policy is to encourage a wide range of low carbon/renewable technologies to meet future energy needs.

1.257 Section 5.3 of the White Paper deals with renewable energy and paragraph 5.3.44 deals with generating energy from waste that cannot be recycled and recognises that this has energy and waste policy benefits.

1.258 The above approach has been carried forward into the overarching National Policy Statement (NPS) for Energy (EN-1) which deals with nationally significant energy infrastructure. However the introduction of this document confirms that it can also be a material planning consideration in decision making on relevant planning applications made under the Town and Country Planning Act 1990 (as amended). The NPS is therefore considered to be relevant in respect of the proposed development.

1.259 Section 3 of EN-1 confirms the following:

- the UK needs all types of energy infrastructure in order to achieve energy security at the same time as reducing greenhouse gas emissions;

- it is for the industry to propose new energy projects;
- the government does not consider it appropriate for planning policy to set targets or limits on different technologies;
- applications covered by EN-1 should be considered on the basis that the government has demonstrated that there is a need; and
- decision makers should give substantial weight to the contribution projects make towards satisfying this need.
- EN-1 goes on to confirm at paragraph 3.3.10 that in order to diversify and decarbonise electricity generation the government is committed to increasing dramatically the amount of renewable energy generation. Paragraph 3.4.1 confirms that the government is committed to sourcing 15% of its total energy from renewable sources 2020 and that new projects need to come forward urgently to ensure that this target is met.
- Finally paragraph 3.4.4 of EN-1 recognises the ability of energy from waste to deliver predictable, controllable renewable electricity which is seen as important in ensuring the security of UK energy supplies.

1.260 This approach is confirmed in the National Planning Policy Framework (NPPF) and paragraph 93 of this document identifies the key role planning has to play in the delivery of renewable energy. Paragraph 97 indicates that to help increase the use and supply of renewable energy, local planning authorities should:

- recognise the responsibility of all communities to contribute to energy generation;
- have a positive strategy to promote renewable energy; and
- design policies to maximise renewable energy development whilst ensuring adverse impacts are satisfactorily addressed.

1.261 Paragraph 98 of the NPPF goes on to provide advice on the determination of planning application and confirms the approach in EN-1 that local planning authorities should not be requiring applicants to demonstrate a need for renewable energy projects. In addition it advises that applications should be approved if its impacts are considered acceptable.

1.262 The role that energy from waste is expected to play in delivering renewable energy is confirmed in the UK Renewable Energy Roadmap, July 2011 (the Roadmap).

1.263 This confirms the Government's commitment to increasing the deployment of renewable energy because it will make the UK more energy secure, it will deliver jobs and investment and it will help deliver the UK carbon reduction objectives.

1.264 The Roadmap confirms that biomass electricity is one of the 8 main technologies that are capable of delivering more than 90% of the renewable energy needed by 2020 and that this includes the biogenic fraction of waste and covers a wide range of conversion technologies including anaerobic digestion and pyrolysis.

1.265 It is therefore directly relevant to the proposed development and the Roadmap also recognises that energy from waste has the added advantage of extracting the value from biomass at the end of its useful life and reducing the amount of waste sent to landfill, which reduces methane emissions - a powerful greenhouse gas.

1.266 The Roadmap identifies that the UK currently has 2.5GW of biomass electricity capacity (2010) and indicates that this could increase to up to 6GW by 2020. The majority of this growth is predicted to come from conversion of coal plant, dedicated biomass generation, biomass waste combustion and anaerobic digestion.

1.267 Projects such as the proposed development are therefore seen as a key part in delivering this growth in capacity.

1.268 The Roadmap identifies that energy from waste schemes can face strong opposition from local communities because of concerns relating to health, traffic and impact on recycling. However to address this the Government has confirmed its support for energy from waste as part of its 2011 Review of Waste Policy, as follows:

- Prioritise efforts to manage waste in accordance with the waste hierarchy and reduce the carbon impact of waste;
- Support energy from waste where appropriate and for waste that cannot be recycled; and
- Work to overcome the barriers to increasing the energy from waste which anaerobic digestion provides.

1.269 It is therefore considered that national energy policy confirms that there is an urgent national need for renewable energy generation capacity and that energy from waste has a key role to play in delivering this capacity.

Waste Recovery

1.270 It is a long established cornerstone of national waste planning policy (PPS10 – Planning for Sustainable Waste Management) that the management of waste should be driven up the waste hierarchy. In accordance with this the adopted Hampshire Minerals and Waste Core Strategy 2007 and the emerging Hampshire Minerals and Waste Plan – draft for publication, November 2011 identify the need for new waste recovery capacity to be delivered in the county in the period up to 2020.

1.271 The Core Strategy identifies at paragraph 18.8 the need for more sophisticated technologies to manage waste and confirms that in order to encourage the necessary investment and delivery of waste recovery capacity, technological options should not restricted as long as they meet the following standards:

- incorporate front end pre-treatment to remove recyclable or biodegradable waste;
- only accept pre-treated waste;

- energy efficient design and generation of own electricity and heat; and
- emissions to meet or exceed environmental standards.

1.272 It is confirmed that the proposed development at Micheldever Rail Sidings meets all 4 of these criteria.

1.273 Policy S5 then goes on to confirm that the Core Strategy aims to provide 0.93 million tonnes of recovery capacity in the period up to 2020 and the table following paragraph 18.11 indicates that to achieve this new recovery capacity of between 0.4 and 0.5 million tonnes will be required.

1.274 The emerging Hampshire Minerals and Waste Plan (November 2011) is not yet adopted and is currently at Examination in Public stage so cannot be afforded full weight. However the figures that make up the evidence base for the emerging Plan can be considered to provide the most up to date position on the need for new waste recovery capacity within Hampshire.

1.275 Policy 24 confirms the long term aim of the emerging Plan is to achieve 100% diversion of waste from landfill and in order to achieve the interim target of 95% diversion by 2020 the emerging Plan (at paragraph 5.2.35) identifies the need to focus on the commercial waste stream, for which the delivery of new merchant capacity such as the proposed development will be essential.

1.276 In order to achieve the 95% diversion target by 2020 policy 26 of the emerging Plan identifies the need to deliver an additional 0.39 million tonnes of recovery capacity. This figure is similar to the 0.4 to 0.5 million tonne capacity figure identified in the adopted Core Strategy and confirms the ongoing need to deliver new waste recovery capacity within Hampshire for the period up to 2020.

1.277 The delivery of 0.16 million tonnes of new recovery capacity by the proposed development will therefore make an important contribution to the delivery of the capacity requirements identified in the adopted and emerging Waste Local Plans for the County.

Recent Appeal Decisions

1.278 SLR has significant experience in delivering decisions for energy recovery facilities.

1.279 The most recent ones including:

- Ardley EfW, APP/U3100/A/09/2119454;
- Severn Road RRC, APP/Z0116/A/10/2132394; and
- Newhurst ERF, APP/M2460/A/11/2150748.

1.280 At Ardley the Inspector recognised that the whole thrust of the Landfill Directive and subsequent advice is to drive waste up the hierarchy away from landfill and the proposed development would assist in achieving this. It was also recognised that it would create a significant amount of energy and that

this in combination with the need for waste management capacity outweighed the conflict with local landscape policy.

1.281 Again at the Severn Road RRC the Inspector recognised that the electric power generated would amount to a significant contribution to local need which was a factor in favour of the proposal.

1.282 In the most recent decision at Newhurst the Inspector recognised the scheme would make a significant contribution to the Government's climate change programme and energy policies. This is because such developments assist in avoiding the release of substantial volumes of greenhouse gases and thereby contribute to combating climate change as well as assisting in achieving self sufficiency in terms of waste management for the plan area.

1.283 The Inspector went on to conclude that the generation of renewable energy should be accorded significant weight and that the benefits of the scheme are substantial and compelling which outweigh the harm on the character and appearance of the area and the conflict with development plan policy.

1.284 A number of common themes can be identified from these recent decisions. Firstly all the applications were recovered by the Secretary of State for decision on the basis that they were of major significance for the delivery of the Government's climate change programme and its energy policy. Secondly in all three decisions the generation of electricity and in particular renewable energy was accorded significant weight. Finally, in respect of Ardley and Newhurst the twin benefits of diverting waste from landfill and generating significant quantities of renewable energy was considered to outweigh the conflict the schemes had with development plan policies.

Summary

1.285 A review of national and local waste and energy policy confirms that there is an urgent national and local need for the new renewable energy and waste recovery capacity that will be provided by the proposed development and that these twin benefits have been accorded significant weight in recent appeal decisions because they will:

- Divert waste from landfill in accordance with the waste hierarchy;
- Help deliver the 15% renewable energy target by 2020; and
- Deliver a reduction in greenhouse gas emissions which will help tackle climate change.

CLIMATE CHANGE

Introduction

1.286 The National Planning Policy Framework (NPPF) sets out how planning should contribute to reducing emissions and stabilising climate change and also how new developments should be designed to reduce risk from climate change. This section considers the possible climate change impacts derived from the construction and operation of the ERC.

1.287 The potential impact on climate change, and the reduction of risk for the ERC from climate change have been considered throughout the design of the proposal, with particular regard to the following:

- Building Research Establishment Environmental Assessment Method (BREEAM);
- Renewable energy generation;
- Surface water management;
- Design and materials used to minimise energy consumption and
- carbon dioxide emissions; and
- Traffic – impact of emissions arising from traffic generation.

BREEAM Assessment

1.288 A BREEAM pre assessment has been undertaken by SOL Environmental.

1.289 The applicant is committed to achieving a minimum BREEAM rating of Very Good for the proposed development and the findings of the BREEAM pre-assessment report, see Appendix C, indicate that it is likely to gain a rating of excellent.

Renewable Energy Generation

1.290 The proposed facility will produce circa 10 Mega Watts of electrical energy based on an input of up to 154,000 tonnes of residual waste per annum, which would be exported to the National Grid.

1.291 250m2 of solar panels will also be provide don the roof to provide the power required to operate the proposed facility.

Surface water management – attenuation features to accommodate climate change and flood risk.

1.292 In addition to the potential impacts of the ERC on climate change, climate change also has impacts on the design and operation of the ERC. For example, increased incidences of heavy and prolonged rainfall could increase flood risk from surface water, groundwater and drainage systems. Consequently, new developments must ensure that they are designed to deal with higher than average rainfall.

1.293 As all developments have the potential to increase surface water runoff, a surface water management scheme has been developed which accounts for increased rainfall. The scheme has been designed in accordance with current best practice as outlined in the Sustainable Urban Drainage Systems (SUDS) Manual. SUDS aim to manage surface water runoff to ensure reduced flood risk and improved water quality.

1.294 Attenuation features are proposed to ensure surface water drainage does not exceed the greenfield rate, thereby mitigating any potential increase in downstream flooding.

1.295 Full details of the FRA and surface water management scheme can be found in Chapter 9 of the ES Technical Appendices (Volume 2B).

Design and Materials

1.296 The applicant is committed to sustainable buildings and will ensure that the facility meets high standards. The NPPF is centred around the objective of reducing carbon emissions from all new development as well as ensuring that new developments are tolerant of predicted climate change.

1.297 A primary objective of the development team has been to address sustainable building principles from the earliest concept stage.

1.298 Materials selection for the buildings has been informed by sustainability principles, in terms of the long-term performance of the materials and the integrated lifecycle management programmes of the manufacturers. Concrete, steel, aluminium, polycarbonate are the principle materials used and can all be recycled. Selection will avoid the use of construction materials which contain Chlorofluorocarbons (CFC) or which use CFCs in their manufacture.

1.299 Recycled aggregates or masonry will be used for structure and slabs where practicable including base material for the construction of the site access roads.

1.300 Ground Granulated Blast Furnace Slag (GGBS) will be considered for all concrete works during the detailed design stages as a replacement for Portland cement in concrete mixes to reduce carbon emissions. The decision on its use will be geared to the acceptability of the suppression of “strength gain” and programmatic issues such as whether the major concrete elements are to be constructed in summer or winter.

1.301 The main buildings have steel frames and steel cladding to the walls. Steel is produced in a “sustainable loop”. It can be recycled again and again without degradation and it is probably the most widely recycled material in the world with over 354MT recycled annually through a well-established infrastructure.

Climate change impacts of traffic generation

1.302 The proposed development is designed to deal with around 154,000 tonnes of waste per annum. It is estimated that the operation would generate 51 HGV trips a day (102 two way movements).

1.303 The Transport Assessment undertaken, see Chapter 6 of the ES (Volume 2A), concludes that following mitigation, the proposed development will not have significant impacts on the highway network. Mitigation is primarily provided by the proposed highway improvements and a routing agreement which requires all vehicles to enter and leave the site from the north so they pass no residential properties.

1.304 An assessment of traffic emissions arising from the development was undertaken. The emissions monitored were nitrogen dioxide (NO2), which plays a role in the formation of tropospheric ozone (a greenhouse gas) and fine particles (PM10).

1.305 The air quality assessment concluded that NO2 emissions from vehicle movements associated with the proposed facility would result in a 'negligible' impact. The additional PM10 generated by the proposed development was also calculated to have a 'negligible' impact.

1.306 The application site also offers the potential for the use of rail in the future, whilst also having good access to the Hampshire Minerals and Waste Lorry Route.

1.307 The applicant will develop a Staff Travel Plan to encourage car sharing, thereby reducing the number of private cars journeys generated by the development and electric charging points will be provided to encourage the use of electric cars.

Summary

1.308 This section has been prepared to assess the climate change impacts of the proposed development and also the potential impact of climate change on the facility.

1.309 The findings are summarised as follows:

- The proposed development would produce carbon emissions but these are less harmful greenhouse gases than methane, which would be produced if the waste was landfilled;
- The proposed development would be powered by renewable energy produced on site and the surplus energy would be exported to the National Grid. Recovered energy avoids the need to produce electricity from non renewable (fossil) sources, which in turn reduces emissions associated with the extraction and combustion of fossil fuels;

- In accordance with the NPPF, the proposed development has been designed to minimise energy use and carbon emissions during construction and operation;
- The site has been designed to attenuate surface water runoff and ensure that the proposed development would not give rise to additional surface water runoff or downstream flooding;

1.310 Having regard to the above, it is considered that the proposed development has been designed to tackle causes of climate change and is therefore sustainable.

POTENTIAL ENVIRONMENTAL EFFECTS AND SUMMARY OF MITIGATION MEASURES

1.311 This section sets out a summary of the potential environmental effects and a summary of the main mitigation measures for the proposed development.

1.312 One of the main aims of the associated ES (please see Volume 2a) is to develop mitigation measures to avoid, offset or reduce the significant adverse effects of the development.

1.313 These measures can relate to any of the three key phases of the project: design, construction or operation.

Traffic and Transport

Potential Environmental Effects

1.314 An assessment of the potential impacts of the proposed development on the local highway network has been undertaken.

1.315 Guidance on the significance of the change is given by the Environmental Assessment of Road Traffic (IEA, 1993), which asserts that projected changes in traffic of less than 10% would create no discernible environmental impact. Where the impacts are greater than this, the guidance advocates the use of two broad criteria to define where impacts may be considered to be discernible, which are as follows:-

- Highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); or
- Sensitive areas where traffic flows will increase by 10% or more.

1.316 The only sensitive area in the locality of the application site is Micheldever Station where the impact of the development would be limited to a nominal increase in traffic by staff of the facility which confirms that the effect of such movements would be significantly below the 10% threshold identified above.

1.317 Consequently, it is concluded that there would be no discernible impact of the development in this location and it therefore follows that any environmental impacts as a result of the proposed development traffic would not be significant.

1.318 The proposed access would operate well within the theoretical capacity limitations and the assessment suggests that the junction would operate with around 60% reserve capacity. Moreover, the results confirm that there would be no material queuing of vehicles on Overton Road that would cause significant delay to existing traffic.

1.319 In view of the low magnitude in the change in traffic and the lack of exposure to vulnerable road users, allied with the fact that the highway network would continue to operate well within its available capacity, it is concluded that there would be no material or significant worsening of highway safety risks as a result of the proposed development.

Summary of Mitigation Measures

1.320 It is proposed to construct a new priority T-junction onto Overton Road some 230 metres south of the A303 over bridge. The arrangement includes a 15 metre radius with 1:10 taper over a 25 metre section, which is designed to accommodate the swept-paths of goods vehicles turning left onto Overton Road. A smaller 6 metres radius restricts inbound movements from the south to light vehicles only. In addition Overton Road will be widened to 7.3 metres around the proposed access.

1.321 The new junction has been designed for a 50mph design speed and thus the visibility envelope created at the junction is 160 metres from a 2.4 metre set-back position. In order to facilitate visibility in the vertical dimension, it is proposed to reconstruct the part of Overton Road where a crest and hidden dip currently limit forward visibility along the road. In so doing, the proposals will help to alleviate an existing deficiency in the road network and thus afford a wider benefit to the community.

1.322 In order to mitigate the impact of construction traffic during network peak hours, a Construction Phase Travel Plan will be developed and implemented by the successful contractor. Elements of this specific plan will include:

- coordination of car share for construction personnel;
- implementation of contractor operated mini bus service as necessary;
- restriction of unnecessary vehicle movements during the day; and
- co-ordination of deliveries to arrive outside of peak times where appropriate.

1.323 With implementation of these measures, it can be expected that the volume of light vehicle trip generation can be brought down below the levels assessed for the operational phase of the development.

1.324 In addition a travel plan will be prepared which will be aimed at encouraging staff to travel to and from the development using sustainable non-car travel modes.

1.325 As part of the Plan, a Travel Plan Coordinator (TPC) will be appointed who will have the responsibility for inducting new staff to the travel plan and

highlighting to them the health and environmental benefits associated with travelling to work by modes other than car.

1.326 The TPC will provide copies of the travel plan to all members of staff and updated versions will be provided if and when required. The TPC will also be responsible for maintaining a database of all staff addresses, contact details and work patterns.

1.327 The TPC will regularly review this database to identify where opportunities exist for staff to share their journey to work through car sharing. This will be supplemented by details of web based car share clubs such as www.2carshare.com and www.nationalcarshare.co.uk which will be provided within the Plan. This will increase the potential for staff to car share with employees of any business located nearby.

1.328 Car sharers will also be guaranteed a lift home in case of emergency or if the driver of the car share vehicle is required to leave work outside of the agreed hours. This will allay fears amongst potential car sharers of being stranded.

1.329 The proposed development includes 16 parking spaces and this figure reflects operational car parking demand for staff and visitors. It also includes an allowance for shift changeovers in order to avoid overspill parking on the internal circulation roads or loading/unloading areas while the shifts are changing. Of the 16 car parking spaces, electric vehicle charging points (EVCP's) will be provided at a 20% active/20% passive ratio to encourage the uptake of electric vehicles.

Air Quality

Potential Environmental Effects

1.330 An assessment of the air quality impacts associated with the proposed development has been undertaken. The assessment has considered:

- construction dust;
- combustion pollutants from stacks serving the ACT and AD processes;
- Air Quality Strategy Pollutants from vehicle exhausts during construction and operation; and
- odour and dust emissions during the operational phase.

1.331 The assessment of construction dust has found that some mitigation measures will be required (primarily during earthworks) due to the proximity to ecological receptors. However with adoption of these measures the residual impact is considered to be insignificant.

1.332 The additional traffic associated with both the construction and operation of the proposed development is below the DMRB criteria for assessment (classified as 'neutral') and therefore the impact associated with vehicle exhaust emissions is considered to be insignificant.

1.333 In terms of process emissions (odour, combustion pollutants and dust) from the proposed development during operation, the permit will not be approved by the EA unless they are satisfied that operations will not cause significant pollution to the environment (including offence to human senses) or harm human health.

1.334 Given the low potential identified for the release of odour and dust from the proposed development with the extensive designed-in mitigation measures appropriately designed and effectively employed, the residual impact is considered to be insignificant.

1.335 The findings of the detailed dispersion modelling assessment of combustion emissions from the stacks serving the ACT and AD processes at the proposed development has found that for all pollutants the maximum predicted long-term and short term impacts on air quality and sensitive ecosytems would be classified as insignificant.

1.336 In summary the proposed development is not predicted to lead to exceedences of applicable air quality standards for either human or ecological receptors.

Summary of Mitigation Measures

1.337 In order to control potential impacts during the construction phase, the following mitigation measures are proposed:

- vehicles will be sheeted to prevent loss of materials off-site;
- storage locations for all materials that create dust, including soil, will be located away from development boundaries as far as practicable;
- regular inspection of local roads to check for dust deposits and any deposits removed;
- use water as a dust suppressant as and when required; and
- a trained site manager (or his deputy) will be on site during working hours to be responsible for proper implementation of dust mitigation measures.

1.338 The environmental design measures to mitigate the risk of odour generation and release during the operation of the proposed development are as follows:

- enclosure of the handling and sorting of wastes within a building;
- fast acting roller action doors to ensure effective containment within the building;
- adoption of good housekeeping measures which would minimise the magnitude of odour generation, to include regular cleaning of waste reception area and minimise the storage time of raw waste;
- extraction of air from within reception building and effective odour abatement;
- vented steam from enclosed autoclave process directed to pyrolysis units for effective thermal abatement;

- anaerobic digestion process undertaken within sealed tanks and biogas directed to CHP facility; and
- provision of back-up odour control plant to provide abatement of odour from reception area when pyrolysis units and gas engines are inoperable.

1.339 In respect of combustion emissions the filtration unit removes all particulate materials to below 5mg/m3 prior to discharge to atmosphere. NOx abatement plant with a maximum potential reduction efficiency of 95% will be fitted and EU Directive 2000/76/EC on the Incineration of Waste (known as the Waste Incineration Directive) requires flue gases to be retained at temperature of 850°C for a period of 2 seconds.

1.340 All emissions from the pyrolysis plant will be monitored using continuous emissions monitors (CEMS) located on an exhaust stack and the CEMS will be WID compliant and monitor particulates, NOx, carbon monoxide, and VOCs (through surrogate monitoring of carbon monoxide). The continuous monitor will operate on a 24-hour basis and will include the facility for on-line monitoring of the gas concentrations.

Noise

Potential Environmental Effects

1.341 The assessment has considered both the potential for the construction and operational proposals to give rise to noise impacts at the closest noise-sensitive receptors.

1.342 The assessment has found that:

- construction noise levels are predicted to be well below the 70dB criterion adopted for this assessment at all receptors;
- when assessed against the existing ambient noise levels construction traffic movements would have no impact at any other receptor locations assessed;
- the BS4142 assessment has shown that the worst-case operational noise rating levels generated by the proposed facility, with the doors open, would lead to a situation between marginal significance and complaints likely during the night-time at Western Farm. In order to mitigate the likelihood of complaints it has been suggested that all doors at the facility remain closed at night; and
- when assessed against the existing ambient noise levels site-related operational traffic movements would have a minor, barely perceptible, impact at Western Farm on Sunday, at The Boundary on Sunday and during the week with no impact at any other receptor locations assessed.

1.343 Based on the results of the assessment, noise should not pose a material constraint for the proposed development.

Summary of Mitigation Measures

1.344 The assessment of construction noise has shown that the adopted criterion is unlikely to be exceeded at the nearby noise-sensitive receptors. The adoption of Best Practicable Means is usually the most effective means of controlling noise from construction sites. In addition, the following measures should be considered, where appropriate:

- phasing the works to maximise the benefit from perimeter structures;
- any compressors brought on to site should be silenced or sound reduced models fitted with acoustic enclosures;
- all pneumatic tools should be fitted with silencers or mufflers;
- any deliveries should be programmed to arrive during daytime hours only. Care should be taken when unloading vehicles to minimise disturbance to local residents;
- delivery vehicles should be prohibited from waiting within the site with their engines running;
- all plant items should be properly maintained and operated according the manufacturers' recommendations in such a manner as to avoid causing excessive noise. All plant should be sited so that the noise impact at nearby noise-sensitive properties is minimised;
- local hoarding, screens or barriers should be erected as necessary to shield particularly noisy activities; and
- problems concerning noise from construction works can sometimes be avoided by taking a considerate and neighbourly approach to relations with local residents. Works should not be undertaken outside if the hours agreed with the local authority.

1.345 The assessment has shown that noise generated by construction traffic movements would have no impact at the receptor locations assessed therefore no mitigation measures are considered necessary.

1.346 In order to mitigate the likelihood of complaints during the operational phase it is proposed that all doors at the facility remain closed at night.

Water Environment

Potential Environmental Effects

1.347 Without the incorporation of mitigation measures the construction and operation of the proposed facility has the potential to impact on groundwater quality. This would be from the risk of contaminated runoff being generated from the following potential sources:

- accidental spillage of raw materials, fuels and lubricants, required over the short term by construction plant and over the longer term from operation of the facility and from the vehicles moving around the site, including the accidental spillage of potentially polluting liquids;
- potential release of fire fighting water in the unlikely event of a fire at site;
- increase in suspended solids; and

- the change in land use may result in contaminated runoff from the weighbridges and vehicle movement areas.

1.348 During the construction phase, the potential for pollution of any groundwater by raw materials, fuels, other liquids and runoff from the operational site will be limited by best practice techniques and inherent compliance with COSHH regulations.

1.349 The likelihood of groundwater contamination due to a leak or spill of pollutants during construction or contaminated runoff during operation of the site is therefore considered to be low due to the short period during which there is a risk, the limited quantities of pollutants being handled or stored at any one time, and the significant vertical distance between site ground levels and the underlying groundwater table.

1.350 The potential for pollution of any groundwater by raw materials, fuels, other liquids and runoff from the operational site will be limited by robust site practices. The likelihood of groundwater contamination due to a leak or spill of pollutants during construction or contaminated runoff during operation of the site is therefore considered to be medium due to the significant vertical distance between site ground levels and the underlying groundwater table.

1.351 During the operational phase, it is considered that the potential for occurrence of pollution of potable groundwater in the chalk aquifer is medium. Owing to the significant vertical distance between site ground levels and the underlying groundwater table, contaminants would tend to be hydraulically separated from the aquifer and the travel time through the intermediate geology would provide a degree of mitigation.

1.352 In the event of a fire at the operational site there is potential, without mitigation, for uncontrolled discharge of contaminated water from site which could infiltrate to groundwater. The likelihood of this occurring is low due to the fire suppression measures inherent provided as part of the proposed scheme.

1.353 Given the site setting it is considered that the proposed development would have a limited impact on the groundwater flow regime for the following reasons:

- the significant depth below ground level to the underlying Aquifer;
- the lack of groundwater abstractions within 2km of the site;
- the presence of made ground and structures beneath western areas of the baseline site; and
- the shallow foundations of the proposed building;

1.354 During the construction phase, in the short term, hydrocarbon pollution from untreated runoff associated with roads and car parking areas could cause issues for surface water quality without suitable mitigation but due to the significant lateral distance (in excess of 3.5km) between the site and the nearest surface water receptor the magnitude is assessed low.

1.355 During the operational phase, hydrocarbon pollution from untreated runoff associated with roads and car parking areas could cause issues for surface water quality without suitable mitigation.

1.356 It is considered that there is a high probability of increased surface water runoff during the short, medium and long term and the significance of this impact has the potential to be medium in the absence of mitigation.

1.357 The development of the site would not potentially lead to an increase in population within a flood risk area during the construction and operation phases as the site lies in the low probability of occurrence Flood Zone 1. A detailed assessment of the flood risk to the site is presented in the FRA (see Technical Appendix 9 Volume 2B).

Summary of Mitigation Measures

1.358 Various best practice techniques will be incorporated within the management procedures for construction and operation activities on site in order to protect the water environment from pollution incidents. The mitigation measures can be summarised as follows:

- during construction there would be heavy plant and machinery required on site and as a result it is appropriate to adopt best working practices and measures to protect the water environment, including those set out in the Environment Agency's Pollution Prevention Guidance (PPG1);
- in accordance with PPG2 all above ground on-site fuel and chemical storage would be bunded;
- an emergency spill response kit would be maintained on site;
- a vehicle management system / road markings would be put in place wherever possible during construction and operation to reduce the potential conflicts between vehicles and thereby reduce the risk of collision; and
- a speed limit would be enforced on site to reduce the likelihood and significance of any collisions.

1.359 All discharges from highway and hardstanding areas will be appropriately treated prior to release to ensure that any discharge meets the required environmental quality standards as to be set out within the discharge consent.

1.360 Appropriate proprietary pollution control measures (e.g. silt traps, trapped gullies, petrol interceptors) will be incorporated within the surface water drainage network prior to discharge to the infiltration basin and infiltration swale facilities.

1.361 All rainwater falling directly onto the building roof areas will be harvested, treated, and reused within the process for steam generation.

1.362 Living 'green' roof technology will be provided to intercept roof runoff and provide a degree of treatment prior to reuse.

1.363 All process water used by the plant will be recycled and recovered within the central water treatment and recovery plant. The plant has been designed to recover all grey water as well as utilise all water from the building operations, internal drains and rainwater.

1.364 For the remainder of the site it is proposed to provide SuDS in the form of a infiltration basin, porous paving across selected parking bays, infiltration swales and filter drains / soakaways, sited to complement the proposed development layout and the existing topography.

1.365 Where appropriate, SuDS features will include marginal planting around the basal perimeter of the basins and within carefully profiled pools in order to enhance water quality and biodiversity offering. Similarly, planting will be specified along selected, carefully profiled sections of the swales.

1.366 SuDS features will be maintained and managed by an appropriate management company (to be established by the developer) over the lifetime of the development, but will be managed sympathetically in line with ecological and habitat constraints.

1.367 Robust flood mitigation measures are proposed in order to adequately manage and reduce risks to an acceptable level for the lifetime of the proposed development. Details of the proposed mitigation measures are summarised below:

- Finished floor levels should be elevated a minimum of 150mm in relation to immediately adjacent external ground levels in order to prevent the ingress of overland flow into the proposed buildings by providing a level differential above any shallow overland flood flow route;
- Proposed highways / drainage will be designed in accordance with latest Sewers for Adoption criteria, incorporating appropriate overland flood flow routes for the conveyance of excess floodwater towards areas of low vulnerability land use;
- Where vulnerable development may be affected by overland flows, or where overland flows emanate from off-site areas, it is proposed that carefully sited / orientated landscape buffers, cut-off drains, filter strips, and swales be provided to stem the overland progress of excess floodwater.

1.368 SuDS facilities, in the form of an infiltration basin, infiltration swales, porous paving, and filter drain / soakaways in conjunction with carefully profiled landscape areas are proposed in order to retain floodwater onsite for up to and including the critical 1% annual probability storm event incorporating an allowance for climate change (applied as a 20% uplift in peak rainfall intensity) over the lifetime of the proposed development. The outline SuDS mitigation strategy and overland flow mitigation measures are presented within the FRA (see Volume 2B).

1.369 Due to the low residual risk of flooding from an event exceeding the proposed design criteria no specific flood resilience measures are necessary.

Land Quality

Potential Environmental Effects

1.370 It is acknowledged that further detailed ground investigations will be required before a remediation strategy for the site can be developed.

1.371 Two forms of assessment have been carried out by SLR Consulting.

1.372 The first, a land quality assessment, takes account of the proposal to construct commercial buildings and the likely impact of contamination identified at the site on humans, the built environment and Controlled Waters, followed by measures to mitigate the risks to these receptors.

1.373 The second, the Development Impact Assessment discusses the potential impacts of the proposed development on soils and near surface geological deposits via erosion, disaggregation, compaction and pollution.

1.374 With respect to geology, ground conditions and land quality it is concluded that, should appropriate mitigation measures be implemented (following completion of ground investigations and development/implementation of a remediation strategy), there will be no significant residual impacts or cumulative effects associated with the proposed redevelopment.

Summary of Mitigation Measures

1.375 At present there is no site specific data relating to soil and groundwater quality. It will therefore be necessary to obtain such information as part of ground investigations at the application site. These investigations will serve several purposes, namely to obtain information in relation to the shallow and deeper soil quality at the site, to obtain information on groundwater quality under the site, to obtain information in relation to petroleum vapour risks associated with soil and groundwater at the site, to obtain information for use in geotechnical assessment of the foundation and paved areas design and to facilitate soils handling either on or off site as part of the development.

1.376 Depending upon the results of ground investigations, it may be necessary to implement a programme of soil/groundwater remediation and/or to incorporate appropriate protection measures within buildings to protect building integrity and human health.

1.377 Such measures could include soil excavation, groundwater treatment, vapour extraction, installation of impermeable barriers within buildings or a combination of approaches.

1.378 The presence of former fuel storage tanks under part of the site indicates further assessment of the potential risks to buildings and their occupants will be required. However, overall it is considered unlikely that the safety and integrity of the proposed development will be compromised by the presence of the former fuel tanks in the western area of the application site, although it

is acknowledged that the inclusion of appropriate vapour protection measures may be appropriate within buildings.

1.379 Additional mitigation measures include:

- Institute procedures for the storage and handling of:
  - all hazardous materials;
  - construction wastes; and
  - fuels.
- Ensure that:
  - spill response kits are provided;
  - vegetation is removed only if required;
  - the extent to which large areas of bare soil are expose to the wind is minimised;
  - stockpiles are grassed or covered to prevent erosion;
  - soil is excavated in order of horizons and each soil-type is kept in separate piles;
  - water is directed away from slopes using a surface water drainage system;
  - siltation traps are installed in watercourses/ditches, if necessary;
  - wide tyres / tracks are fitted to construction plant;
  - the site road network is limited to a few main tracks; and that compacted areas are tilled once activities have ceased.

Landscape

Potential Environmental Effects

1.380 A landscape and visual assessment of the proposed development has been completed in accordance with accepted guidance. The application site is set down in the landscape and enclosed by mature tree belts adjacent to an area safeguarded as a rail-head aggregates depot.

1.381 There are no national landscape designations within the 6km study area. The site itself has an SINC for its calcareous grassland habitats and there is a group tree preservation order along the eastern boundary.

1.382 The landscape surrounding the site is consistent with the key characteristics for the “North Dever Downs Character Area” and “Open Arable Character Type” as set out in the published assessments. For example the rolling and relatively large fields with straight boundaries, strong field boundaries, with tall, thick hedges, a relatively high proportion of hedgerow trees and small assorted semi-natural ancient woodlands give a degree of visual enclosure. There are long panoramic views of open farmland, contained by distant woodland to the east and north and a well-treed railway embankment running in a north-south direction, which is a visually prominent feature within the area. The wider area has a remote, rural character, although the A303 and railway detracts from this to the north of the area.

1.383 However, more locally the application site and adjacent railway sidings contrast with the character of the wider study area. The site consists of bare

ground (with large areas of species-rich unimproved chalk grassland), has an engineered, linear form (with the railway sidings cutting into the sites topography) and although there is some natural regeneration and mature trees/woodland plantation around the periphery of the site, the character is of a largely abandoned/derelict state. Overall the character of the site is of "Previously Developed Land".

1.384 The proposed development would alter the landscape character of the site to 'Active Industrial Land' and thus constitute a few changes to its fabric and therefore of a slight to moderate and neutral effect.

1.385 The effect on the wider landscape resource (North Dever Downs Landscape Character Area) would be very limited, due to the small footprint of the 6ha site and its existing condition; but also limited visibility. The majority of the fabric and views from the published Landscape Character Area will remain intact. Overall there would be no significant landscape effects.

1.386 The viewpoint assessment identified a localised significant adverse visual effect, immediately adjacent to the isolated residential property at Western Farm, at Viewpoint 5 east of the site. This very restricted viewpoint position would receive views of the site entrance, vehicle movements and associated tree loss.

1.387 All other representative viewpoints in the study area, as agreed with the Local Authority, were less than significant and either neutral in nature, or considered to be none resulting from the final development design, degree of screening and nature of landscape mitigation.

Summary of Mitigation Measures

1.388 The assessment has indicated that the building would be set down and hidden from the majority of views.

1.389 A detailed scheme for materials to be used for the building will be submitted and agreed with the local planning authority.

1.390 At this stage, it is proposed that the colour of the building and tanks would be similar to the colours found locally such as "red brick, flint and slate" as mentioned in the North Dever Downs Landscape Character Area, or from natural materials such as exposed chalk and green vegetation.

1.391 Areas of chalk grassland would be retained, as much as practicable, within the margins of application site. Areas vulnerable to construction traffic would be protected during the construction period.

1.392 The internal vehicle access route would cut through native shrub/scrub planting. The existing tree belts to the north of the site would be retained and protected during the construction period. Areas that are subject to removal due to construction would be replanted with similar plant specimens.

1.393 Additional woodland and scrub planting would be introduced to the periphery of the site boundary. The main aim of the landscape treatments to this area is to compliment and extend the adjoining existing habitats outside the application boundary.

1.394 A small number (3) of trees and scrub would be felled on Overton Road to accommodate the new junction to the site and allow for sufficient visibility splays. Compensatory planting would be carried out as near as possible to these individuals to be removed.

Ecology

Potential Environmental Effects

1.395 An Extended Phase I Habitat survey has been undertaken of the application site. In addition, a detailed survey of the grassland botanical resource was undertaken, along with work on bats, reptiles, birds and invertebrates.

1.396 The application site is wholly contained within Micheldever Oil Terminal SINC and comprises calcareous grassland, scrub and bare ground mosaics.

1.397 The ecological evaluation identified the following receptors of ecological importance within the site:

- Micheldever Oil Terminal SINC supports species-rich calcareous grassland plant communities;
- Slow worm;
- roosting bats in trees assumed present for the purposes of mitigation;
- commuting / foraging bats;
- Dormouse assumed present for purposes of mitigation (present locally);
- Nesting peregrine falcon;
- Nesting birds; and
- Invertebrate assemblage.

1.398 The assessment of impacts upon receptors within and around the application site identified a range of potential impacts, i.e. habitat loss, fragmentation, hydrological, dust, noise and visual impacts; that could result from the construction and operation of the proposed development.

1.399 Residual impacts of the proposed development have been highlighted with specific regard to habitat loss from the Micheldever Oil Terminal SINC. Residual habitat loss associated with Micheldever Oil Terminal SINC has been quantified at 0.25 ha of calcareous grassland, although this does not take into account areas of calcareous grassland which attempts to re-instate would be made as part of the proposed conservation management programme, see below.

1.400 The implementation of the conservation management plan would help to secure the presence of calcareous grassland at the SINC in the long term. At present this residual impact is considered to be of minor significance in the short term.

Summary of Mitigation Measures

1.401 It is proposed that a green roof is installed upon the main building of the proposed development to replace the calcareous grassland lost. The green roof would be vegetated using the seed bank, propagules and root fragments contained within the habitats which would be lost to the development.

1.402 A full habitat creation and management plan for the green roof would be provided. In total 0.75ha of calcareous grassland is due to be lost to the proposals and it is anticipated that approximately 0.5ha of calcareous grassland could be re instated upon the green roof.

1.403 In addition a conservation management programme would be implemented in selected areas post-planning, in order to enable retained habitats to maintain their biodiversity interest over the long-term and to selectively commence scrub removal (where conflicts with dormouse and nesting birds are not identified), in order to open up the habitats for re-instatement of calcareous grassland.

1.404 It is proposed that this management plan would also be implemented across the southern section of Micheldever Oil Terminal SINC which is outside of the application site.

1.405 The removal of scrub would allow for the re-instatement of calcareous grassland within the SINC. The introduction of a conservation management programme at the SINC would be considered to be a positive impact upon an ecological receptor of County value.

1.406 In order to minimise the potential for impacts upon individual slow worms, it is proposed that a scheme of habitat modification is introduced prior to any ground preparation works. Habitat modification would comprise the phased removal of suitable habitats, namely grassland, by or under the direction of a suitably qualified ecologist. Modification would be carried out from within the development footprint towards the eastern grassland habitats, in order to encourage slow worms to migrate in this direction. Modifications would ideally be timed to be undertaken during periods of the day and weather conditions where slow worms would be most active (notably the middle part of the day during warm sunny weather). Where slow worms are recorded in habitat to be modified, their movement by hand may also be necessary.

1.407 All Cat 1 trees required to be removed to facilitate the new access would be subject to a climbing inspection by a licensed bat ecologist at an appropriate time of year. In the event that roosts are found, bats would need to be first excluded prior to felling / surgery under the aegis of an EPS licence and an appropriate method statement. Mitigation for roost loss would include such measures as fitting one-way exclusion devices prior to felling or surgery; ‘soft-felling’ limbs (i.e. lowering to the ground and leaving in situ for a 24 hour period for bats within crevices to disperse); provision of 20 bat boxes of various types (wooden, woodcrete, crevice, cavity and hibernation boxes) and retention of the original roost feature where possible by strapping cut sections to retained trees within the tree belt so as to maintain the overall roost resource available.

1.408 An EPS licence to facilitate the removal of dormouse habitat would be applied for.

1.409 The EPS application would also comprise a method statement designed to protect dormouse during habitat removal and mitigate for the loss of dormouse habitat.

1.410 Standard methodologies would be followed in this plan, with above ground habitat removed during the winter period and below ground habitat, such as root stumps removed in May to avoid any hibernating individuals.

1.411 It is proposed that 0.3ha of scrub would be lost to the proposed development, of which approximately 0.1ha is considered optimal (in the eastern section of the site).

1.412 This scrub habitat would be ideally be replanted within the application site, using species suitable for dormouse and appropriate to the substrates and species already present.

1.413 However, a balance would have to be struck between replanting of dormouse habitat, without impacting upon the existing calcareous grassland. In this the re-planted dormouse habitat would be incorporated into the conservation management programme so as to only replace dormouse habitat in areas where sub optimal scrub species have already been removed.

1.414 Construction activities likely to disturb nesting peregrine falcon would commence outside the nesting season, which is typically February to June, so as to avoid disturbance during the breeding season. If the birds then choose to nest at the site following start of works it would be assumed that disturbance levels are tolerable to this species. It is proposed to incorporate at least three artificial Peregrine nest sites within the development.

1.415 Two of which would be attached to the western aspect of the ACT building, one at each end. The third would be attached to the chimney stack in a south east facing direction.

1.416 The box in this location would be attached in such a way that it was not directly touching the chimney stack, to minimise the transfer of any fluctuations in heat from the chimney to the nest box. This would provide alternative nesting sites, in addition to the cliff face already present.

1.417 To avoid destruction of any wild bird nests, scrub or trees would be removed outside the breeding season (March to August) where possible. If active bird nests are observed in any habitat scheduled for destruction, operations within that area would cease immediately and would not recommence until the breeding attempt has concluded to avoid committing an offence.

Cultural Heritage

Potential Environmental Effects

1.418 The cultural heritage of the application site was assessed in the context of the surrounding area.

1.419 Data was gathered from a variety of sources so that a model for the site's historical development could be constructed, and its potential historic value understood.

1.420 This confirmed that there are no designated sites that will be impacted upon by the proposed development.

1.421 A large proportion of the western part of the application site has been disturbed through extensive groundworks associated with the previous use of the site as a rail linked oil terminal.

1.422 The archaeological potential of the eastern, potentially undisturbed part of the application site has been shown to be high, with Iron Age settlement and agricultural activity demonstrated in the adjacent fields to the east. This archaeological potential is also supported by the evidence demonstrating activity throughout the prehistoric and historic periods, but most notably, the wealth of evidence for prehistoric occupation of the surrounding landscape, displayed by settlement, agrarian and burial remains.

Summary of Mitigation Measures

1.423 An archaeological site investigation and watching brief will be commissioned as part of a pre-development condition to ensure that the extent and importance of any archaeological remains which might exist within the application site (particularly in the East) are recorded.

BENEFITS OF THE DEVELOPMENT

1.424 The renewable energy and waste management development at the Micheldever Rail Sidings has the potential to make an important contribution to waste management and renewable energy generation in Hampshire and fulfil the County Council's aspirations on future waste management by helping to deliver the diversion of 95% of waste from landfill by 2020.

1.425 The operation of the facility would result in a move away from reliance on landfill as the means of disposing of waste towards a system that recovers valuable resources in an effective and efficient manner.

1.426 The facility would provide a number of benefits including:

- The facility would maximise the segregation of recyclate for offsite recycling;
- Pyrolysis ACT creates a clean syngas, ideal for use in the site combustion engines;
- Pyrolysis ACT does not create any wastes that cannot be reused or recycled;
- The footprint and capital expenditure of the plant is significantly less than conventional waste to energy (mass burn or gasification systems);
- As the plant removes all potential chlorine containing materials from the waste stream prior to the combustion of the gas, there is no potential for dioxins to be present within the plant emissions;
- The facility offers a safe and sustainable alternative to landfill for the wastes from local homes and businesses;
- The facility would offer employment for new permanent staff when it is operational as well as temporary jobs during the construction period;
- The facility will involve the re-development of brownfield land and bring former industrial land back into productive use;
- The facility will generate approximately 7.6MW of renewable electricity for export to the National Grid, maximising the recovery of resources and contributing to energy security for the area;
- The facility is in compliance with national, regional and local planning policies for siting waste management facilities and will enable national, regional and local targets on recycling and recovery to be met;
- Will satisfy the principle of sub-regional self sufficiency helping Hampshire to remain at the forefront of sustainable waste management; and
- Enable the local economy to benefit from additional employment and be sustained by wages and salaries received and spent in the local economy by people directly employed on the operational side and through the use of local services.

1.427 It has been demonstrated that the need for the facility will outweigh the local nature conservation and visual impacts for which mitigation has been provided and it will make a significant beneficial contribution to moving the management of waste up the waste hierarchy in Hampshire and the generation of renewable energy in accordance with national policy.

CONCLUSIONS

1.428 This supporting statement has been prepared in support of a planning application by Clean Power Properties Limited and Network Rail Infrastructure Limited (the Applicant) for a development comprising Advanced Conversion Technologies and Anaerobic Digestion (AD) technologies at the Micheldever railway sidings.

1.429 The proposed development will make a significant contribution to waste management in this part of Hampshire and the surrounding area and maximise the recovery of recyclates and energy from waste.

1.430 The introduction of an ACT pyrolysis plant and an AD plant into the area will continue the move away from reliance on landfill towards a solution by which the recovery of recyclates is maximised. This process will generate significant amounts of energy to be harnessed for use within the development and for surplus export to the National Grid.