

VIRIDOR

**Proposed Development of a
Waste Treatment Plant,
Lostock Gralam, Cheshire**

Scoping Report

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Viridor

Proposed Development of a Waste Treatment Plant, Lostock Gralam, Cheshire

Scoping Report

PREPARED BY:

M D Chamberlain Engineering Geologist

A J Mitchell Associate Director

APPROVED BY:

K R J Mitchell Director

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CONTENTS

1	Introduction.....	1
2	Site Location and Description	3
3	Description of Proposed Development.....	4
4	Planning Policy	9
5	Environmental Assessment Methodology	10
6	Landscape and Visual Assessment	11
7	Ecology and Nature Conservation	13
8	Geology, Mining, Ground Conditions and Land Quality.....	15
9	Hydrology, Hydrogeology, Drainage and Flood Risk.....	17
10	Archaeology and Cultural Heritage	19
11	Traffic and Transport	20
12	Noise	22
13	Air Quality and Public Health	24
14	Assessment of Amenity	26
15	Summary and Conclusions	28

APPENDICES

Appendix A	MBT Process Flow Diagram
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DRAWINGS

LE10104/EIA 001	Site Location
LE10104/EIA 002	Site Setting
LE10104/EIA 003	Proposed Site Layout

1 INTRODUCTION

- 1.1 Viridor are one of two remaining bidders that have reached Stage 3 of Cheshire's Waste Treatment PFI Contract.
- 1.2 Through the contract, Cheshire West and Chester, and Cheshire East will establish how they will address the management of residual waste over the next 25 years. Like all local authorities, they have to meet challenging targets to divert large volumes of waste away from landfill in order to avoid increasing rates of landfill tax and large potential fines (under the Landfill Allowance Trading Scheme).
- 1.3 Viridor is seeking planning consent for the development of a Waste Treatment Plant (WTP) at the former works at Lostock Gralam, near Northwich, Cheshire. The site location is shown on Drawing Number LE10104/EIA 001. The development will be a key site and will be in a strategic location for the treatment of all kerbside collected and Household Waste Recycling Centre (HWRC) derived residual municipal waste from across the areas of Cheshire West and Chester, and Cheshire East.
- 1.4 The proposed development of the WTP at Lostock Gralam will form an important part of the strategy to ensure that the majority of wastes generated within the Cheshire area can be managed within the region. In doing so, the location of the proposed site will accord with locational principles and will minimise waste transport.
- 1.5 This report has been prepared by Wardell Armstrong LLP, on behalf of Viridor, to provide background information on the Lostock Gralam former chlorine works site and the proposed development, and to identify the scope of environmental issues to be addressed in detail in an Environmental Statement.
- 1.6 In accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, Viridor, as applicants, will undertake an Environmental Impact Assessment (EIA) and submit an Environmental Statement (ES) to accompany the planning application for the proposed Waste Treatment Plant at Lostock Gralam.
- 1.7 The objectives of the assessment are:
 - to ensure that concerns about the environmental effects of the development are identified and fully considered; and
 - to enable the design of mitigation measures during the construction and operational phases of the project to minimise any potential adverse impacts.

- 1.8 In accordance with Regulation 10 of the 1999 EIA Regulations and in line with best practice, the overall EIA process is being initiated through a scoping exercise with the Planning Authority and in consultation with other bodies. Based on this Scoping Report, Viridor is now requesting a Scoping Opinion from Cheshire West and Chester Unitary Authority.
- 1.9 The process of scoping defines the terms of reference of an environmental assessment. The proposed assessment will focus on the principal issues, as identified in this Scoping Report. Based on preliminary evaluation of the site and the development proposals, the issues that we propose to address are as follows:
- Landscape and Visual Assessment;
 - Ecology and Nature Conservation;
 - Geology, Mining, Ground Conditions and Land Quality;
 - Hydrology, Hydrogeology, Drainage and Flood Risk;
 - Archaeology and Cultural Heritage;
 - Traffic and Transport;
 - Noise;
 - Air Quality and Public Health; and
 - Amenity.

2 SITE LOCATION AND DESCRIPTION

- 2.1 The site is located off Griffiths Lane, Lostock Gralam, approximately 2km east of Northwich town centre. The site is located in an industrial setting consisting of existing and former chemical works close to the A559 (Manchester Road). Access to the site is located off the A530 Griffiths Road and is shared with the other uses of the chemical complex. Its location is shown on Drawing Number LE10104/EIA 001.
- 2.2 The site of the proposed Waste Treatment Plant (WTP) is circa 3.38 ha in size and presently comprises derelict industrial buildings, tanks and pipework, having been used formerly for chlorine manufacture up until 2001. Railway sidings are present along the northern edge of the site. The site is part of a larger chemical industrial complex. Drawing Number LE10104/EIA 002 shows the setting of the site.
- 2.3 The site is bounded to the north by the Altrincham and Chester railway line. Beyond the railway line to the north lie a number of light industrial units and residential properties. The closest industrial unit is 143m to the northwest. The closest residential property is 200m to the north, on Manchester Road.
- 2.4 We understand that there are also proposals for residential developments at Hargreaves Road and Wade Works. These lie approximately 500m or more to the south west of the Lostock Gralam site.
- 2.5 An area of open land lies to the west, beyond which are residential properties, the nearest of which lies some 590m west south west of the site. Bedminster International/Organic Waste Management Ltd have recently received planning permission for the development of a bio-energy plant on part of this open land that lies immediately adjacent to the western site boundary.
- 2.6 Wade Brook runs adjacent to the southern site boundary, in a general east to west direction. To the south of Wade Brook lies Griffiths Park, a former landfill site. Beyond Griffiths Park are residential properties some 500m from the site. Adjacent to the east of the site is the Solvay industrial plant. Beyond the Solvay facility are further works which make up the Brunner Mond facility.
- 2.7 In developing their strategy, Viridor will take into account all of the potential physical and social receptors to ensure that the design and operation of the proposed development will have minimal negative effects and, in fact, may lead to improvements since it will result in the redevelopment of a currently derelict, brownfield site.

3 DESCRIPTION OF PROPOSED DEVELOPMENT

Introduction

- 3.1 Viridor propose to construct a Waste Treatment Plant (WTP) comprising a Mechanical Biological Treatment (MBT) facility with biodrying technology, an HWRC waste treatment facility, and an associated amenity and education building.
- 3.2 The WTP will treat kerbside collected residual waste and residual waste from HWRCs delivered by heavy good vehicles (HGVs) from two Waste Transfer Stations (WTS) located at Crewe and Macclesfield in Cheshire East, and from a WTS at Ellesmere Port in Cheshire West and Chester. Kerbside collected residual waste will also be delivered from the surrounding area directly to the facility by Refuse Collection Vehicles (RCVs). A small proportion of residual waste from industrial and commercial sources will also be delivered direct to the facility. This combination of facilities will enable more practical, environmentally sound and economic movement of materials to the WTP.
- 3.3 The WTP is designed with a capacity of up to 250 000 tonnes per annum and will produce an output of various recyclates (aggregates, metal, plastic, etc), Solid Recovered Fuel (SRF) which will be sent on to a thermal power station operated by INEOS in Runcorn, and a small quantity of material that will be sent to landfill.
- 3.4 It is proposed that the SRF produced at the plant will be transported to the Runcorn thermal power station by rail, utilising the extant rail sidings located on the northern boundary of the site. The use of rail will necessitate the construction of a gantry crane in the north of the site, for loading SRF onto wagons. This will have the benefit of reducing vehicle movements on the local road network.
- 3.5 Highway access to the WTP site is off the A530 Griffiths Road, and is shared with the users of the adjacent chemical complex.

Hours of Operation

Opening Hours

- 3.6 The WTP will be open to accept waste and dispatch recyclates, SRF and unusable residual waste between the hours of
 - 0700 and 1930 Monday to Friday, and
 - 0700 and 1930 Weekends and Bank Holidays.
- 3.7 Waste will be delivered direct from Waste Collection Authorities (WCAs), the HWRC Contractor and from the WTSs between these hours.

Processing

Biodrying Facility

- 3.8 The biodrying tunnels will process waste on a 24 hour per day basis, 7 days a week. Mechanical preparation and treatment of the waste will occur on a two shift system between 0700 and 2300; each shift will be of 8 hours and will be between 0700 and 1500 and 1500 and 2300, 7 days per week.
- 3.9 One hour of each shift will be set aside for cleaning and routine maintenance.

HWRC Waste Treatment Plant

- 3.10 The HWRC Waste Treatment plant will operate a single shift working pattern and accept contract waste between the hours of:
- 0700 to 1930 Monday to Friday
 - 0700 to 1930 Weekends and Bank Holidays
- 3.11 An additional maintenance/cleaning shift will operate overnight as and when required to undertake major maintenance operations. This will be undertaken by third party maintenance contractors supervised by Lostock site staff.

Additional Opening Hours

- 3.12 As part of the Contract to deliver services to the Cheshire authorities, Viridor would be required to provide an extension to the waste reception service at the facility in case of collection overruns or emergencies on request from the Waste Disposal Authority. The longer operating hours required can readily be accommodated as the site will be manned on a two shift system from 0700 to 2300. As part of the planning application, Viridor would seek the ability to open for longer than the normal waste reception hours where required and at the request of the Waste Disposal Authority.

The Waste Treatment Plant

Mechanical Biological Treatment Plant

- 3.13 The Mechanical Biological Treatment (MBT) processing building comprises a waste reception hall, a mechanical separation process hall, a biodrying tunnel hall and a refinement processing hall. Together, the MBT processing building will be approximately 156m x 96m, with a height of between approximately 10m to 14m

to eaves. It is located in the centre of the site, as shown on Drawing Number LE10104/EIA 003.

- 3.14 RCVs carrying residual waste direct from local kerbside collections by Cheshire West and Chester, and Cheshire East Waste Collection Authorities (WCA), and HGVs carrying residual waste collected from the three WTSs will weigh in at the two designated weighbridges and proceed to the waste reception hall inside the main building. All waste tipping, temporary storage and processing will take place within the MBT building which will be sealed with controlled ventilation to prevent odour release, and to ensure a safe working environment for plant operators.
- 3.15 Once tipped in the waste reception hall, residual waste will be initially screened for oversized objects and transferred using a loading shovel and a wheeled 360° excavator with a grab attachment, into the adjacent mechanical separation process hall and shredded prior to mechanical separation. A first-in first-out operating procedure will apply in order to ensure good management of waste to comply with Environmental Permit storage conditions and prevent waste material from being left for too long in the reception hall.
- 3.16 The reception hall will have six entrances to allow the entry/exit of delivery vehicles. These doors will be equipped with fast acting roller shutters. These will remain closed unless a vehicle requires entry/exit from the hall and when the door is open, the entrance will be shielded by an air curtain to maintain a barrier to fugitive emissions, particularly of odour. By undertaking all tipping operations within the building, minimising the time doors are open and protecting open doors with air curtain technology, the incidence of airborne dust and litter migrating out of the reception hall is also negated.
- 3.17 The control of dust, odour and bioaerosol levels within the reception hall will be maintained by the constant change of air provided by the process air treatment system.
- 3.18 The Mechanical Treatment process will segregate ferrous and non-ferrous metals, glass and aggregate from the residual waste, generate a component of the final output SRF and leave an organic rich fraction which will pass to the biodrying (biological treatment) process. By separating metals and high calorific waste, a substantial amount of the residual waste will be used for material recovery and energy production.
- 3.19 The objectives of the Mechanical Treatment phase are:
 - Reduction of waste size by shredding;
 - Size fractionation of the shredded waste to facilitate separation of component fractions;

- Separation of ferrous and non-ferrous (mainly aluminium) metals for further recycling;
 - Removal of contraries;
 - Separation of a component fraction of the SRF to be dispatched off site for energy recovery; and
 - Production of an organic fraction to be dried in the biodrying process.
- 3.20 The mechanical element of the process will take place using a combination of enclosed sorting equipment and enclosed conveyors with air extraction to reduce the levels of dust and bioaerosols in the working environment to the lowest practicable level.
- 3.21 At the end of the mechanical treatment process, the wet organic fraction will be transferred via the distribution hall, to concrete 'biodrying' tunnels in the adjacent biodrying hall.
- 3.22 During the biodrying phase, the organic materials from the mechanical treatment phase will be loaded into biodrying tunnels enclosed within the biodrying hall. In the biodrying process air is introduced, via pipework, into the base of the waste. This air flow promotes aerobic conditions and the waste begins to self heat via the action of micro-organisms. This self heating, which is the start of a composting process, serves to drive off moisture while reducing the overall energy requirement of the process by minimising additional heating requirements within the biodrying tunnels.
- 3.23 The bio-drying process is managed in closed aerobic treatment units with exhaust air collected in the closed exhaust air system direct from the tunnels, ensuring no odours are released to the atmosphere.
- 3.24 On completion of the biodrying phase which takes approximately 13 days, the material is unloaded from the tunnel and passes to the refining hall where further recycle recovery takes place and the remaining material passes to the outloading area to be added as a component of the solid recovered fuel (SRF).
- 3.25 In summary, the waste treatment process follows the stages set out below, with a flow diagram detailing the treatment processes included as Appendix A:
- Waste reception
 - Mechanical processing – outputs comprise SRF feedstock, aggregates, metals and a small quantity of untreatable material to landfill
 - Biodrying – water loss and production of SRF feedstock
 - Refining – bio-dried material refined to remove aggregate

- Combining of SRF feedstocks to produce an SRF suitable for treatment at the thermal power station.
- 3.26 All the process buildings will be subject to air extraction and this air will pass through dust filters and a biofilter prior to discharge via a stack.
- 3.27 The biofilters are separated from the main building, and will measure approximately 74m x 20m by 5m high. The stack will be circa 20m high, subject to the results of air quality modelling.

HWRC Waste Treatment Facility

- 3.28 The HWRC Waste Treatment Facility will receive residual waste from HWRCs in Cheshire, with the waste either being direct delivered by the HWRC Contractor or delivered from Waste Transfer Stations by Viridor haulage vehicles.
- 3.29 The treatment facility for the HWRC residual waste will accept the waste, will carry out some separation of bulky recyclable materials and unsuitable materials and will then shred the waste. Further metal removal will then be undertaken and the composition of the remaining waste is such that it can then go to form a component part of the solid recovered fuel (SRF) to be despatched from the site for energy recovery. Materials which cannot be recycled or form part of the SRF stream will be despatched from the site to landfill.
- 3.30 The doors of the HWRC Waste Treatment Facility will be of a fast acting design and will remain closed other than to allow delivery vehicles to enter or exit the hall. This will control the risk of dust or litter being emitted from the facility. Based on the anticipated composition of this waste stream, it is not considered that there will be any requirement for air extraction from this facility. The potential for the generation of odour or bio-aerosols is very low and there will be no impact on amenity or on operational staff. However, air extraction pipework connected to the main plant biofilter will be fitted such that air extraction can be undertaken if required.

Site Office and Welfare Facilities

- 3.31 Site office and welfare facilities will be provided for employees and visitors. Located in the east of the site, near the site entrance, as shown on Drawing Number LE10104/EIA 003, it will have adequate parking provided for cars, motorcycles and disabled users. An education and visitor centre will be incorporated into the design of the site offices. The office building will be circa 30m x 26m and 6m high to eaves.

4 PLANNING POLICY

- 4.1 A review of national, regional and local planning policies and guidance relating to waste management development has been undertaken. This review confirms that the proposals accord with relevant national, regional and local policies in relation to the provision of waste treatment facilities and that there is no conflict with planning policy in the redevelopment of this site.
- 4.2 A detailed planning policy review will be provided in the planning application for the development. The policy review will be contained within a Supporting Statement, which will be prepared in support of the planning application for the development. A Design and Access Statement will also be prepared.
- 4.3 The proposals at the site will move the management of wastes up the waste hierarchy. The WTP will increase recovery of recyclable material from residual household wastes and produce useful solid recovered fuel from the waste input.
- 4.4 The proposed development represents an opportunity to drive forward and implement a sustainable waste management strategy which will help reduce reliance on landfill and reduce the impact on the environment. The facilities will help deliver an integrated waste management strategy for the Cheshire Region.

5 ENVIRONMENTAL ASSESSMENT METHODOLOGY

- 5.1 The proposed scheme has been assessed against the criteria set out in the Town and Country Planning (Assessment of Environmental Effects) Regulations 1999 (SI No 293) to determine the requirement for an Environmental Impact Assessment (EIA).
- 5.2 The type of development proposed falls within Schedule 2 of the Regulations, and by virtue of its characteristics, location and the nature of the potential environmental impacts, it was considered that an EIA would most likely be required.
- 5.3 The Environmental Statement will follow established Environmental Impact Assessment (EIA) procedures. In EU countries procedures are based on the EU Directive 97/11/EC (updating 85/337/EEC) which are implemented in the UK by the Town and Country Planning (Assessment of Environmental Effects) Regulations 1999 (SI No 293) (Amended November 2000).
- 5.4 The Department of Communities and Local Government published a consultation paper entitled "Environmental Impact Assessment: A Guide to Good Practice and Procedures" June 2006. The Environmental Statement will be prepared in accordance with such guidance and will accompany a planning application with a Supporting Statement. The Supporting Statement will give consideration of alternative schemes and establish the need for the development (as required by the legislation) as well as an examination of the planning and policy background, and a detailed description of the proposed scheme.
- 5.5 Viridor have undertaken preliminary environmental assessment works and have identified the extent of impacts to be considered in an Environmental Statement to include only those issues set out in the following sections as being the most important and relevant.
- 5.6 Potential impacts will be assessed in detail as part of the EIA process and will be discussed in depth within the Environmental Statement, submitted as part of the planning application. An initial discussion of the potential impacts of each issue and the type of assessment that will be undertaken is provided in the following chapters of this Scoping Report.

6 LANDSCAPE AND VISUAL ASSESSMENT

Introduction

- 6.1 The Landscape and Visual Assessment within the EIA will involve a study of the existing landscape character, identification of viewpoints within the visual envelope and an assessment of the sensitivity of such views with and without mitigation. The results of the assessment will form the basis of the landscape mitigation proposals. Drawing Number LE10104/EIA 002 shows the area in which the site is located.

Existing Conditions and Proposals

- 6.2 The site consists of derelict buildings, tanks, pipe-work and various other structures associated with its former use as a chlorine works. Concrete hardstanding is present between the structures across the site, with an area of scrub and trees in the south, adjacent to Wade Brook that flows just outside the southern site boundary. To the west and south of the site is open ground, to the north of the site is a railway line beyond which are light industrial units and residential properties. The Solvay industrial plant is located to the east of the proposed development.
- 6.3 The closest industrial unit is 143m to the northwest of the site. The closest residential properties to the site are 200m to the north, 500m to the south and 590m to the west. It is understood that new residential properties are planned for an area of land approximately 500m to the south west of the site. The site setting is shown on Drawing Number LE10104/EIA 002.
- 6.4 In addition, Bedminster International/Organic Waste Management Ltd have recently received planning permission for the development of a bio-energy plant on part of the open land that lies immediately adjacent to the western site boundary.
- 6.5 The proposals for this application entail demolition of the existing derelict structures on the site, and constructing a Waste Treatment Plant (WTP) and associated site office and welfare building. There will be five buildings in total at the site: the main MBT processing building, the HWRC Waste Treatment building, the biofilter/air treatment building, the site office/education building, and the weighbridge office. Access and service areas will be of hardstanding, with soft landscaping adjacent to the site office building and car park. Further description of the development proposals is given in Section 3 of this report.

Method of Assessment

- 6.6 A detailed visual impact assessment will be undertaken to analyse the effects of the development from residential properties, the road network, public rights of way and public open space. This will analyse potential visual impacts over time. It will identify key views and inform the landscape proposals for the scheme. The effect of the proposed scheme on landscape policies and the landscape character of the area will be examined.
- 6.7 The landscape and visual assessment will be carried out by a combination of desk study and site visits. The methodology laid down in the guidelines published by the Landscape Institute and Institute of Environmental Management and Assessment, "Guidelines for Landscape and Visual Impact Assessment" (2002) will be followed. This places emphasis on impacts on the landscape resource requiring the existing local landscape character, and its sensitivity to change, to be established.

7 ECOLOGY AND NATURE CONSERVATION

Introduction

- 7.1 This section of the EIA will provide an assessment of the existing habitats, flora and fauna, within and in the immediate vicinity of the site.

Existing Conditions

- 7.2 The site is located within a mainly industrial area to the northeast of Northwich. There is no soft landscaping on site currently, although the surrounding land to the north, west and south is predominantly scrub. The site area comprises derelict buildings and hardstanding. There is one watercourse, Wade Brook, adjacent to the site. In addition, one pond lies beyond the rail line to the north of the site.
- 7.3 No statutory or non-statutory sites of ecological importance are on or within 2km of the site.
- 7.4 An extended Phase 1 Habitat survey has been carried out to assess the site in terms of its nature conservation value and potential for protected species.
- 7.5 The Habitat survey was undertaken during July 2008 and determined the site as a whole to be of low ecological value. The survey did not identify the presence of any protected species within the site or immediate surrounds although it did identify some potential habitats for birds and small mammals within the trees and vegetation along Wade Brook to the south of the site and potential habitats for bats within some of the structures on site. The survey also identified a pond to the north of the site that could potentially provide a habitat for Great Crested Newts.
- 7.6 With regards to the potential habitats identified, the report indicated that there are no likely migration routes from the potential Great Crested Newt habitat onto the site due to physical barriers (a mainline railway and embankments) and no suitable habitats within the site and as such, Great Crested Newts are not considered to be present at the site.
- 7.7 The Phase 1 survey indicated that there is the potential for bats to roost within the site, and recommended that a bat survey should be conducted prior to any works that might disturb buildings at the site (and any necessary mitigation measures undertaken, should bats be identified).
- 7.8 There is the potential for birds to nest along Wade Brook, and the Phase 1 report indicated that any vegetation clearance works should be undertaken outside of bird breeding seasons if possible (or vegetation checked by a qualified ecologist prior to works if this is not possible). Wade Brook also provides a potential

habitat for water voles; as such, the report recommended a stand-off area from the brook of around 5-10m at all times to prevent disturbance.

- 7.9 Whilst now out of date, the extended Phase 1 Habitat survey undertaken in July 2008, provides useful background information for the assessment that is proposed as part of the EIA for the proposed WTP development.

Method of Assessment

- 7.10 The Phase 1 habitat survey of the application area will be updated. Habitat types present on site will be identified and mapped following techniques outlined in the 'Handbook for Phase 1 Habitat Survey', Joint Nature Conservation Committee, 1993. The plant species present will be recorded, and a reconnaissance survey for protected species will be carried out.
- 7.11 The Phase 1 survey will record any evidence or sightings of protected species and will highlight if further, specialist, protected species surveys are required.
- 7.12 Based on the recommendations of the July 2008 Phase 1 Habitat survey, a bat survey will be carried out.
- 7.13 The assessment of ecology in the Environmental Statement will include the following:
- a habitat survey including mapping and description of vegetation types;
 - an assessment of the site in terms of its value for fauna;
 - an appraisal of sites of significance for nature conservation within 2km of the site boundary;
 - an overall evaluation of the site in terms of its nature conservation value;
 - an assessment of the potential ecological impacts of the proposed development;
 - the results of a bat survey; and
 - recommendations for mitigation.
- 7.14 Information recorded during the ecological survey, combined with existing information from appropriate sources, will form the basis for the assessment of the potential impacts. Where adverse impacts arise, proposed mitigation principles will be put forward.
- 7.15 The assessment will be carried out in accordance with appropriate guidance such as the guidelines for baseline ecological assessment, Institute of Ecology and Environmental Management (IEEM); and Guidelines for Ecological Impact Assessment, EclA.

8 GEOLOGY, MINING, GROUND CONDITIONS AND LAND QUALITY

Introduction

8.1 The assessment will consider the following broadly related effects, in relation to the potential impacts on the development of the site:

- Geology
- Mining
- Geotechnical properties and soil stability,
- Contaminated land;
- Contaminated controlled water; and
- Ground gas.

Existing Conditions and Proposals

Geological Conditions and Land Quality

8.2 Ground investigation work has recently been undertaken on site by contractors. Boreholes have been drilled and trial pits excavated, with soil and groundwater samples taken and sent for laboratory geotechnical and chemical analysis. Ground gas monitoring wells have been installed and are being monitored for the presence of ground gases.

8.3 In summary, the preliminary results of the ground investigation indicate that variable made ground is present across the site from ground level to between 0.6m and 5.0m below ground level. Below the made ground, natural superficial deposits of clay are present until mudstone is encountered between 5.7m and more than 15.5m below ground level.

8.4 A major geological fault crosses the site, trending in an approximate north-south direction.

8.5 The findings of the ground investigations will form part of the Environmental Statement.

Mining Setting

8.6 The Coal Authority Ground Stability Report, reference 10055534-09, dated 7th May 2009, obtained for the site shows the site to lie outside any defined coalfield area. Therefore the site will not be at risk from potential ground instability resulting from historical or current coal mining. However, the site lies just outside the Cheshire Brine Subsidence Compensation District, and is underlain by

mudstone and soluble halite deposits. Records also show that there are a number of 'brine wells' in several locations at and adjacent to the site. Therefore there is the possibility that brine extraction has taken place beneath the site, giving rise to the potential for voids to be present beneath the site, which could cause ground instability. However, the Brine Compensation Board's records indicate that no brine was found in any of the wells, and therefore it is considered that these wells were not productive.

Method of Assessment

- 8.7 The detailed assessment will involve the characterisation of the geological baseline of the site for both drift and solid bedrock geology, and with regard to the potential for soil and controlled water contamination, geotechnical stability and potential ground gas emissions. The evaluation of the significance of predicted effects will take into account the magnitude of impacts (before and after mitigation) and the sensitivity of the baseline environment affected.
- 8.8 The EIA will take into account the possible presence of ground settlement, contamination and landfill gas. Thorough site investigation in the areas proposed for development and monitoring of gas/groundwater installations constructed during the site investigation will be undertaken to feed into the design proposals. Such issues are commonly encountered on development sites, and appropriate mitigation measures will be designed to enable the safe development of the facility.

9 HYDROLOGY, HYDROGEOLOGY, DRAINAGE AND FLOOD RISK

Introduction

- 9.1 The assessment will include a hydrological and hydrogeological assessment and the preparation of a desk-based drainage and flood risk assessment.

Existing conditions and proposals

- 9.2 The site is located within an area of mudstone and halite of the Northwich Halite Formation, and mudstone of the Eldersfield Mudstone Formation, which are classified as a Non-Aquifer in terms of the Environment Agency policy and practice for the protection of groundwater. In the south of the site, alluvium drift deposits associated with Wade Brook are classified as a Minor Aquifer. The site does not fall within or near to any groundwater public water supply Source Protection Zones although there are a number of groundwater abstraction licenses in the vicinity of the site (the closest being approximately 319m to the east of the site). Wade Brook is the closest watercourse to the site, present along the southern site boundary.

Method of Assessment

- 9.3 The first part of the assessment will describe the baseline hydrological and hydrogeological conditions within the site and surrounding area. A desktop study will be used to compile a conceptual model of the characteristics of the hydrogeology of the area. The second part will determine the impact of the schemes on the local water resources and describe measures to mitigate those impacts.
- 9.4 A Flood Risk Assessment (FRA) will be prepared in accordance with the guidance set out in Planning Policy Statement (PPS) 25; – Development and Flood Risk and included as an appendix to the Environmental Statement.
- 9.5 The scope of this desk based Flood Risk Assessment is expected to require the following:
- A review of existing available reports, studies and documentation;
 - Liaison with the Water Authority, Environment Agency and Local Authority to confirm drainage outfall positions, constraints and flooding information;
 - A site walkover;
 - Compilation of a drainage strategy/constraints plan following a review of available information;

- Basic flood modelling to determine the flood levels/extents, given that it is known that the Environment Agency hold no existing flood level information for the site; and
- Preparation and issue of a Flood Risk Assessment and input into the EIA.

9.6 In addition to the above hydrological assessment, baseline hydrogeological conditions within the site and the surrounding area will be established by means of a site walkover survey, in conjunction with desk-based research and site investigation. The desk-based research will include reference to the following:

- Published geological mapping – to identify the structure of the site, potential pathways and sources:
- Published hydrological and hydrogeological data – to identify any potentially sensitive receptors:
- Existing groundwater and surface water quality data; and
- Reported pollution incidents – to identify records of pollution incidents that could affect (or have affected) the site.

10 ARCHAEOLOGY AND CULTURAL HERITAGE

Introduction

- 10.1 This section of the Environmental Statement will provide an assessment of the cultural heritage and archaeological sensitivity of the proposed development and its immediate vicinity. The section will assess the impacts of the proposed development on the identified archaeological resource and other aspects of cultural heritage and consider appropriate means of mitigating these impacts.

Method of Assessment

- 10.2 The Cheshire Historic Environment Record (CHER) will be consulted for entries within the search area (taken as an area of approximately 250m radius from the centre of the site). Besides identifying sites that may be directly or indirectly affected by the proposed development, this search boundary is expected to provide sufficient data to represent the archaeological character of the area.
- 10.3 The primary objective of the section will be to compile a detailed assessment of the archaeology of the site in accordance with the IFA standard and guidance for archaeological desk-based assessment (revised 2008), to include an evaluation of the condition and nature of potential archaeological remains.
- 10.4 Key information (such as details of Scheduled Ancient Monuments, Listed Buildings and known archaeological sites) will be obtained. A walkover inspection will be carried out to confirm the findings of the desk study researches.

11 TRAFFIC AND TRANSPORT

Introduction

- 11.1 This section of the EIA will assess the prevailing traffic conditions and operation of key junctions on the local highway network in the vicinity of the site that could be affected by the development.

Existing Conditions and Proposals

- 11.2 It is proposed to construct a WTP on the land available at the site. It is anticipated that the WTP facility will process less than 250,000 tpa of material. Consequently, there will be an increase in the number of heavy goods vehicles using the surrounding road network. However, it is noted that the site is located within an industrial setting near to main highway routes, and therefore the road network will be able to meet the requirements of significant volumes of HGV and other traffic movements.
- 11.3 The proposals include re-opening the railway sidings that are present in the north of the site, enabling the transport of Solid Recovered Fuel by train from the WTP to the thermal power station in Runcorn. This will be of great benefit in reducing the number of vehicles using the surrounding road network.
- 11.4 Vehicles serving and using the proposed facility will access the site through the adjacent chemical works complex, from the A530 Griffiths Road in the south. In turn, Griffiths Road leads to the A556 to the south. Junction 19 of the M6 motorway is approximately 5.5m driving distance to the north east, therefore providing good access to the site from the wider road network. Although Griffiths Road has a connection to the A559 Manchester Road to the north, which would also allow access to the A556 and hence the M6, this route has low bridges which would not allow the use of this route for bulk haulage vehicles.
- 11.5 Effective measures will be incorporated into the access design for the facility, to support the increase in traffic due to the proposed facility. This will include a site layout designed to reduce vehicle turnaround times to a practicable minimum.
- 11.6 As part of the planning process, the current transport situation will be thoroughly assessed and any potential impacts on the existing transport infrastructure and surrounding area, which may arise as a result of the operation of the site, will be determined. The impacts arising from construction traffic during the development phase will also be considered.

Method of Assessment

- 11.7 The assessment will be carried out in accordance with appropriate guidance such as the Guidelines for Traffic Impact Assessment, Institution of Highways and Transportation (1994). The Design Manual for Roads and Bridges, Volume 11 – Environmental Assessment, Department of Transport, 1993 (as amended, 2002); and Guidelines for the Assessment of Road Traffic, The Institute of Environmental Management and Assessment (IEMA) (2003) and Transport Analysis Guidance (TAG).

12 NOISE

Introduction

- 12.1 This part of the EIA will analyse the noise environment of the proposed scheme and analyse potential effects on existing receptors. The assessment will include a review of existing and potential sources of noise in the area and an outline of proposed mitigation measures.

Existing Conditions and Proposals

- 12.2 The likelihood of a noise impact arising from a new development is dependent upon the proximity of noise sensitive receptors; the intensity and nature of the potential noise sources; and the presence of any screening barriers. Given its location within a wider industrial area, there are not likely to be any significant noise sensitive receptors in the immediate vicinity of the site.
- 12.3 The closest noise sensitive receptors are the residents of properties located to the north of the site, across the railway and Manchester Road, at a distance of around 200m.
- 12.4 Noise may be generated during the site preparation and construction phases of the WTP at the site. Sources of noise may include plant and machinery working on the site and vehicles delivering construction materials to the site.
- 12.5 Careful planning of working methods, regular maintenance of plant and the use of temporary screening barriers, can all mitigate the potential noise impact of the construction phase.
- 12.6 During the operational potential noise sources could include the operational activities and plant associated with the WTP.
- 12.7 In addition, road and rail traffic transporting materials to and from the site may also be potential sources of noise.
- 12.8 The WTP will be designed to minimise the level of noise generated by the activities undertaken, with the majority of the activities being housed within a purpose built enclosed structure. This enclosure of the facility will minimise noise impacts at existing sensitive receptors during the site's operational phase.

Method of Assessment

- 12.9 Noise assessment works will be carried out for the construction and operational phases of the proposed development, to ensure that the implementation of the proposed mitigation measures will achieve acceptable noise levels at sensitive receptors in the vicinity of the site.

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- 12.10 The noise assessment will identify the location of any sensitive receptors that could be adversely affected by any noise arising from the site. The operation and the noise impact will need to be carefully considered. Baseline noise monitoring at noise sensitive receptors and predictions of the operational noise levels will be carried out.
- 12.11 The assessment works will be based upon appropriate guidance including BS5228 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise (2009), and BS4142 Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas (1977).

13 AIR QUALITY AND PUBLIC HEALTH

Introduction

- 13.1 The assessment will take into account the air quality impacts associated with the proposed development. Existing air quality will be evaluated and potential impacts predicted by reference to current guidelines.

Existing Conditions and Proposals

- 13.2 The site will comprise a new WTP for the treatment of residual waste and extraction of solid recovered fuel and recyclates, and an amenity/education building.
- 13.3 The process at the WTP will consist of several stages. An initial pre-preparation stage will involve the removal of contrary materials and shredding of the waste, followed by mechanical segregation of the waste into various materials. The remaining wet organic rich material will then be subjected to the biodrying process in biodryer tunnels. At the end of the process, further mechanical segregation of the dried organic rich waste is carried out, including separation of aggregate, and the final products transported to various third party users.
- 13.4 The handling of organic material and aggregates at the WTP has the potential to generate bioaerosols, odours and dust. The treatment process will be enclosed within a building, with air extracted from the building being subject to a dust filter and biofilter. Therefore the potential for bioaerosol, odour and dust emissions generated by the proposed development will be minimal. The air extraction system will also manage the air quality within the building to ensure a safe working environment for the operational staff.
- 13.5 There is a potential for emissions to be generated by vehicles travelling to and from the WTP. The operation of the new facility will generate some additional vehicle movements on nearby adjacent routes and in turn there is potential for an increase in air pollutant concentrations at sensitive receptor locations nearby.
- 13.6 The proposed site is not located within an Air Quality Management Area (AQMA).

Method of Assessment

- 13.7 Proposed control systems will be described and dispersion modelling of residual odours will be carried out to confirm acceptability of the proposed approach to odour control. The assessment will also consider any potential health impacts associated with the operation of the facility.

- 13.8 An air quality assessment will be undertaken in accordance with Design Manual for Roads and Bridges (Volume 11, Section 3, Part 1 Air Quality, HA207/07, May 2007 (DMRB)) to consider potential road traffic emissions generated by the proposed development.

14 ASSESSMENT OF AMENITY

Introduction

- 14.1 The number of amenity impacts assessed in this chapter has been narrowed to include only those 'significant' in nature. The impacts from dust, odour and noise have already been addressed in preceding sections. As such, the issues of most importance and relevance, that could potentially arise from the operation of the WTP, relate to odour, pests and lighting.

Existing Conditions and Proposals

- 14.2 In terms of odour, of significant influence is the wind and intensity of site operations. In the Cheshire area the predominant wind direction is generally south westerly which would reduce potential exposure of the closest residential dwellings to any odours generated.
- 14.3 The impacts of odour and pests largely relate to the site's operational phase. Appropriate mitigation measures will be put in place to minimise any potential impacts.
- 14.4 The wastes accepted at the WTP will contain some putrescible wastes and as such there is a potential for odour from these materials. During the operational phase of the WTP, the buildings will be sealed and, as appropriate, maintained under slight negative pressure to minimise the escape of odours. Fast acting external doors will be kept closed at all times except when access is required. In addition, air extracted from the MBT building, including the process hall and biodrying tunnels (considered as potentially the main source of odour), will be fed to a biofilter and then released to atmosphere via a stack.
- 14.5 Waste accepted at the HWRC waste treatment building is considered to have a low potential to be a source of odours, and therefore no extraction and treatment of the air from this building is proposed. However, air extraction pipework connected to the main plant biofilter will be fitted to the HWRC waste treatment building, should air extraction and treatment become necessary.
- 14.6 As part of the planning permission and Environmental Permit applications for the site, potentially sensitive receptors to odour will be identified and a thorough risk assessment carried out.
- 14.7 The nature of some of the waste to be accepted at the site has the potential to attract pests. However, the site will observe good working practices; these will include the ongoing processing of waste within the WTP and all waste operations being undertaken within the proposed MBT and HWRC waste treatment

buildings. This will control any nuisance from pests or detriment to the amenity of the locality. Daily site inspections will identify any pest infestations or vermin.

- 14.8 There is the potential for the proposed facilities to impact on surrounding environment due to light spillage. Lighting for operational activities and during the construction phase can affect habitats and amenity if the lighting is designed and used inappropriately.
- 14.9 It is proposed that the main site lighting at each of the facilities will be utilised only during poor light conditions during the sites operational hours, i.e. during the period when waste reception activities are taking place. Outside of this time, low level security lighting will be used to reduce the potential for glare. This system will be compatible with the proposed CCTV security systems. All lighting will be designed to ensure minimum light levels are achieved within the operational areas while minimising light spillage outside the site boundaries. This will minimise disturbance to amenity and habitats around the sites.

Method of Assessment

- 14.10 Based on the assessment works undertaken to date, it is considered unlikely that the development proposals will result in any significant impact on amenity. Therefore we do not currently envisage undertaking any specific amenity assessment as part of the EIA beyond the detailed assessment of odour impact.

15 SUMMARY AND CONCLUSIONS

- 15.1 Viridor is seeking planning consent for the development of a Waste Treatment Plant at the former chlorine chemical works at Lostock Gralam, near Northwich, Cheshire.
- 15.2 The site will be central to three waste transfer stations also to be developed by Viridor for the delivery of a fully integrated residual waste management service in Cheshire. The Waste Treatment Plant at Lostock Gralam, fed by the waste transfer stations, will increase recycling and will provide solid recovered fuel for use in thermal power generation. This will divert waste from landfill, minimise waste transport and recover energy.
- 15.3 The planning application for the Lostock Gralam site will be accompanied by a Supporting Statement, Environmental Statement and a Design and Access Statement.
- 15.4 The Environmental Statement will draw upon the interactions identified in previous sections of this Scoping Report, in order to provide an assessment of the scale and significance of the potential impacts which may occur as a result of the proposed development. The statement will propose mitigation measures, as appropriate, to minimise any potentially adverse impacts.
- 15.5 The scope of the assessment will be refined following consultations with a wide range of authorities, statutory agencies and interested parties, this being seen as an iterative process.
- 15.6 During the design process, account will be taken of studies on the following subjects:
- Landscape and Visual Impact;
 - Ecology and Nature Conservation;
 - Geology, Mining, Ground Conditions and Land Quality;
 - Hydrology, Hydrogeology, Drainage and Flood Risk;
 - Archaeology and Cultural Heritage;
 - Traffic and Transport;
 - Noise;
 - Air Quality and Public Health; and
 - Assessment of Amenity.

- 15.7 The results of the studies and recommendations will be included and incorporated into the design of the site. Full regard will be given to the current national, regional and local planning guidance and policies in the preparation of the design and the environmental statement.



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