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Micheldever Rail Sidings, Hampshire

Proposed Development of Advanced Conversion Technology and Anaerobic Digestion Facility

Statutory Instrument 2011 No.1824
The Town and Country Planning (Environmental Impact Assessment Regulations 2011.

Regulation 13: Request for a Scoping Opinion

SLR Ref: 402.03620.00004

March 2012

Clean Power Properties Limited and

Network Rail Infrastructure Limited

CONTENTS

1.0 INTRODUCTION 4
European Policies 4
National Policies 4
Regional Policies 4
Local Policies 5
1.1 Background to the Proposal 5
2.0 BENEFITS OF THE DEVELOPMENT 6
3.0 ENVIRONMENTAL IMPACT ASSESSMENT 6
3.1 Scoping Exercise 6
3.2 Planning and Pollution Control 7
4.0 SITE DESCRIPTION AND SURROUNDING AREA 8
4.1 The Site 8
4.2 Surrounding Area 9
4.3 Potentially Sensitive Receptors 9
4.4 Access 9
4.5 Geology 9
4.6 Land Quality 10
4.7 Landscape and Visual 10
4.8 Nature Conservation 10
4.9 Topography 11
4.10 Cultural Heritage/Archaeology 11
4.11 Planning History 12
5.0 DESCRIPTION OF DEVELOPMENT 13
5.1 Building Design 13
5.2 Pyrolysis ACT Plant 13
5.3 Transport 16
5.4 Hours of Operation and Staffing 16
5.5 Grid Connection 16
5.6 Construction 16
5.7 Environmental Permit 16
5.8 Decommissioning 17
6.0 ISSUES TO BE ADDRESSED BY THE EIA 17
6.1 Introduction 17
6.2 Temporary/Permanent Effects 18
6.3 Direct/Indirect Effects 18
6.4 Positive/Negative 18
6.5 Air Quality and Odour 18
6.6 Transport 19
6.7 Land Conditions and Contamination 21
6.8 Ecology 22
6.9 Water Resources and Flood Risk 24
6.10 Landscape and Visual 25
6.11 Noise 26
6.12 Archaeology and Cultural Heritage 26
6.13 Socio-economic 28
6.14 Cumulative Impact 29
6.15 Alternative Technologies/Sites/Need 29
6.16 Development Programme and Construction 30
6.17 Other Relevant Documents 30
7.0 PROPOSED STRUCTURE OF THE ENVIRONMENTAL STATEMENT 30
8.0 SUMMARY AND CONCLUSION 32

FIGURES

Figure 001 **Site Location Plan**

Figure 002 **Indicative Process Diagram**

Figure 003 **Indicative Site Layout and Planning Application Boundary**

Figure 004 **Indicative Elevation Site Plans**

Figure 005 **Receptors within 3km of site**

1.0 INTRODUCTION

Clean Power Properties Limited and Network Rail Infrastructure Limited (the Applicant) are proposing to develop an Advanced Conversion Technology (ACT) and Anaerobic Digestion (AD) facility at the Micheldever railway sidings, to the north of Micheldever train station and to the south of the A303, in Hampshire. The site location is shown in Figures 001 and 003.

The development of the waste management facility would consist of the following:

- A 6MWe Pyrolysis Advanced Conversion Technology (ACT) plant which would require approximately 90-150,000tpa of non hazardous Municipal Solid Waste (MSW) and Commercial and Industrial (C&I) Waste; and

- A 1.6MWe AD facility which would require approximately 50-60,000tpa of organic, digestible food (food waste, green waste etc).

This report marks the first formal stage in the preparation of a planning application and is intended to provide the Planning Authority (Hampshire County Council) and any external bodies it may consult, with sufficient information to provide a formal 'Scoping Opinion' on the likely environmental effects that need to be addressed by the required Environmental Impact Assessment (EIA).

The following sections provide an overview of the site, the development proposals and the intended scope of the environmental impact assessments which are considered relevant to the proposed development in this location.

Whilst there is no requirement to consider the policy context as part of the EIA, the Planning Statement which would accompany the planning application, would include a full review of relevant planning policy, including the following:

European Policies

- EU Waste Framework Directive (Revised WFD) 2008/98/EC; and
- European Community (EC) Landfill Directive 1999/31/EC.

National Policies

- NPS1 – Energy
- NPS3 – Renewable Energy
- PPS1 – Delivering Sustainable Development (2005);
- Planning and Policy Statement: Planning and Climate Change (supplement to Planning Policy Statement 1) (2007);
- PPS9 – Biodiversity and Geological Conservation (2005);
- PPS10 – Planning for Sustainable Waste Management (2005);
- PPG 13 – Transport (2011)
- PPS22 – Renewable Energy (2004);
- PPS23 – Planning and Pollution Control (2004);
- PPS25 – Flooding (2010) and
- Waste Strategy (2007).

Regional Policies

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

Local Policies

- Hampshire Minerals and Waste Core Strategy (Adopted 2007)
- Draft Hampshire Minerals and Waste Plan (2011) not yet adopted.
- Winchester District Local Plan Review- saved policies (Adopted 2006)

1.1 Background to the Proposal

The Hampshire Minerals and Waste Plan (Draft) publication 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.

2.0 BENEFITS OF THE DEVELOPMENT

The renewable energy and waste management development at the Micheldever 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. 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.

The facility would provide a number of benefits including:

- The facility would maximise the segregation of recyclate for off site recycling;
- Pyrolsis ACT creates a clean syngas, ideal for use in the site's 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; and
- The facility would offer employment for new permanent staff when it is operational as well as temporary jobs for the eighteen month construction period.

3.0 ENVIRONMENTAL IMPACT ASSESSMENT

For any significant development it is important to establish if an Environmental Impact Assessment 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. Prior to the granting of a planning permission in respect of any proposal to which the EIA Regulations apply an Environmental Impact Assessment (EIA) is required. Responsibility for compiling information regarding environmental effects lies with the developer, and the information is presented as an 'Environmental Statement'.

3.1 Scoping Exercise

Having established that an Environmental Statement is required to be prepared to accompany the planning application, the EIA Regulations stipulate that the Applicant may make a request for a formal Scoping Opinion from the Local Planning Authority as to the information which should be provided in the Environmental Statement

This report therefore forms the Applicant's written request to the Local Planning Authority, Hampshire County Council, under Regulation 13 of the EIA Regulations, for its opinion as to the information to be provided in the Environmental Statement. Regulation 13 requests for Scoping Opinions should be accompanied by:

- a plan sufficient to identify the land;
- a brief description of the nature and purpose of the development and of its possible effects on the environment; and
- such other information or representations as the person making the request may wish to provide or make"

The three main purposes of the Scoping exercise are considered to be:

- 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;
- to identify those which are unlikely to need detailed study.

The following sections are intended to provide Hampshire County Council and the relevant consultees with the information necessary to come to an opinion on the issues that should be addressed in the ES. The value of the statutory consultees in inputting to the Scoping Opinion is recognised by the Applicant and SLR and both parties will be pleased to discuss any aspect of the proposed scheme with any organisation.

3.2 Planning and Pollution Control

Once constructed the facility would need to operate under an Environmental Permit (EP). However, this Permit can only be issued after planning permission has been granted.

4.0 SITE DESCRIPTION AND SURROUNDING AREA

4.1 The Site

The application site consists of approximately 6 acres to the north of Micheldever railway station and to the south of the A303. The site was previously used as a rail freight yard and as a rail head at the end of the line. 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. The Client is unable to bring forward the adjoining land identified in the Draft Plan as it still required for rail operational purposes. Representations to extend the identified land to include the available, and now proposed, site have been made to Hampshire County Council.

The study area does not have any National Trails or Long Distant Footpaths associated within it, the nearest being that of the South Downs Way which is situated 10km south-west of the site. The site is located at National Grid Reference SU 51981 43525.

The site is shown in its local context on the aerial photograph[1] set out below.

Fig 1.0 Aerial Photograph of Proposed Site at Micheldever Railway Sidings

Approximate Site Boundary

[1] www.googleearth.com

4.2 Surrounding Area

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.

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.

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

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. 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.

4.3 Potentially Sensitive Receptors

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 (set out in Section 4.8) and possible protected flora and fauna on the site and surrounds;
- Groundwater and nearby water bodies;
- Consturction Site workers; and
- Future site workers and employees.

4.4 Access

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.

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.

4.5 Geology

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.

4.6 Land Quality

The site comprises former railway sidings and a former freight yard with associated fuel tanks. The extent of any contamination on the site is not known at present...

4.7 Landscape and Visual

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.

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.

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. 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.

4.8 Nature Conservation

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.

4.8.2 Non-statutory Sites

Micheldever Oil Terminal SINC

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

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.

4.9 Topography

The site lies at approx 130-140m AOD towards western end of a slight ridge which falls away to around 100m AOD to the north, south and west. Locally there is significant variation in the topography resulting from the construction of the railway through a cutting and tunnel beneath the A303.

4.10 Cultural Heritage/Archaeology

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

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

There are no Listed Buildings within 500m of the site. Within 2km there are 10 Listed Buildings, the majority concentrated at Warren Farm and Micheldever Station. These are all Grade II listed. It is possible that development components associated with the facility (e.g. stack, plume) may affect the setting of some of these buildings, particularly those surrounding Micheldever Station and Warren Farm to the south of the site.

4.11 Planning History

A web base search of information available on the Winchester and Hampshire websites revealed no history for the site itself. Nearest recorded permissions are set out in the Table below:

Application No.	Description
01/01168/FUL	5m antennae and radio equipment on land at New Road.
03/02825/HCM	Periodic review of Stockbridge Oil Field which used part of the adjacent rail sidings as a terminal but the decision notice confirmed that Micheldever was no longer in use for this purpose. However, the supporting documents did identify the site as industrial land.

5.0 DESCRIPTION OF DEVELOPMENT

The development would consist of the following:

- A 6MWe Pyrolysis ACT plant which would require approximately 90- 150,000tpa of Municipal Solid Waste (MSW) and Commercial and Industrial (C&I) Waste and other waste with organic content.

- A 1.6MWe AD facility which would require approximately 50-60,000tpa of organic, digestible food (food waste, green waste etc).

An indicative flow diagram of the process is attached at Figure 002.

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 (approx 6m diameter and 9m high);
- A stack for the pyrolysis ACT plant (approx 20-30m high and max 120cm diameter);
- 3 Gas Engines;
- A stack for each of the 3 engines (approx 20-30m high and max 100cm diameter);
- An emergency flare; An electricity sub station (5m by 3 m and 3 m high)
- 2 AD digester tanks (approx 25m diameter) and 2 x AD digestate tanks (approx 32m diameter) and 9.5m high.
- New access road and car parking for visitors and approximately 10 staff.

Buildings and operational areas would be situated on an impermeable concrete pad. All run off from the operational areas would be contained and discharged to mains foul sewer via the water treatment plant. 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.

5.1 Building Design

The new, purpose designed building would comprise a single portal framed building approx 120m by 40m, 9m height to ridge. The building would be sealed and operated under negaitive pressure. All vehicles doorways would be equipped with fast acting roller shutter doors for the purposes of odour control. The composite external panels of the building would be approximately 175mm thick and windows would be double glazed and aluminium framed. Drawings showing the indicative layout and elevations of the building are attached at Figures 003 and 004.

5.2 Pyrolysis ACT Plant

The Pyrolysis ACT plant and equipment would be located in a single building, containing 4 compartmentalised zones. Zone 1 would be the reception zone.

5.2.1 Zone 1- Waste Reception

Vehicles importing waste would drive over the weighbridge and into Zone 1. Upon closure of the fast acting doors, would empty their contents into one of 3 sealed, isolated reception

bays, relevant to the waste they are carrying. The bays would be fitted with a push floor transfer system.

One bay would be reserved for the receipt of waste for the AD facility. The waste reception area is a purpose built, sealed, internal area which would be operated under slight negative pressure to mitigate potential odour dispersion impacts.

The waste reception area and loading system would comprise the following;

- Weighbridge (capable of taking the full range of delivery vehicles;
- In-feed ferrous magnet (for removal of oversized metals);
- In-feed shredder (capable of shredding c.30 tonnes per hour);
- Grab Crane;
- In-feed conveyor system (capable of delivering full load to autoclave in approx 15 minutes);
- In-feed weighing system (to register accurate batch weights); and
- Hydraulic moving floor.

Following inspection of the waste within the bays, the waste would be transferred, by means of a conveyor, directly into the loading system of the autoclave for steam sterilization.

Any wastes which do not conform to the acceptance criteria of the site would be segregated and isolated prior to their removal off site.

5.2.2 Zone 2- Steam Sterilisation and Segregation

The autoclave is a 18-20m heated pressure vessel into which up to 20 tonnes of mixed waste can be loaded, via conveyor systems . Once the autoclave is sealed, pressurised and rotated slowly to aid the break up of waste material. Steam is delivered to the autoclave from a heat recovery steam generator connected to the pyrolysis unit and the waste within the autoclave is pressure sterilised for one to two hours at a temperature of 140-160^{0}C. This process sterilises all metals, glass and plastic and these pass through the autoclave unaffected. During this time, the organic components of the waste are transformed into a fibrous biomass through the application of heat and pressure. The autoclave load is then processed through a state of the art mechanical separation plant which removes metals, plastics and glass (i.e. non biodegradable waste) and drops them into waste bays for the particular waste stream. These segregated recyclates are then sent off site for recycling.

The autoclaving process reduces the original volume of waste by approximately 80%. The remaining waste is discharged from the autoclave onto a moving floor and transferred to a conveyor for transport to the segregation area.

5.2.3 Zone 2 - Segregation Area

The segregation area would segregate glass, plastic, metals and sterilised fibre from the organic matter. Materials which would be rejected would include stones, textiles and large wood fragments. These would be removed manually in the Picking Station.

The segregation area would comprise the following;

- Process separation to remove textiles;
- Trommel system;

- Ferrous magnet and bailing system to remove and segregate ferrous metals;
- Eddie current separator and non ferrous bailing system;
- Plastic separation (manual picking and separation);
- Fibre separation;
- Fibre drying to reduce moisture content to below 10%;
- Fibre storage system to maintain dry fibre in storage hopper to release to pyroyisis plant; and
- Pyrolysis ACT in feed conveyors.

The clean, sterile biomass fibre is dried before transfer to the Pyrolysis ACT Plant.

5.2.4 Zone 3 - Pyrolysis ACT

Once dried, the organic material is transferred to the pyrolysis ACT plant. Pyrolysis is the thermal degradation of the waste in the absence of air. This produces a syngas which is then used to generate energy. The gas is not deemed to be a waste product, thus it is not bound by the Waste Incineration Directive (WID).

The organic waste is fed into the oxygen free pyrolysis chamber and heated externally by a charcoal burner system, which uses the char residue from the pyrolysis plant as fuel. The heating causes the waste to be transformed into carbon and gases. The gases are cleaned to create synthetic gas (syngas) and then stored in an external gas holder, prior to combustion. Ash from the burning of charcoal (approx 3-4% of the total waste input) is heated and turned into vitrified slag material which is inert and can be used as an aggregate.

A reception and office area would also be contained within Zone 3.

5.2.5 Zone 4 – Power Generation

Generation of electrical power would occur via 3 gas engines, each coupled to an electrical generation plant. The engines are designed to operate using syngas and would provide power to the National Grid. Biogas from the AD plant would be injected directly with the syngas in the gas holder and burnt within the engines.

The heat generated by the engines would be used for the drying of the sterilised fibre.

5.2.6 Water Treatment Plant (located in Zone 2)

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.

5.2.7 Anaerobic Digester

The AD facility would comprise the following;

- Feedstock blending system and associated pumps/pipelines;
- Batch pasteurization equipment;
- 2 x bunded digestate storage tanks;
- 2 x digester & gas storage tanks; and
- Gas treatment and odour abatement unit.

The AD facility would accept solid biodegradable waste, which would be macerated and blended within the 2 digester tanks, to ensure a homogenous mixture. The biogas produced by the AD process would be utilised through the gas engines to produce electricity. It is proposed that the solid digestate from the AD process is reprocessed through the autoclave. Liquid digestate would be transported off site for use as an agricultural soil improver.

5.3 Transport

The assessments would assume that all waste would be transported by road, although a rail interface is included and the option of rail transport is being investigated. It is anticipated that 50% of the waste would be imported by bulk trailer with an average payload of 24 tonnes, 30% by skip lorry with a 15 tonne payload and the remaining 20% by refuse collection vehicles (RCV) and commercial waste vehicles with average payloads of 4.5 tonnes and 8 tonnes respectively.

New site accesses are currently proposed to the north and east. The provision of one or both of these new access points would be reviewed through the EIA process.

5.4 Hours of Operation and Staffing

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 (e.g.8am to 6pm) and Saturday mornings only.

The proposed development is anticipated to generate 27-30 full time jobs, working over a 24/7 working pattern. Approximately 10 members of staff would operate the site during the daytime and 8 during other time.

5.5 Grid Connection

Whilst not fixed at this stage the ES would consider the likely route of the proposed grid connection and its implications for any of the technical assessments carried out for the ES.

5.6 Construction

The site preparation and construction stage would take place over an 18 month period (during 2013-14) with the plant being operational from 2015.

The ES would consider the following:

- Outline construction logistics, programme and works;
- Identified potential construction effects;
- Required mitigation measures; and
- Site Waste Management Plan.

5.7 Environmental Permit

The proposed development would be regulated by the Environment Agency as Part A(1) installation under the Environmental Permitting Regulations 2011. Under the requirements of the Permit, all emissions and operational aspects of the installation would be regulated in accordance with strict conditions. The Permit would only be issued by the Environment Agency once it is satisfied that the installation can be operated within appropriate limits and by ensuring that appropriate safeguards, controls and operator competency are in place.

The entire plant would be operated and controlled from a central control room and would include continuous emissions monitors (CEMS) located on the main exhaust stack of the pyrolysis plant, which would operate on a 24 hour basis. This would provide on line monitoring of gas concentrations to ensure that the plant operates within its Environmental Permit.

All aspects of the plant would be continually monitored and fully interlocked to ensure that the plant can be safely shut down in a controlled manner in the event of a plant or equipment failure. The site includes the installation of a flare stack located in Zone 3, to be used in emergencies only.

The entire plant would be designed to comply with all aspects of UK Environmental Best Practice and would be able to demonstrate Best Available Techniques (BAT) as identified by the sector Technical Guidance Notes (TGN) issued by the Environment Agency.

5.8 Decommissioning

The proposed plant and buildings are modular and of simple construction. Therefore, decommissioning would involve deconstruction of the plant and buildings. This would allow reuse of parts of the buildings and plant elsewhere. Under the conditions of the Environmental Permit, all plant decommissioning would be subject to Environment Agency approvals and oversight.

6.0 ISSUES TO BE ADDRESSED BY THE EIA

6.1 Introduction

This section outlines some of the potential environmental impacts and considerations of the proposed development and considers the scope of the EIA required to accompany the proposed planning application.

This section is intended to provide Hampshire County Council and relevant consultees with a breakdown of the various different environmental impacts which need to be addressed in the Environmental Impact Assessment, and the scope of their consideration.

The range of information proposed for each topic is based on the technical knowledge of SLR in relation to similar waste and recycling facilities and a joint understanding of the regulatory system and the issues associated with the site and the surrounding area. Regulation 2 (1) specifies that an Environmental Statement is a statement “that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile but that includes at least the information referred to in Part 2 of Schedule 4”. The information described in Schedule 4 includes at paragraph 3 to Part 1 the following requirement:

“A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climate factors, material assets, including the architectural and archaeological heritage, landscape and inter-relationship between the above factors”

This Scoping Report identifies a range of potential environmental issues, which may be: temporary or permanent; direct or indirect; and positive or negative.

6.2 Temporary/Permanent Effects

The potential for effects to occur is dependent on the two key periods associated with the development: the potential disturbance as a result of the construction period; and the longer term influence of the operational facility.

6.3 Direct/Indirect Effects

The proposed development could have indirect effects upon nearby properties and settlements, together with the environment as a whole in relation to issues such as air quality, noise and the changing appearance of the site.

6.4 Positive/Negative

The proposed development has the potential to generate benefits as well as negative effects. These benefits might include the reduction of volumes of waste that would otherwise be disposed of to landfill, the potential to generate renewable energy from waste material as opposed to by means of burning fossil fuels; the effective use of otherwise vacant land, and the potential socio-economic benefits of the development.

Having considered the above issues, and taking into account the guidance contained in the DTLR publication “Environmental Impact Assessment: A Guide to Procedures” the potential environmental effects resulting from the proposed development have been identified below along with intended assessment methodologies.

SLR considers the following potential environmental impacts below to be of significance in relation to the proposed site and waste management facility.

- Air Quality and odour
- Transport
- Ground Conditions and Contamination
- Ecology
- Water Resources and Flood Risk
- Landscape and Visual Impact
- Noise
- Archaeology and Cultural Heritage
- Cumulative Impacts
- Climate Change
- Alternative Technologies/Site/.

These are considered in more detail below:

6.5 Air Quality and Odour

The potentially significant air quality impacts of the proposed development would be as follows:

- generation of dust during the construction and operation of the development and the potential to cause a nuisance;

- emissions of pollutants from combustion sources; and

- pollution generated by construction and operational traffic.

Approach and Methodology

Air quality assessment would be undertaken using detailed dispersion modelling to consider emissions from the proposed pyrolysis ACT plant, associated gas CHP engines and associated traffic emissions. The assessment would take account of all relevant national and local policies relating to air quality.

The study would focus on nitrogen dioxide and fine particulate matter (PM10) from road traffic, and oxides of nitrogen, particulate matter (PM10 and PM2.5) and all other relevant emissions from pyrolysis ACT/anaerobic digestion combustion sources.

All waste reception and treatment would take place within the new buildings where air quality will be controlled via mechanical ventilation, which will create a slight negative pressure. Air within the building would be treated by an odour control plant consisting of UV treatment followed by combustion in the pyrolysis units and gas engines. As a result of the design of the building and the odour control plant, it is not considered that there would be any significant effect from odour, thus no odour assessment will be provided as part of the ES. During operation, the development would be regulated through an Environmental Permit. The Permit will include an Odour Management Plan to identify potential sources of odour and appropriate control measures which will require approval by the EA prior to operation commencing.

The air quality assessment would identify:

- The impacts of emissions from the proposed pyrolysis ACT plant and CHP engines on air quality at nearby human receptor locations;
- The impacts of emissions from the proposed pyrolysis ACT plant and CHP engines on air quality at nearby ecological receptor locations; and
- The impacts of emissions from road traffic generated by the proposed development on air quality at nearby environmental receptor locations.

The air quality assessment is to include the following two assessment scenarios:

- Development Scenario: The impacts on air quality of emissions from the proposed facility alone, based on the opening year; and
- Cumulative Development Scenario: The impacts on air quality of emissions from the proposed pyrolysis ACT plant/anaerobic digester and associated CHP engines, and from other local committed developments.

Specific activities would include:

- Conducting a site visit to identify sensitive receptor locations, local air quality monitoring sites, local emissions sources and other parameters affecting baseline air quality conditions;
- Modelling of emissions using the dispersion model for the pyrolysis ACT plant and associated CHP engines, and DMRB for road traffic (if required);
- Validating the model against local air quality monitoring sites where data is available;
- Assessment of the dispersion model results against relevant environmental assessment levels for human exposure and sensitive habitats and ecosystems; and
- Preparation of technical appendices in an appropriate format for submission and preparation of ES chapter.

6.6 Transport

Site Accessibility

The site's location in the southwest corner of A303 Micheldever Station junction lends itself to excellent accessibility to the primary road network. Further afield the A34 Bullington Cross junction lies 6.3km to the east and M3 junction 8 5.9km to the west.

The A303 is a Dual 2-lane all purpose (D2AP) trunk road forming part of the strategic highway network nationally. Between the M3 motorway and Stonehenge the road provides a high standard of provision with continuous dual carriageway and grade separated junctions. The route is subject to some tidality and seasonality of traffic flow and some parts of the route are capacity constrained at certain times. The Micheldever Station junction is a lightly used junction and is not believed to be capacity constrained at any time.

As a consequence of the A34 serving as the link between the A303 and M3 south, M3 junction 8 does not have a requirement for traffic movements to and from the south and therefore is a limited movement junction allowing for traffic to and from the north only. The A34 is also a D2AP standard road with grade separated junctions between Winchester and Bicester and is a designated HGV route linking the M40 and M4 motorways to the M3 and Southampton docks.

The M3 motorway has dual three lane provision north of junction 8 and acts as the southern arterial motorway linking London to Southampton docks and the south coast. Junction 6 (Basingstoke North) is severely capacity constrained during commuting periods but junction 7 (Basingstoke south) is only lightly used and junction 8 (A303) experiences only light congestion from the two major routes merging.

Neither the A303, A34 or M3 in the vicinity of Basingstoke are programmed for upgrade works within the current Highways Agency programme. This would indicate that in comparison to other parts of the national network capacity and road safety issues are not as critical in maintain their efficient operation.

As set out in the introduction, it is anticipated that between 140,000 and 210,000 tonnes of waste would be delivered to the site per annum. Of this total, approximately 30% is anticipated to be reclaimed for recycling and would be exported from the site. The dry fraction of the digestate produced by the AD facility can be reintroduced into the ACT facility and further recovered. The liquid digestate will be tankered off site for use as liquid fertiliser.

Vehicles would enter the site from the new access to the north of the site from the A303 and leave the site via the new exit to the east of the site, along Overton Road, back towards the A303.

Aspects of Proposed Development Giving Rise to Potential Impact

- Vehicle movements associated with site preparation and construction works;
- Vehicle movements associated with waste imports and exports from site.

Potential Impacts

- Loss of amenity/disturbance to other homes and businesses in area;

- Capacity of surrounding road networks and junctions to accommodate changes in traffic levels.

Approach and Methodology

The Transport Assessment will comprise:

- Site visit;
- Scoping discussion with local highway authority and Highways Agency;
- Determine baseline traffic situation;
- Existing and proposed trip generation and distribution;
- Highway network proportional increases;
- Junction capacity analyses (up to 4 junctions);
- Site and access design development including swept path analyses;
- Accident analysis;
- Construction logistics strategy;
- Delivery & Servicing Plan;
- Prepare ES Transport Chapter.

To provide traffic data for the air quality and noise assessments for roads adjacent to the site, as well as any roads on which flows are anticipated to materially change as a result of the development. Traffic data to be provided in a suitable format for the air quality and noise assessment (AADT and/or AAWT flows, split into light duty vehicles (<3.5 tonnes) and heavy duty vehicles (>3.5 tonnes; HGV + buses), and where available, average speed data).

6.7 Land Conditions and Contamination

Aspects of Proposed Development Giving Rise to Potential Impacts:

- Site preparation and construction works.

Potential Impacts

- Effects of excavations and construction of prevailing ground conditions.

Approach and Methodology

The work undertaken so far has comprised the following phases:

Initial Phase

- A review of historical map records;
- Purchasing current Groundsure® data on site conditions; and
- Collating the information about site conditions and assessing the potential contamination risks.

Based on the available information, it is considered that there is a low risk that significant ground contamination exists at the site and in light of the previous/ongoing land use and in the context of the site's current environmental setting, and usage, it is considered unlikely that this site would be regarded as potentially contaminated, within the meaning of Part IIA of the Environmental Protection Act, 1990.

As a result of this Phase 1 Contamination Assessment the following conclusions can be drawn:

- The site appears to have remained undeveloped except in relation to excavation works to re-profile the site sometime between 1956 and 1974. No formal development for the site has taken place, e.g. construction of buildings, infrastructure, etc.
- No surface water bodies at risk of ground contamination have been identified other than a minor surface water drain on the northern site boundary.
- No groundwater abstractions have been identified in the site area.
- A review of the published geology for the site area indicates the solid geology comprises Chalk. No specific mining issues have been identified, but small scale chalk excavations have been identified in the wider site area.
- No adjacent land uses of concern (e.g. industrial/commercial premises, waste management activities, etc) have been identified that are likely to impact on the subject site.

Overall, based on this preliminary assessment, the current condition of the site is considered to present a low risk with respect to its proposed development for a commercial/industrial use.

Given current information relating to the historic and current uses of the site, it is not considered necessary to recommend a programme of intrusive contamination investigations.

6.8 Ecology

The following web-based resources were accessed in order to search for designated sites and legally protected taxa within the vicinity of the proposed development site:

- Multi-Agency Geographic Information for the Countryside - www.magic.gov.uk
- National Biodiversity Network Gateway – data.nbn.org.uk
- Natural England's 'Nature On the Map' - www.natureonthemap.naturalengland.org.uk
- Winchester City Council Local view – http://map.winchester.gov.uk/lvinternet/OnTheMap.aspx

The data search was conducted up to a nominal **10 km radius** from the site for statutory designated sites[2], specifically those which may be sensitive to aerial deposition of pollutants or be of importance to birds or bats and within a **2 km radius** for lower status 'non-statutory' designated sites[3], legally protected species and / or other species of conservation concern[4].

Hampshire Biodiversity Information Centre was formally contacted for archive data on non-statutory designated sites, legally protected species and species of conservation concern within a 2km radius of the site. The Winchester City Council Local view map was also searched for Tree Protection Orders (TPO) within and adjacent to the site.

Micheldever Oil Terminal SINC lies within the proposed development site and would be directly affected by loss of habitat. Further information on the size and land-take of the proposed development and an assessment of the quality of habitat present would be required in order to assess the impact in detail. The species-rich grassland within the SINC may be sensitive to aerial deposition of N, NO_x and SO_x from the facility.

[2] Statutory Designated sites include those protected under national or international legislation, such as Sites of Special Scientific Interest (SSSI) and Special Areas for Conservation (SAC).

[3] Non statutory Designated sites include local sites afforded protection under the planning system, such as County Wildlife Sites (CWS) and Regionally Important Geological and Geomorphological Sites (RIGS).

[4] This includes species protected under international and national legislation as well as species included in the UK and/or local Biodiversity Action Plans, Red Data Book taxa and Red / Amber listed 'birds of conservation concern' (as listed by the British Trust for Ornithology).

Micheldever Spoil Heaps SSSI lies to the immediate north of the A303 which abuts the site and two further SSSI's that are important for their floristic and invertebrate communities (the River Test and Bere Mills Meadows SSSI's) are located within 10 km. These sites are likely to be vulnerable to deposition of pollutants expelled during operation.

Detailed modelling of the expected air dispersion and assessment of the effects of pollutant loads on relevant habitats would be required to enable a more comprehensive ecological impact assessment on the SSSI sites to be undertaken. It is recommended that full assessment of potential impacts on critical sensitive species on these designated sites is undertaken at the earliest opportunity.

The following legally protected taxa / species of conservation concern may present a potential constraint to the development:

- Bats;
- Dormouse;
- Badger;
- Birds;
- Reptiles;
- Great crested newt
- Invertebrates; and
- Plants.

In order to facilitate delivery of a full impact assessment, incorporating design of appropriate mitigation (and if required a compensatory package), specialist survey work in line with various best practice guidance will be required. Planning Policy Statement 9 stresses that protected species are a material consideration when considering planning applications and it will therefore be necessary to consider undertaking the surveys prior to any planning submission.

Aspects of Proposed Development Giving Rise to Potential Impacts

- Site preparation;
- Operation of the Facilities;
- Emissions from the stack on surrounding habitats.

Potential Impacts

- Habitat loss through land take;
- Direct impacts upon species populations;
- Indirect impacts on fauna through habitat change and loss; and
- Alterations to habitat quality through pollution deposition.

Approach and Methodology

The ecological impact assessment would follow the data gathering guidelines recommended by the Institute of Environment Assessment and the most recent guidance on site evaluation and impact assessment, as issued by the Institute of Ecology and Environmental Management.

An extended Phase 1 Habitat Survey of the site has been undertaken. During this survey, an appraisal of the likelihood of any protected species being associated with the site and the habitats present, has been carried out. The results of the Phase 1 Survey are not known at

present. Recommendations for further survey work would be confirmed following findings of the Phase 1 survey.

The Ecological Impact Assessment would use IEEM methodology and identify the significance of any impacts. The findings and any critical constraints would contribute to the refinement of the proposed site layout and the report would recommend mitigation measures for any residual impacts where appropriate. It would pay particular attention to assessing the potential of aerial deposition from the proposed ACT upon any potentially sensitive ecological receptors, in close liaison with SLR's in house air quality team.

6.9 Water Resources and Flood Risk

Aspects of Proposed Development Giving Rise to Potential Impacts

- Potential pollution of surface and groundwater from site operations;
- Alteration of catchment areas and surface water flows.

Potential Impacts

- Contamination of surface water by pollutants;
- Adverse impacts on groundwater and surface water regime;
- Risk of flooding;
- Indirect impacts on ecological interests in nearby water bodies.

Approach and Methodology

The Water ES chapter would present the baseline information on the local hydrology and hydrogeology (including water quality, water resources and drainage), then consider the potential impact of the proposed development on the baseline conditions and present appropriate mitigation measures where required. Information would be obtained from published maps/reports, and data requests to the Environment Agency and Local Authority (for details of licensed/unlicensed abstractions, Strategic Flood Risk Assessment, details of flood zone extents etc.). In addition, site specific information, where available, would be reviewed to confirm baseline hydrogeological and hydrological conditions.

A Flood Risk Assessment in accordance PPS25 would be produced to accompany and support the planning application for the proposed development. The FRA would form an appendix to the Water Chapter. The proposed scope of works for the FRA is presented below:

- Liaison with the Environment Agency, Local Authority and sewerage undertaker to confirm the flood risk status of the site and drainage requirements / restrictions and to obtain details of the local sewerage network. Confirmation of flood zone status, details of any flood defences, predicted flood water levels and evidence of historic flooding would be sought from the Environment Agency through a formal data request.
- Review of all potential sources of flooding including overland flow, high groundwater levels, pluvial and fluvial flooding;
- Review of the Strategic Flood Risk Assessment (SFRA);
- Review of topographical survey and flood level data to allow site specific delineation of Flood Zones and formulation of mitigation measures as appropriate;
- Assessment of the impact of climate change upon local flood risk and drainage arrangements;
- Review of the site's existing drainage infrastructure (if any) and proposals for future development;

- Review of the site's existing and proposed surface water management measures and a review of how surface water runoff from the proposed development would be managed. The FRA would include a sustainable drainage design statement with outline design of appropriate SuDS techniques.
- Recommendations for mitigation measures such as elevated development platform levels, safe access routes, and flood resilient design features, if required;
- Preparation of a FRA report in accordance with PPS25.

The FRA would include an outline of the proposed surface water management measures and an indication of attenuation volumes required, in accordance with PPS25. An outline surface water drainage strategy would be provided.

6.10 Landscape and Visual

Aspects of Proposed Development Giving Rise to Potential Impacts

- Erection of new buildings and chimney stack;
- Movement of plant and vehicles within the site and along the service route to and from the A303;
- Lighting associated with 24 hour operation; and
- Construction impacts.

Potential Impacts

- Loss of visual amenity from public areas

Approach and Methodology

The LVIA would consider the effects of the proposed development during construction and operation stages on the landscape and visual receptors identified within an agreed study area.

The assessment would be based on the Guidelines for Landscape and Visual impact assessment produced by the Landscape Institute and Institute of Environmental Management and Assessment (GLVIA) (2002) and Landscape Character Assessment (The Countryside Agency and Scottish Natural Heritage, 2002).

The detailed LVIA would identify the predicted visibility of the proposed development in the study area, and assess the residual landscape and visual impacts arising. Potential cumulative effects associated with the establishment of the proposed development would also be assessed.

The LVIA report would include the following sections:

- Introduction;
- Methodology, including reference to the agreed assessment methodology and study area;
- Baseline landscape character and visual amenity to include a description of the principal land-uses, character of the study area and extent of inter-visibility across it;
- Landscape planning policy of relevance to the development;
- Landscape designations and classifications of relevance to the development;
- Project description;

- Mitigation, including matters pertaining to the configuration and appearance of the development;
- Assessment of residual effects including possible cumulative effects – including visibility analysis, and assessment of effects on landscape and visual receptors;
- Development Programme and Construction; and
- Conclusions and discussion.

The LVIA would be supported by the following illustrations:

- Landscape Character Plan for the study area based on a combination of national *Landmap* data and field verification;
- Landscape Designation Plan for the study area;
- A Zone of Theoretical Visibility drawing or Visual Analysis drawing; and
- Photo-real photomontages

6.11 Noise

The design of the plant ensures that all operations and processing take place internally. In addition, the building is sealed and airtight with no high level openings or louvers. All external ancillary plant would be enclosed within dedicate acoustic enclosures.

Aspects of Proposed Development Giving Rise to Potential Impacts:

- Site preparation and construction works;
- Lorry movements associated with waste transportation from site; and
- Generation of noise from waste management processes.

Potential Impacts

- Loss of amenity at/disturbance to noise sensitive properties in the vicinity of the site.

Approach and Methodology

It is proposed that SLR would undertake a noise survey at up to four of the noise-sensitive receptors closest to the site during a representative mid-week period. The noise survey would cover daytime and night-time periods. The noise survey would be attended throughout by SLR staff to ensure that the measured noise levels are attributed to the correct noise sources.

An assessment of the construction and operation of the proposed facility would be carried out in accordance with national guidance and where appropriate, in accordance with any guidance stipulated by the local planning authority. The assessment would indicate whether the noise emission levels from the site are likely to generate complaints from the occupants of the closest noise-sensitive properties.

Where necessary and feasible, mitigation measures would be outlined and any residual impacts identified.

6.12 Archaeology and Cultural Heritage

Data has been gathered from the following sources:

- National Monuments Records online GIS datasets (the National Heritage List)
- English Heritage ‘Heritage Gateway’

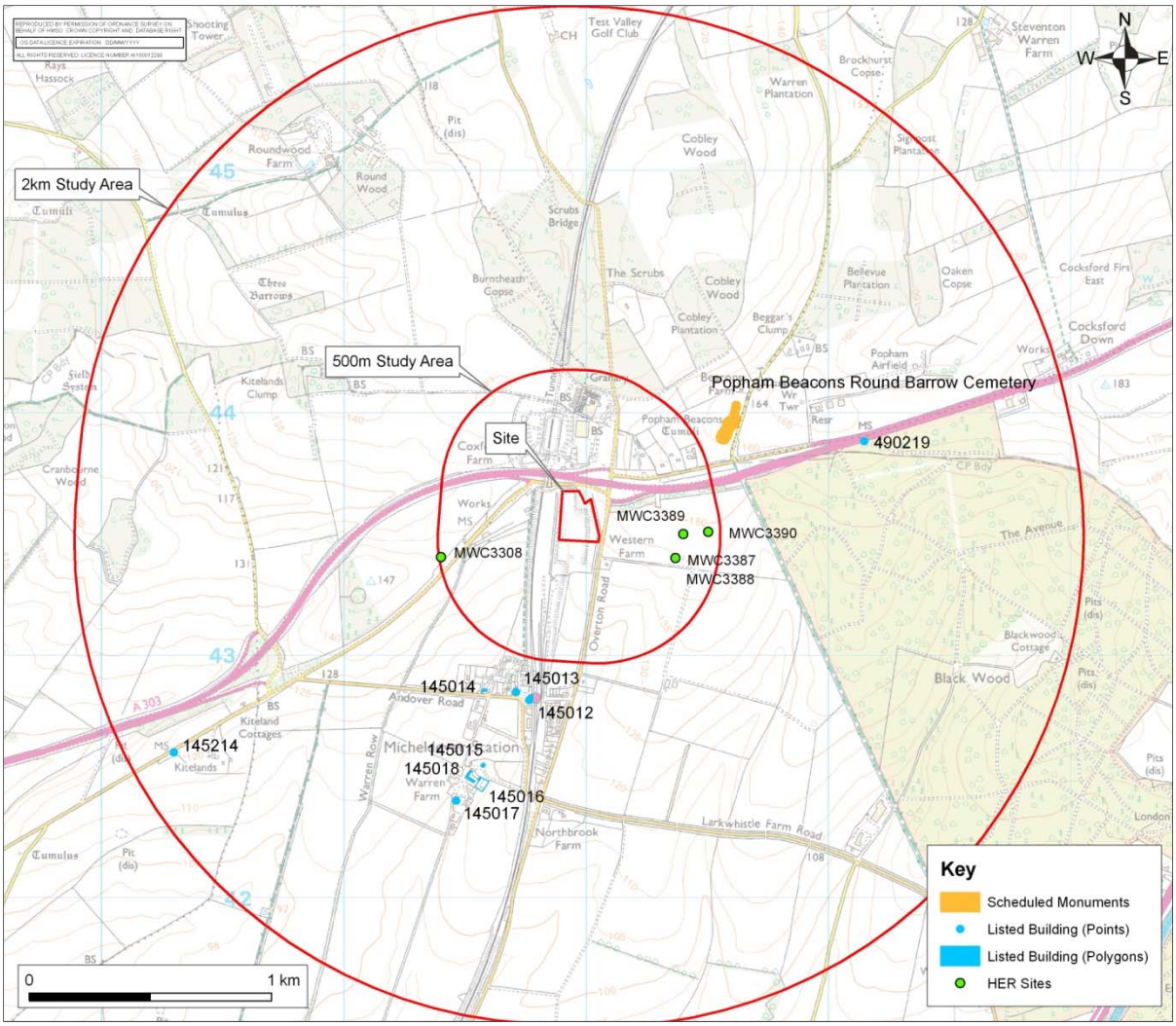
- Winchester Historic Environment Record and Urban Archaeological Database (HER and UAD)[5]
- Historic mapping
- Aerial photographic data available through online sources

The desk based assessment has confirmed that there are no World Heritage Sites located within 2km of site and 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.

There are no Listed Buildings within 500m of the site. Within 2km there are 10 Listed Buildings, the majority concentrated at Warren Farm and Micheldever Station. These are all Grade II listed. It is possible that development components associated with the facility (e.g. stack, plume) may affect the setting of some of these buildings, particularly those surrounding Micheldever Station and Warren Farm to the south of the site.

Details of potential cultural heritage constraints are shown on the map below.

[5] NB: the online HER and UAD data available through the Heritage Gateway is an evolving and incomplete database and therefore the data presented in this report provides an overview, but cannot be relied upon for planning purposes.



Aspects of Proposed Development Giving Rise to Potential Impacts

- Change in Cultural Heritage setting.

Potential Impacts

- Potential visual impact of development;
- Damage to archaeological remains.

Approach and Methodology

Based on the desk top study which has been undertaken, it is considered that there is a low risk overall that cultural heritage would present a major constraint to the proposed development. However, it is likely that more information will need to be provided (including detailed desk study and site investigation through geophysics and trial trenching) in support of any ES/planning application, and mitigation (e.g. excavation or strip map and record) may be necessary prior to development.

6.13 Socio-economic

The proposed development would introduce a new industry to the area and provide temporary and full time jobs during construction and operation. Whilst the job creation is considered to be a positive effect of the development, the anticipated 25-30 jobs are not

considered to amount to the development being a major employer. Therefore, a socio economic impact assessment is not proposed to be included in the EIA.

6.14 Cumulative Impact

Aspects of Proposed Development Giving Rise to Potential Impacts

- Opportunities for additional development;
- Potential cumulative impacts on local environment.

Approach and Methodology

The consideration of cumulative impacts is an integral part of the EIA process. It is customary to assess all the effects that have the potential to arise from the combination of activities at a development site (e.g. noise and transport) and those that might occur from different developments (e.g. cumulative traffic impacts) in a particular area.

The cumulative impacts would generally be considered on a qualitative basis and would apply equally to the construction and operational phases of the development. In the case of transport movements and emissions, qualitative modelling would be implemented where necessary. These would be undertaken in accordance with best practice.

In the event that cumulative impacts are identified, mitigation measures would be proposed where necessary and practicable to address any issues that arise.

6.15 Alternative Technologies/Sites/Need

Approach and Methodology

The requirement to consider the needs and alternatives for a development is a core principle of the preparation of an Environmental Statement. In consideration of the proposed development an assessment of potential alternative sites would be undertaken, as well as the consideration of alternative waste management technology. The ES Chapter will include commentary on the following;

- The ‘No Development’ alternative i.e. the consequences of no development taking place;
- Alternative technologies – the ES will provide a summary of the main alternatives considered by the Applicant and an indication of the main reasons for the selection of the preferred technology; and
- Alternative designs – The ES will present a description of the alternative designs considered as part of the proposal, taking account of constraints and technical and environmental considerations.

There is no specific requirement in the EIA Regs to assess alternative locations for redevelopment. The site is owned by Network Rail Infrastructure Ltd and is no longer required for operational railway uses. Consequently Network Rail Infrastructure Ltd is seeking to regenerate the site and consider the site suitable for the proposed development. As such, the applicant has not considered alternative sites for the development and alternative sites will not be given consideration in the ES.

Need Assessment

Hampshire County Council has identified a need to change the way they manage and dispose of their waste. Future waste requirements have revealed that there is a need for

strategic waste management facilities to handle residual waste in the area. SLR would provide a full need analysis building on the work already undertaken by Hampshire County Council. This assessment would be provided in the Planning Statement within the planning application, rather than as a chapter in the Environmental Statement.

6.16 Development Programme and Construction

The ES will include a description of the following aspects;

- Anticipated programme and phasing of construction works;
- Methods of construction, including types of piling and foundations likely to be employed and location of construction compounds etc;
- Resource use and waste minimisation;
- Transport access for construction vehicles, routing and number of HGV movements;
- General site management in relation to environmental management and protection; and
- Construction working hours.

This information will be used to form the framework of an Environmental Management Plan (EMP) which would be implemented during construction. The detailed content of the EMP would be subject to planning conditions and agreed with Hampshire County Council prior to the commencement of construction.

6.17 Other Relevant Documents

6.17.1 Sustainability Statement

Sustainable development has become a cornerstone of Government policy in the UK, since its conception at the Rio Summit of 1992.

SLR would ensure that the proposed scheme accords with the general principles of sustainability during the design process, the facility's construction and through its operational life. The findings would be set out in a stand alone Sustainability Statement, rather than within the ES.

The Sustainability Statement would include assessment of the potential impact of the proposed facility on climate change. The potential impact of the development on climate change and the reduction of risk for the facility from climate change would be considered throughout the design of the proposal, with particular regard to the following;

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

7.0 PROPOSED STRUCTURE OF THE ENVIRONMENTAL STATEMENT

The proposed structure of the ES is set out below.

Non Technical Summary

The Non Technical Summary (NTS) would provide a summary of the proposed development and the conclusions of the technical assessments, in non technical language. The NTS would be a stand alone document.

Volume 1 Environmental Statement Chapters

- Introduction and EIA Methodology
- Site Context and Description
- Description of Development
- Landscape and Visual
- Ecology
- Archaeology and Cultural Heritage
- Land Conditions and Contamination
- Water Resources and Flood Risk
- Transport
- Air Quality and Odour
- Noise
- Alternative Technologies
- Cumulative Impact
- Summary and Conclusions

Volume 2 Figures

Volume 3 Technical Appendices

Volume 3 would provide the supporting data of the technical assessments undertaken as part of the EIA. The final list of appendices can only be confirmed following competion of the technical assessments, However, it is likely that the following would be included;

- EIA Scoping Report
- Adopted Scoping Opinion
- Transport Data

- Air Quality Technical Data
- Phase 1 Habitat Survey and Protected Species Surveys
- Phase 1 Preliminary Environmental Risk Assessment
- Flood Risk Assessment

8.0 SUMMARY AND CONCLUSION

Clean Power Properties Ltd and Network Rail Infrastructure Ltd are proposing to develop an Advanced Conversion Technology and Anaerobic Digestion facility at the Micheldever Railway Sidings in Hampshire. The development would involve the construction of a 90-150,000 tonne per annum pyrolysis ACT facility and a 50-60,000tpa Anaerobic Digestion facility, both of which would generate renewable energy. This facility has the potential to make an important contribution to waste management and renewable energy generation in Hampshire and make an important contribution to fulfilling the County Council's aspirations on future waste management for the following reasons:

- It would meet an identified need for waste management technology that diverts waste from landfill and would enable Hampshire County Council to demonstrate that they are meeting their waste management needs within their own boundaries;

- It is located on previously developed, brownfield land and has excellent transport links.

This Scoping Report has been prepared to provide Hampshire County Council and other relevant bodies with the key environmental issues that are anticipated to be associated with the proposal to enable the scope of the EIA to be finalised. The design of the scheme, in terms of appearance, technology, footprint and relationship with the wider environs is an iterative process that will form an integral part of the EIA process.

Although the formation of a Scoping Opinion by the Planning Authority is a statutory process, both the Applicant and SLR value the input of the statutory consultees and stakeholders and will be pleased to discuss any aspect of the proposed scheme with any organisation or individual. SLR Consulting Limited is contactable at:

SLR Consulting Limited, Treenwood House, Rowden Lane, Bradford on Avon, Wiltshire BA15 2AU.

Tel: 01225 309 400 Email: cherbert@slrconsulting.com

Figure 001

Site Location Plan

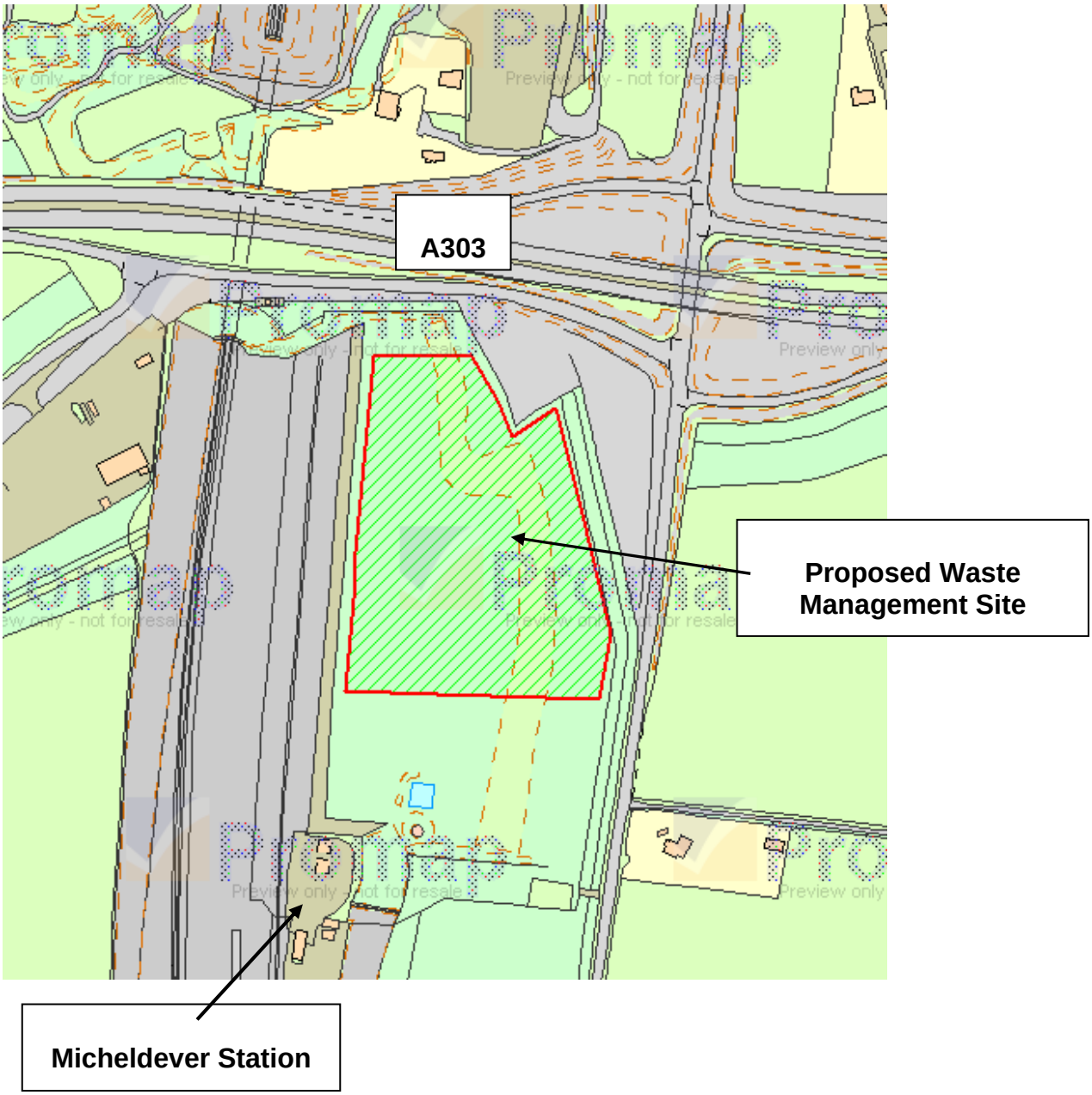


Figure 002

Indicative Process Diagram

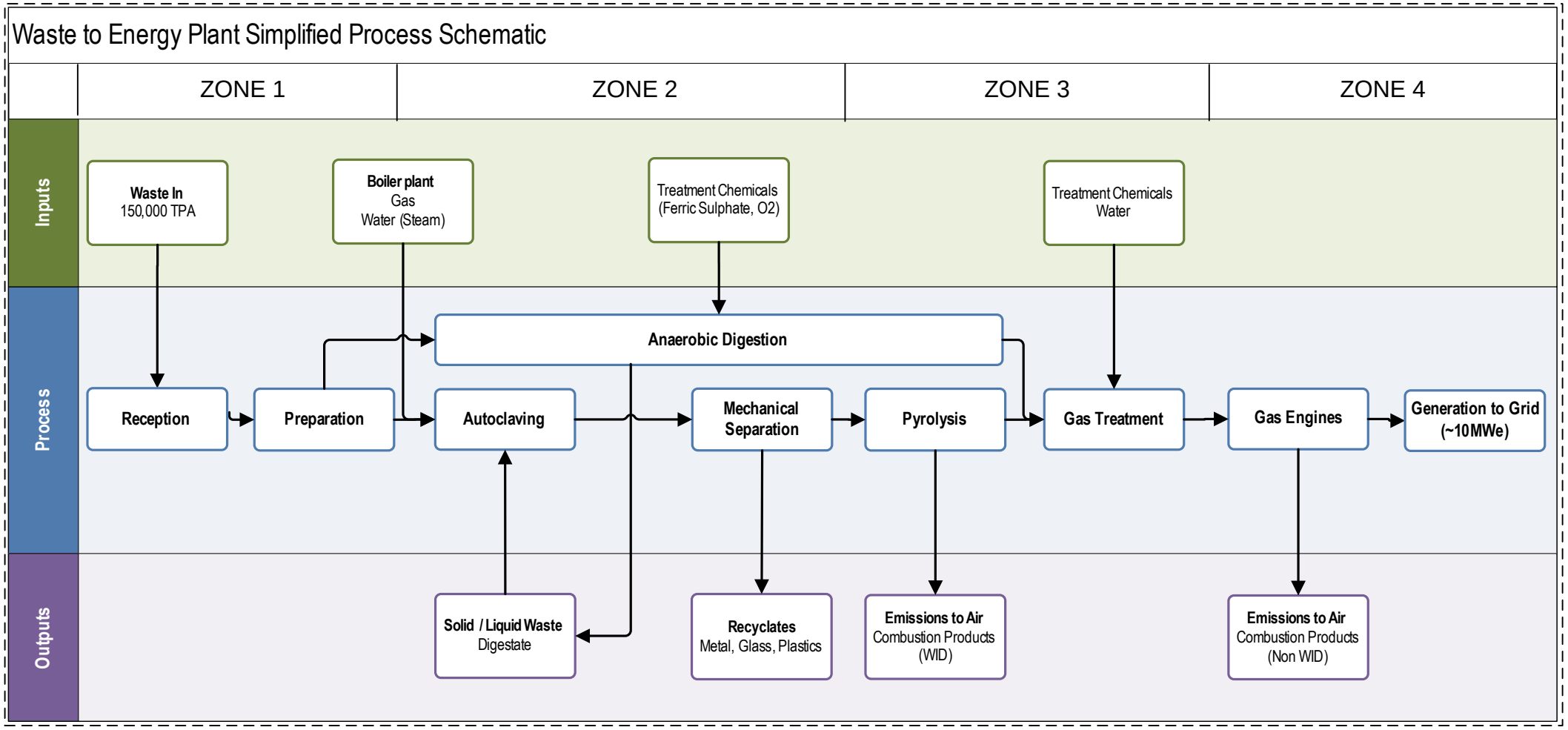
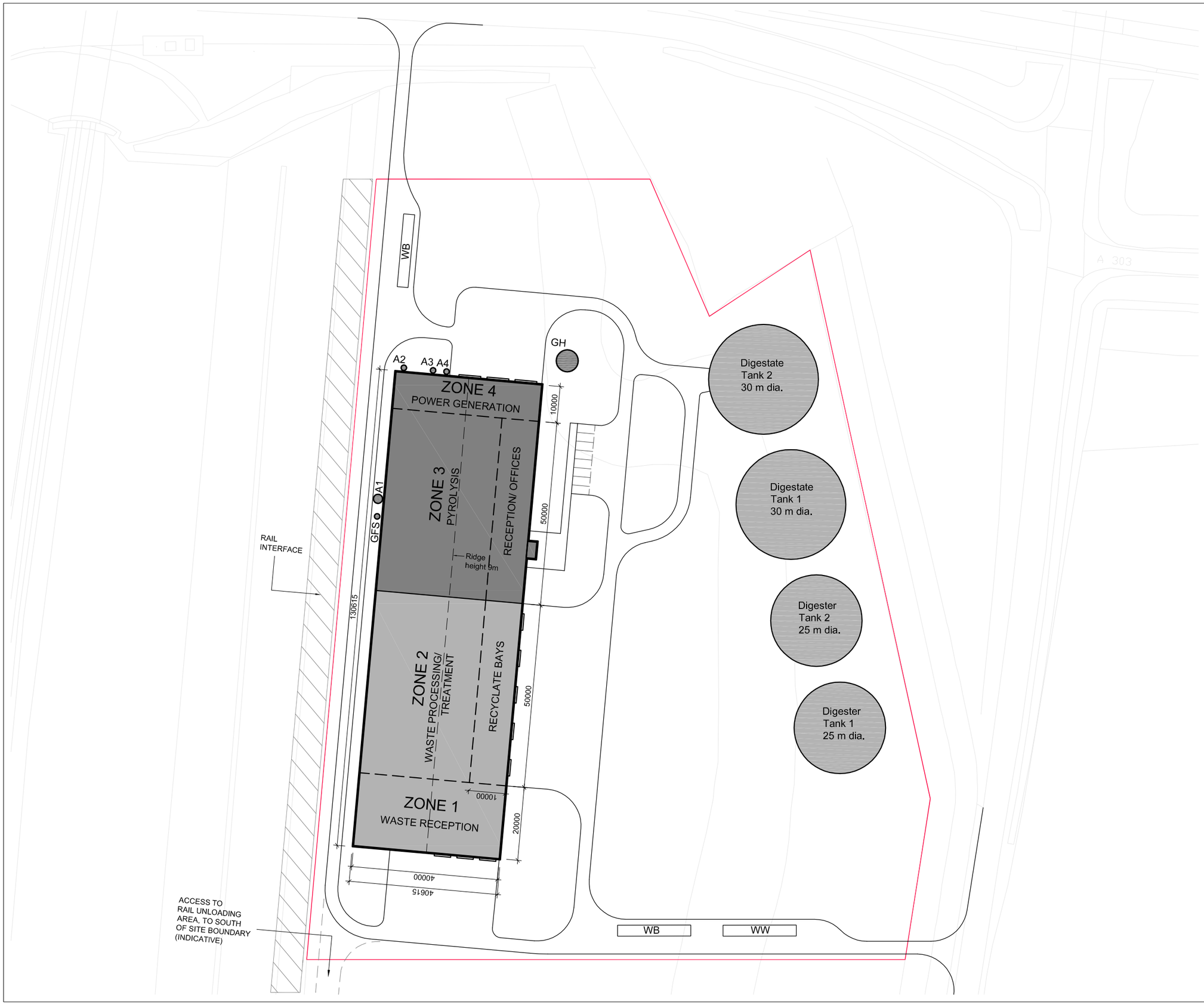

Waste to Energy Plant Simplified Process Schematic
ZONE 1
ZONE 2
ZONE 3
ZONE 4
Inputs
Process
Outputs
Waste In
150,000 TPA
Boiler plant
Gas
Water (Steam)
Treatment Chemicals
(Ferric Sulphate, O2)
Treatment Chemicals
Water
Anaerobic Digestion
Reception
Preparation
Autoclaving
Mechanical Separation
Pyrolysis
Gas Treatment
Gas Engines
Generation to Grid
(~10MWe)
Solid / Liquid Waste
Digestate
Recyclates
Metal, Glass, Plastics
Emissions to Air
Combustion Products
(WID)
Emissions to Air
Combustion Products
(Non WID)

Figure 003

Indicative Site Layout and Planning Application Boundary



Notes:

1. Do not scale from this drawing.
2. All dimensions are in millimeters unless otherwise stated.
3. All dimensions must be checked on site.
4. The designers shall be notified of any discrepancies.
5. This drawing has been produced for sole use on this project and is not intended for use by any other person or any other purpose.

Drawing Notes:

This drawing represents an Indicative site layout arrangement only, and is therefore subject to change through design development. Final positioning and size of items shown are notional and to be confirmed.

Key:

WW	:	Wheel Washing
WB	:	Weigh Bridge
A1-A4	:	Emission Stacks
GFS	:	Gas Flame Stack
GH	:	Gas Holder Tank

Rail Interface Area

REV	DATE	REVISION DETAILS	BY
A	17.01.12	GS tank & GF stack added	

entran

EDEN LODGE STUDIOS, EDEN OFFICE PARK,
CHAPEL PILL LANE, HAM GREEN
BRISTOL, BS20 0BX
TEL : 01275 375 007 / FAX : 01275 376 333

PROJECT TITLE
Energy from Waste Scheme
MICHELDEVER SITE

DRAWING TITLE
Preliminary Site Layout

CLIENT / ARCHITECT
RLand Ltd

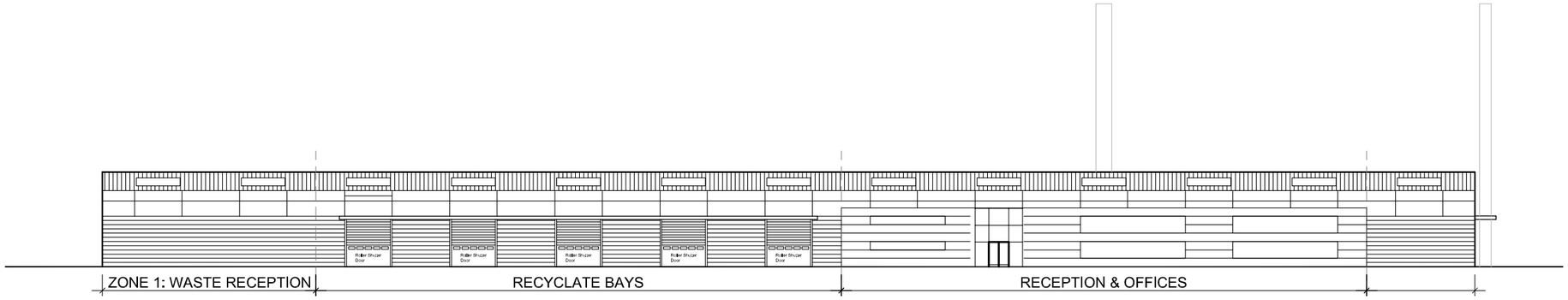
STATUS
PRELIMINARY

SCALE		DRAWN
1:1000	AT A3	JW
CHECKED		APPROVED
RW		RW

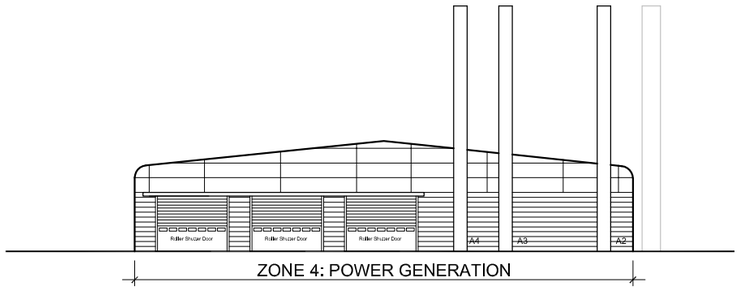
DRG SIZE	DATE	DRAWING NUMBER	REV
A3	10.01.12	SK-001	A

Figure 004

Indicative Elevation Site Plans

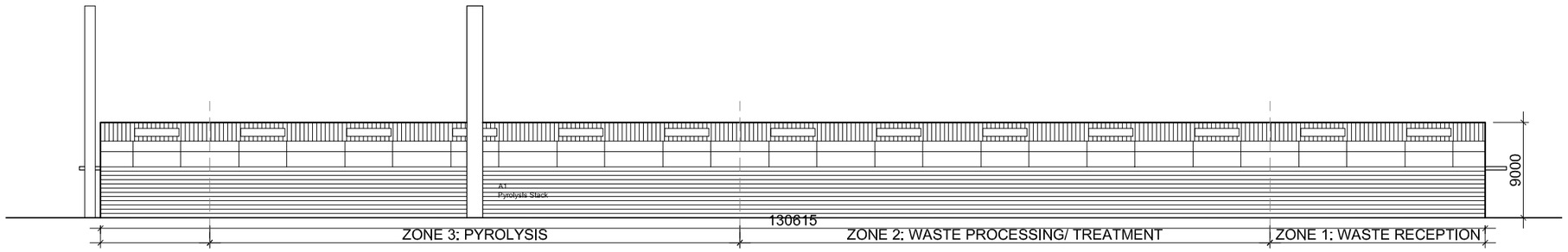


East Elevation



North Elevation

South Elevation



Notes:

1. Do not scale from this drawing.
2. All dimensions are in millimeters unless otherwise stated.
3. All dimensions must be checked on site.
4. The designers shall be notified of any discrepancies.
5. This drawing has been produced for sole use on this project and is not intended for use by any other person or any other purpose.

Drawing Notes:

1. THIS DRAWING REPRESENTS AN INDICATIVE SITE LAYOUT ARRANGEMENT AND BUILDING DESIGN ONLY, AND IS SUBJETCT TO CHANGE THROUGH DESIGN DEVELOPMENT. FINAL DESIGN TO BE CONFIRMED.

2. BUILDING CLADDING COLOUR SCHEME TO BE SELECTED TO MINIMISE VISUAL IMPACT.
3. BUILDINGS INTERIOR TO BE BE KEPT UNDER NEGATIVE PRESSURE TO PREVENT ODOUR IMPACTS.
4. ALL WASTE RECEPTION & DELIVERIES TO BE CARRIED OUT WITHIN THE BUILDING.
5. ROOFLIGHTS TO MAXIMISE NATURAL DAYLIGHT WITHIN THE BUILDING.
6. GREEN ROOF TO BE CONSIDERED AS PART OF THE 'SUDS', AND ECOLOGY STRATEGIES.

REV	DATE	REVISION DETAILS	BY
-	-	-	

entran
EDEN LODGE STUDIOS, EDEN OFFICE PARK,
CHAPEL PILL LANE, HAM GREEN
BRISTOL, BS20 0BX
TEL : 01275 375 007 / FAX : 01275 376 333

PROJECT TITLE
Energy from Waste Scheme
MICHELDEVER SITE

DRAWING TITLE
Preliminary Elevations

CLIENT / ARCHITECT
Clean Power Properties Ltd

STATUS
PRELIMINARY

SCALE		DRAWN
1:500	AT A3	JW
CHECKED		APPROVED
RW		RW

DRG SIZE	DATE	DRAWING NUMBER	REV
A3	21.01.12	SK-002	0

Figure 005 Sensitive Receptors within 3km of site

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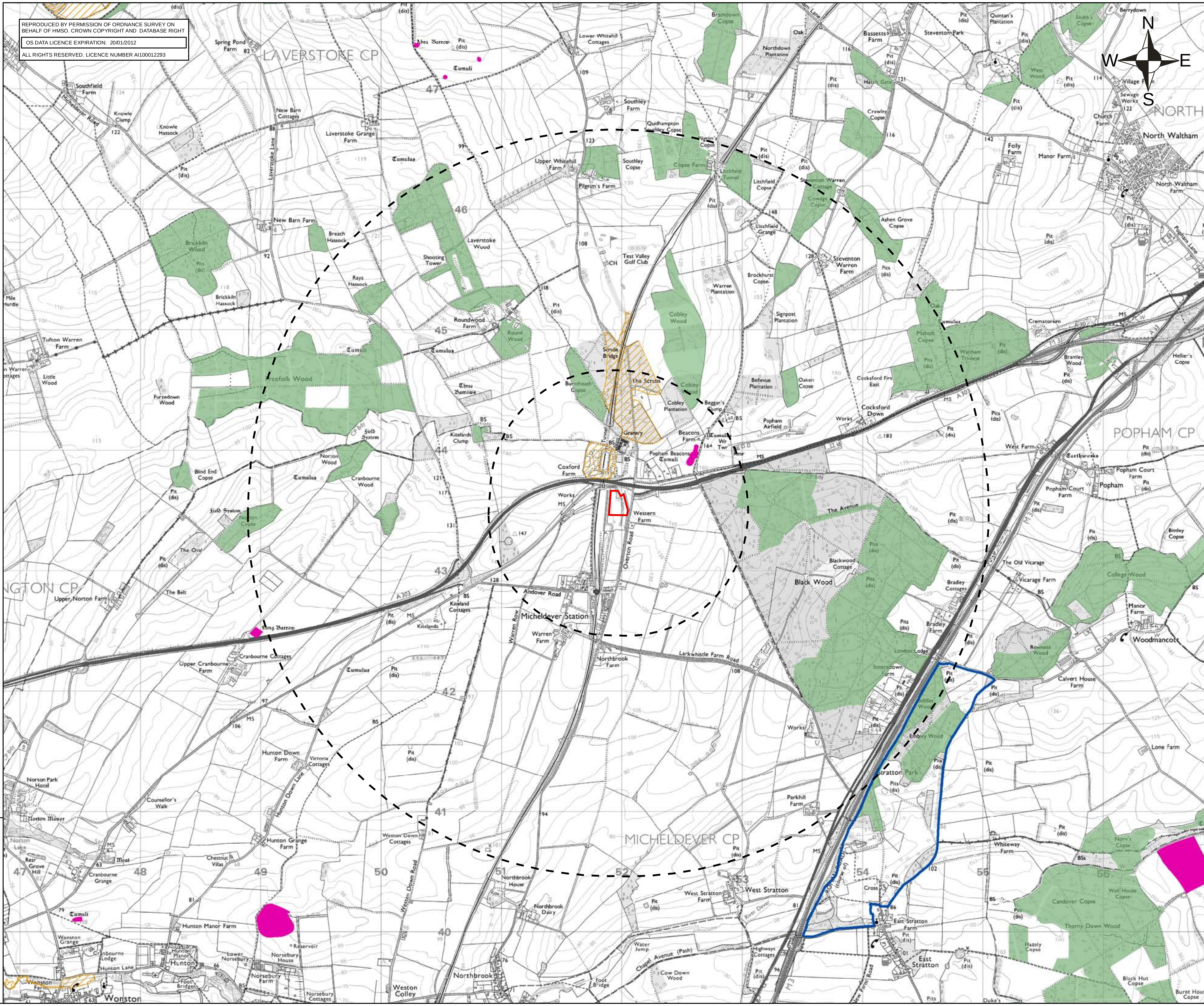

3620.0004.005 Site Receptors

NOTES

1. NOTES

LEGEND

(red outline)	APPLICATION BOUNDARY
(dashed outline)	1KM & 3KM BUFFER FROM SITE BOUNDAY
(orange hatching)	SITE OF SPECIAL SCIENTIFIC INTEREST
(blue outline)	PARK AND GARDEN
(green fill)	ANCIENT WOODLAND INVENTORY
(magenta fill)	SCHEDULED MONUMENT

CLEAN POWER PROPERTIES LIMITED & NETWORK RAIL INFRASTRUCTURE LIMITED

SLR
4 THE ROUNDAL
RODDINGLAW BUSINESS PARK, GOGAR
EDINBURGH. EH12 9DB
T: 0131 335 6830
F: 0131 335 6831
www.slrconsulting.com

MICHELDEVER

SCOPING OPINION

POTENTIAL RECEPTOR (3KM RADIUS)

005

Scale 1:30,000 @ A3

Date FEBRUARY 2012