ENVIRONMENTAL STATEMENT

PLANNING APPLICATION FOR PROPOSED HIGH TEMPERATURE TREATMENT FACILITY FOR MANAGEMENT OF MEDICAL WASTE, STOPGATE LANE, SIMONSWOOD

Culzean W2E Limited

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1 Introduction

1.1 Overview

1.1.1 This Environmental Statement (ES) has been completed in support of proposals for development of a High Temperature Treatment Facility for management of Medical Waste at Stopgate Lane, Simonswood Industrial Estate, Simonswood, Lancashire. This ES has been undertaken in accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ("the EIA regulations").

1.1.2 The proposals will provide the following numerous benefits:

- Provision of a facility to deal with local medical wastes which would otherwise have to be transported over longer distances, increasing sustainability of management of a local waste stream;
- Provision of a facility for the safe destruction of medical wastes, being the only viable treatment/disposal option for most of the waste streams being accepted;
- Reduction in road miles and associated emissions, since the waste would otherwise have to be transported further afield;
- Reduction in road miles for medical wates reduces associated risks with transportation of the hazardous waste stream
- Generation of 12 full time jobs, providing significant economic benefits;
- Economic benefits through the need for contractors and raw materials during the construction phase;
- Economic benefits for other businesses during operations through the need for contractors, raw materials and maintenance support during site operations;
- Removal of ageing building which is in state of disrepair from site;
- Recovery of value from waste through re-use of waste heat from treatment process and potential for re-use of bottom ash for use in concrete block manufacturing; and,
- Use of heat from the process to dry wood products, maximising the sustainability of the operation.

1.2 Purpose of ES

1.2.1 This ES has been undertaken to assess potential impacts upon the environment as a result of construction of the site and site operations. This has included a mixture of qualitative impact assessment using available sources of data through desk top surveys, and, where further assessment has been deemed necessary, quantitative assessment of impacts.

1.2.2 This document should be read in conjunction with the Planning Statement (document ref: 2776-008-A).

1.2.3 This report contains the following components:

- Overview of site location;
- Description of proposals;
- Discussion of reasonable alternatives;
- Outline of the underpinning Environmental Impact Assessment (EIA) methodology used to complete the ES;
- Assessment of environmental impacts split by topic with consideration to baseline environmental conditions;
- Identification of mitigation measures; and,
- Summary of impacts.

2 EIA Methodology

2.1 Introduction

2.1.1 There are no statutory requirements on the format of an ES. However, Regulation 18(3), 18(4) and 18(5) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 outlines information which must be included in an ES as follows, which is quoted from the EIA Regulations:

"18(3) An environmental statement is a statement which includes at least—

(a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development;

(b) a description of the likely significant effects of the proposed development on the environment;

(c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;

(d) a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;

(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and

(f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

18(4) An environmental statement must—

(a) where a scoping opinion or direction has been issued in accordance with regulation 15 or 16, be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion or direction);

(b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment; and

(c) be prepared, taking into account the results of any relevant UK environmental assessment, which are reasonably available to the person preparing the environmental statement, with a view to avoiding duplication of assessment.

18(5) In order to ensure the completeness and quality of the environmental statement—

(a)the developer must ensure that the environmental statement is prepared by competent experts; and

(b)the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts."

2.1.2 Regulation 18(3) refers to Schedule 4 of the EIA Regulations, which contains additional information for inclusion in an ES. However, in accordance with Regulation 18(3), it is important to note that the ES only needs to include information in Schedule 4 which is relevant to the characteristics of a particular development. Therefore, not all environmental aspects within Schedule 4 of the EIA Regulations will necessarily need to be considered.

2.1.3 This ES accords with the requirements of Regulation 18(3), 18(4) and 18(5) of the EIA Regulations. The following table confirms the sections of this ES which address each of the requirements:

Table 2.1 – Demonstration of Compliance with EIA Regulations

Section of EIA Regulations	Relevant Section(s) of ES/Comments
Regulation 18 (3)(a)	Chapter 3
Regulation 18 (3)(b)	Chapters 5 to 17
Regulation 18 (3)(c)	Chapters 5 to 17
Regulation 18 (3)(d)	Section 3.4.1
Regulation 18 (3)(e)	Document ref: 2776-005-B
Regulation 18 (3)(f)	The relevant parts of Schedule 4 of the EIA regulations are addressed throughout this ES
Regulation 18 (4)(a)	ES has addressed all comments raised within the formal Scoping Opinion – see section 2.4
Regulation 18 (4)(b)	Chapters 5 to 17
Regulation 18 (4)(c)	Chapters 5 to 17

Section of EIA Regulations	Relevant Section(s) of ES/Comments
Regulation 18 (5)(a)	Section 2.2
Regulation 18 (5)(b)	Section 2.2

2.2 Project Team

2.2.1 This ES has been compiled and co-ordinated by Oaktree Environmental Ltd who are highly experienced waste management consultants and has included input from a number of additional technical experts. The table below summarises the relevant expertise and/or qualifications of the ES contributors.

Table 2.2 – Expertise of ES Contributors

Consultant	Responsibility	Relevant Expertise/Qualifications
Oaktree Environmental Ltd – Primary contributors - David Young, Chris Greenwood, Tom Benson, Richard Sims	Co-ordination of ES, and technical input on Chapters 1, 2, 3, 4, 5, 6, 9, 10, 11, 12 and 13	Primary Author: David Young BEng MSc PhD MIEnvSc MIAQM Contributors: Chris Greenwood BSc MSc CGeol FGS, Tom Benson BSc MIEnvSc TechIOA, Richard Sims BSc MSc Oaktree Environmental Ltd are highly experienced waste management consultants and have been preparing and contributing to Environmental Statements for over ten years. The contributors have a combined experience in excess of 45 years working in private sector environmental consultancy, specialising in waste and environmental assessments. Work is overseen by the company Managing Director, who has 30 years experience, including having worked for several years previously for Regulatory Authorities.
SCP Transport	Technical input on chapter 7	Primary contributor was Pete Todd, who holds an MSc in Transport Engineering and Planning and is also a member of the Chartered Institute of Highways and Transportation. Pete has over 15 years' experience in providing transport and highways advice on development related matters for a range of development uses

Consultant	Responsibility	Relevant Expertise/Qualifications
United Environmental Services	Technical input on chapter 8	Primary contributors include Toby Hart BSc MCIEEM PIEMA, Emily Clark BSc PGdip ACIEEM and Daniel Smith BSc MScRes Toby Hart is UES Managing Director with 18 years of experience working in the ecology sector. Toby holds a level 5 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC), which certifies him as competent to undertake phase 1 habitat and national vegetation classification (NVC) surveys. Toby is licensed by Natural England to disturb, take and handle all species of bats under licence numbers 2015-15898-CLS-CLS (level 3) and 2015-15899-CLS-CLS (level 4). Toby is also a registered consultant of the bat low impact class licence (RC090). Emily Clark has over 5 years of experience working in the ecology sector. Emily has Emily holds a level 4 BSBI FISC, which certifies her as competent to undertake phase 1 habitat and NVC surveys. Emily is licensed by Natural England to disturb, take and handle all species of bats under licence number 2019-39350-CLS-CLS (level 2). Daniel Smith BSc MScRes, UES Graduate Ecologist with one year of experience working in the ecology sector.

2.3 EIA Status of Proposals

2.3.1 The proposed development falls under Schedule 1 of the EIA Regulations, on the basis that the proposals include the disposal of hazardous waste, for which there are no qualifying tonnage thresholds within Schedule 1. As such, the proposals are automatically EIA development.

2.4 EIA Scoping

2.4.1 It should be noted that EIA scoping is not a mandatory process and ultimately it is up to the developer to decide as to the content of the ES. However, undertaking an EIA scoping exercise with the LPA is good practice to ensure that environmental issues have been given due consideration. As such, an EIA scoping request was submitted to Lancashire County Council (LCC). LCC issued their formal EIA scoping opinion on 18 November 2020.

Within this this advice, LCC stated that they considered that the issues of traffic and transport, ecology, geology and hydrology, landscape and archaeology could be scoped out of the ES, but that some information on these issues should be included within the planning application, based on the accompanying pre-application advice which was issued on 9 November 2020. As such, consideration has also been given to the pre-application advice during completion of this ES.

2.4.2 In accordance with the EIA scoping opinion and pre-application advice detailed assessments have been included for the follow aspects:

- Socio-economic;
- Traffic and Transport;
- Ecology;
- Air Quality and Climate; and,
- Noise.

2.4.3 LCC confirmed that other environmental issues could be scoped out from inclusion within the ES, as follows. Therefore, the following topic have not been considered in detail, but where relevant, justification has been provided as to why these are not significant issues.

- Landscape and visual;
- Geology. Hydrology and Hydrogeology; and,
- Archaeology and Cultural Heritage

2.5 Overview of EIA Assessment Topics and Chapter Structure

2.5.1 The EIA is divided into separate chapters for each of the following topics:

- Socio-Economic;
- Landscape and Visual;
- Traffic and Transport;
- Ecology;
- Hydrology, Hydrogeology and Geology;

- Air Quality;
- Noise and Vibration;
- Archaeology and Cultural Heritage; and,
- Cumulative Impacts.

2.5.2 Each of the above chapters are generally divided into the following sub topics, where appropriate:

- Baseline Assessment;
- Construction Phase Impacts;
- Operational Phase Impacts;
- Outline of Proposed Mitigation;
- Residual Impacts;
- Cumulative Impacts;
- Summary of Impacts; and,
- Conclusions.

2.6 Baseline Assessment

2.6.1 Before determining potential impacts, it is first important to determine the current baseline position with respect to environmental conditions. This is because any impacts must be assessed in the context of baseline environmental conditions. The baseline conditions have been determined qualitatively through desk top studies and where deemed appropriate, on a quantitative basis through site specific surveys/quantitative assessment.

2.7 Assessment of Impacts and Mitigation

2.7.1 Once the baseline environmental conditions have been established, assessment of the potential impacts associated with both the construction and operational phase of the site can be undertaken. Should any significant environmental impacts be identified, mitigation measures are identified to control potential impacts to acceptable levels. The relevant guidance advises that mitigation should be fed into the design stage of a project

as part of an iterative process – this is not necessarily limited to construction and operational controls which have a physical manifestation in the scheme, but can also include, for example, dust control measures and noise abatement techniques[1].

2.7.2 The mitigation measures will often be based upon Pollution Prevention Guidelines. These are guidance documents containing statutory controls produced by the Environment Agency (EA). These contain good practice measures to ensure that businesses comply with legislation for prevention of pollution to air, land and water. Although the Pollution Prevention Guidelines have recently been withdrawn by the EA, they are still considered to be a relevant source of guidance for mitigation and have therefore been referred to throughout this ES. Mitigation measures will also include specific control measures that are proposed to be implemented during the construction and operational phase to minimise environmental impacts.

2.7.3 Mitigation measures will also include specific control measures that are proposed to be implemented during the construction and operational phase to minimise environmental impacts.

2.7.4 Once mitigation measures have been identified, as applicable, an assessment of remaining residual impacts is undertaken. Finally, an assessment of any potential cumulative impacts is undertaken, eg impacts that the proposals may have 'in-combination' with other processes. This includes other proposals in the planning process, or recently approved but not yet operational, e.g. are not covered by the baseline assessment.

2.7.5 Each chapter contains a summary table which outlines significance of impacts before and after mitigation.

[1] Environmental Impact Assessment: A guide to Good Practice and Procedures: A Consultation Paper, Department for Communities and Local Government, 2006.

2.8 Assessment of Impact Significance

2.8.1 Impact Magnitude

2.8.1.1 The table below outlines the terminology used to determine magnitude of impact. The magnitude of impact determines the scale of change from baseline conditions. For some assessments, this has been assessed quantitively, for example through undertaking site surveys, modelling or monitoring, but has also been assessed qualitatively using professional judgment in some cases, where it has been determined through consultation with the Local Planning Authority that this will be sufficient. The scale used to describe magnitude of impact is outlined within the table below with generic descriptions included. Within the various chapters within this ES, topic specific indicative criteria have been outlined to grade the magnitude of impact. In addition to scaling the magnitude of the impact, a description is also included on whether the impact is positive or negative.

Table 2.3 - Magnitude of Impact Criteria

Magnitude of Change	Criteria
Substantial	Substantial change from baseline conditions
Moderate	Moderate change from baseline conditions
Slight	Small discernible change from baseline conditions
Negligible	No discernible change from baseline conditions

2.8.2 Receptor Sensitivity

2.8.2.1 The table below outlines the generic criteria used to grade receptor sensitivity. The sensitivity of a receptor is based on the importance of the receptor and/or the ability of the receptor to accommodate change in the context of the prevailing baseline environmental conditions. Within the various chapters within this ES, topic specific indicative criteria has been outlined to assign receptor sensitivity.

Table 2.4 - Receptor Sensitivity Criteria

Sensitivity of Receptor	Criteria
Very High	Receptor very highly sensitive to change. Receptor has very limited ability to absorb change without very significant change to receptor character or local environment. Receptors within this category are likely to be of international importance.

Sensitivity of Receptor	Criteria
High	Receptor highly sensitive to change. Receptor has limited ability to absorb change without significant change to receptor character or local environment. May include receptors of national/international importance
Medium	Receptor with medium sensitivity to any change with a moderate capacity to absorb change without significantly altering character or local environment. May include assets of national/regional importance
Low	Receptor with low sensitivity to any change. Receptor can accommodate change to character or local environment. May include assets of local importance

2.8.3 Significance of Impact

2.8.3.1 The overall significance of impact is determined by combining the magnitude of impact and receptor sensitivity. The following table presents the generic matrix that is used to grade impact significance. Within certain topics contained in this ES, topic specific assessment criteria have been developed to describe/determine such parameters which may deviate from the generic matrix/terminology shown below. Where this is applicable, it has been outlined within the relevant chapter/assessment.

Table 2.5 - Impact Significance Matrix

Magnitude of Impact	Significance of Impact			
Substantial	Moderate	Moderate to major	Major	Major
Moderate	Minor to moderate	Moderate	Moderate to major	Major
Slight	Minor	Minor to moderate	Moderate	Moderate to major
Negligible	Neutral	Neutral	Neutral	Neutral
	Low	**Medium**	**High**	**Very High**
	Receptor Sensitivity			

2.8.3.2 Impacts which are described as neutral in significance are those which will be below the level of perception within normal bounds of variation or forecasting error. Impacts which are described as minor in significance may be local issues but are highly unlikely to be important in the decision making process. However, such issues should be considered in relation to site design. Impacts which are moderate in significance are likely to be important on a local scale, but are not likely to be key decision making issues, in isolation. However, the cumulative effect of such issues may lead to more significant impacts on an

area or resource which can become key within the decision making process. Impacts which are major in significance will be key to the decision making process and will often relate to, though not exclusively, sites and features of national and international importance.

2.8.4 Describing the Nature of an Impact

2.8.4.1 Once the impact significance has been determined, the nature of the impact is described using the descriptors below, where applicable, in accordance with the requirements of Schedule 4 of the EIA Regulations:

- Net result of impact (beneficial, negligible or adverse);
- Type of effect (direct or indirect);
- Scale of impact (local, regional, national, global);
- Duration of the impact (short term, medium term or long term);
- Permanence of impact (temporary or permanent); and,
- Reversibility of impact (irreversible or reversible).

3 Site Location and Description of Proposals

3.1 Site Location

3.1.1 The application site is located at Stopgate Lane, Simonswood, within an existing industrial estate, which contains a number of existing industrial processes, including waste recycling facilities and other industrial processes.

3.1.2 The site is located within an industrial estate, allocated for waste use and therefore suitable for this type of development. There are a number of existing waste and other industrial operations in the vicinity with several large scale structures. The existing site is permitted for waste management related use. As such, the proposals are in keeping with the location, both in terms of scale and proposed processes.

3.1.3 The site is accessed via Stopate Lane, via an existing purpose built access point.

3.2 Site Description

3.2.1 Reference should be made to Appendix III for proposed layout plans. The centre of the site is located at approximate National Grid Reference (NGR) 343260, 400708. Access to the site is gained via Stopgate Lane.

3.2.2 The proposed site is located within the heart of an existing industrial estate with several industrial operations, including waste operation(s) and large scale buildings within the vicinity.

3.3 Proposed Development Description

3.3.1 The proposals are for a high temperature treatment facility for management of medical wastes. This will include acceptance of up to 3,650 tonnes/annum of hazardous wastes for treatment, which will form the majority of wastes accepted, in addition to smaller quantities of non-hazardous waste with wastes predominantly arising from medical sites.

3.3.2 Reference should be made to the drawings in Appendix III for details of the layout and elevations. The proposals will include the construction of a purpose built building, 28m by 40m in length and width and 10.635m in height to the ridge. This will be located as shown on the site layout plan. The proposals also include the demolition of an existing ageing building on-site, to make way for the footprint of the new development/building.

3.3.3 The building will house the main thermal processing equipment, including the pyrolyser and fuel storage and feed system. Ancillary plant will be included external to the building, including heat exchanger, pollution control plant, exhaust flue and flare, as shown on the layout plan. This flue is required to dilute and disperse residual emissions from the process, following abatement. The flue will fairly modest in height, being 14m in elevation. The height of the flue has been determined/verified as sufficient by a detailed modelling assessment. Heat from the process will be used to dry wood within a container, also located externally to the building, maximising the sustainability of the process.

3.3.4 The exact specification of plant and equipment to be installed within the building along with the internal configuration is outside the scope of the planning application and will be agreed with the regulator as part of the permitting process. However, this has been provided for information purposes as part of this application.

3.3.5 The site will include the following principal infrastructure, as shown on the Site Layout Plan:

- Pyrolysis unit and associated ancillary plant;
- Pollution control plant;
- Waste reception area;
- Wood drying container;
- Bin wash area; and,
- Bin store.

3.3.6 Wheeled Bins (1100 litre and 240/700 litre capacity) are to be delivered to site by articulated lorry (double stacked) for processing. For traceability and identification of wastes, all bins will have a unique Community Power (CP) Barcode/QR Code Tag.

3.3.7 The bins are to be scanned in (where barcodes are present), with barcodes attached to those that do not have them. The different waste types (by European Waste Catalogue (EWC) code) will be weighed, with these weights being set against the bins identity (barcode). Following this, they will be stored in “like type” areas (again by EWC code, ensuring clear separation).

3.3.8 At the point of collection from a waste producing site (hospital, medical centre etc), securely locked bins (1100 litres + 240/700 litre capacity) will be checked for a relevant CP issued barcode/ QR code. As and where required (lost damaged tags), new CP barcode/ QR code tags will be applied by the driver/operator. A bin without a CP issued barcode/QR code tag applied cannot be collected/removed from waste producing site. This barcode / QR code will stay with the bin/waste until the waste contained within has been duly processed, and the bin disinfected and made ready for re-distribution. Until collection from the production of waste site, the barcode/QR code tag is of no relevance. At the point of collection, and reading, the Barcode / QR code becomes “live”.

3.3.9 At the point of reading the barcode and prior to loading onto the transportation vehicle, the type of waste along with location of pickup will be recorded. This information will be sent directly to the waste processing site at Simonswood for verification and record keeping.

3.3.10 Multiple waste types may be collected from the same or multiple sites in one vehicle “Milk round” style.

3.3.11 Bins will be locked by the operator/driver if not already so, prior to collecting and loading onto the transportation vehicle, when collecting from the waste production site.

3.3.12 At no point will differing waste types be put within the same bin. The bins will be unloaded from the transporting vehicle directly into the building on the site. At no point will unprocessed bins go “outside” of the building. Only disinfected bins will be moved or stored outside of the building, but within the fenced compound of the site.

3.3.13 Upon delivery of the bins to the work site (Simonswood), the bins will be weighed. Prior to arriving, the bins barcodes, contents, and originating location will have been transferred to the work site.

3.3.14 Once weighed, the differing waste types by bin will be moved to its dedicated internal storage area, prior to processing by pyrolysis. The bin's barcode will be read and recorded again at the dedicated storage location to confirm it's location within the facility. Bins will be stored with "like type" bins. (Yellow with Yellow, Orange with Orange etc).

3.3.15 The pyrolysis unit will thermally destruct the medical waste. The empty bin will be taken directly to the bin wash point. Once complete, the bin will be scanned as clean, and then stored ready for return to the medical sites they have originated from.

3.3.16 Heat from the process will be used to dry wood, which will be brought onto site by a local business.

3.3.17 The development will generate up to 12 full time jobs.

3.3.18 It is anticipated that up to 12 Heavy Goods vehicle (HGV) trips (24 movements) will be generated by the development each day and up to 12 car trips (24 movements) each day associated with site staff. Additionally, one tractor trip (2 movements) will be generated each week, for the delivery and removal of wood for drying.

3.3.19 The process will be operated on a continual basis, 24 hours per day, 7 days per week, except for periods of maintenance/shut down. The site will be open for the limited number of HGV movements for the delivery and export of materials between the hours of 06:00 and 20:00.

3.3.20 Clean surface water drainage from the roof will discharge to the existing drainage system on site. It is anticipated that rainwater harvesting will be included to capture water for use in the bin washing operation. Effluents and waste water from the process will be collected in below ground holding tank(s) to be removed from site periodically for appropriate disposal at a suitably permitted facility. The main effluent from the process is expected to include disinfectant and water from the bin washing process.

3.3.21 The site will require an Environmental Permit (EP) to operate. This will be a Schedule 13 permit, regulated by WLBC. Emissions from the process will be controlled and regulated under the EP.

3.4 Detailed Description of High Temperature Treatment Process

3.4.1 The precise details of the process/design are outside the scope of the planning application and will be required to be agreed with WLBC as part of the permitting process. However, the following provides basic technical information on the process to provide the reader with an understanding of the principles of the operation.

3.4.2 At the point of thermal (Pyrolysis) processing, the bins will be moved to the Pyrolysis unit, in the optimal order as calculated by the operations software. The Pyrolysis unit will thermally destruct the waste, initially at a temperature of 850°C.

3.4.3 The pyrolysis process includes the controlled heating of wastes in an oxygen free environment, which is undertaken within an initial chamber. Wastes are initially pyrolysed to produce syngas and char. The char is removed from the process by a filtration system. The syngas is then directed to a secondary chamber, where the gases are combusted at a minimum temperature of 1100C for at least two seconds, in accordance with legislation. Due to the design of the chamber, the gases will be resident for approximately 7 seconds. The heat within the secondary chamber exhaust gases are routed past the main, primary chamber, with the heat being utilised to keep the primary chamber continuously heated.

3.4.4 Hourly, the pyrolysis unit will process on average, 400Kg of waste. A dedicated waste processing software programme will calculate which bins should be processed, and in which order, to facilitate 400kg of waste per hour.

3.4.5 Bins will be stored ready for processing for a maximum of 24 hours, unless collected on a Friday, or Saturday.

3.4.6 Exhaust gases arising from the process will be abated to meet the relevant emission limits, which are set out in the Industrial Emissions Directive (EU Directive 2010/75/EU). The abatement system will include the following components:

- Solids/dust removal with a trace heated cyclone prior to oxidiser. This is to reduce the soot loading on the thermal oxidiser and reduce volatile metals in the combusted gases;
- Selective Non-Catalytic Reduction for nitrogen oxides (NO_x) control;
- Gas cooling to approx. 220-250°C prior to gas cleaning/filtration to give optimal conditions for sodium bicarbonate reaction and metals and dioxins and furans adsorption onto the Powdered Activated Carbon (PAC).
- Ceramic filtration for particulate matter removal;
- Abatement of acid gases using sodium bicarbonate;
- Capture of Volatile metals using PAC; and,
- Dioxin and furan removal using PAC – this ends up in the gas cleaning residues.

3.4.7 Following abatement, the exhaust gasses are then routed into the exhaust stack, where they are released to atmosphere for further dilution and dispersion of residual emissions.

3.4.8 The produced ash/char will be removed on a weekly basis, and it is anticipated that this will be suitable for utilisation in the production of concrete blocks, subject to assessment of suitability via further analysis and testing. Pollution control residues will be disposed at suitably permitted facilities, as required.

3.5 Consideration of Reasonable Alternatives

3.5.1 Overview

3.5.1.1 The regulations require a description of reasonable alternatives studied by the developer which are relevant to the proposed project and its specific characteristics and main reasons for the option chosen, taking into account the effects of the development on the environment to be included in an ES. These should be credible and appropriate alternative options for the project. It is important to note that this does not place an

obligation on applicants to consider alternatives, but to report any alternative options that have been studied.

3.5.1.2 The main alternative options to that proposed are as follows:

- 'Do nothing';
- Alternative options for use of feedstocks; and,
- Use of alternative sites.

3.5.1.3 The alternative options presented above have been considered in more detail below, with justification provided to demonstrate why they are not considered suitable alternative options to the proposed development.

3.5.2 Do Nothing

3.5.2.1 There is a local need for facilities for the disposal of hazardous medical waste. Thermal treatment is the only viable disposal route for most of the waste streams being accepted. The applicant has advised that waste will likely be sourced from within a 15 mile radius of the plant. It is understood that this will include wastes which are currently transported to high temperature facilities within Oldham and Wrexham and therefore the proposals will provide a specialist local facility for the disposal of hazardous medical wastes, reducing road miles and associated reduction in vehicle emissions. The reduction in transportation distances is also important as it is not desirable to transport these types of wastes over long distances from a safety perspective.

3.5.2.2 Given the above, the do-nothing scenario is not considered a suitable alternative option to the proposed development.

3.5.3 Alternative Treatment/Recovery Options for Feedstocks

3.5.3.1 There are no suitable alternative treatment/recovery options for the feedstock. Thermal treatment is the only suitable treatment option for hazardous medical wastes.

3.5.4 Alternative Sites

3.5.4.1 As outlined previously, there is no obligation for the applicant to have considered alternative sites. The applicant is ultimately seeking to develop sites at various locations around the country to provide a localised facility for the disposal of medical wastes. The use of an existing industrial site adjacent to active industrial uses, including waste operations and thermal treatment process(es) and which is within a relatively short distance of the waste sources is considered a suitable site for development of this type of facility. Furthermore, provided any potential environmental impacts can be demonstrated to be acceptable, as is demonstrated to be the case throughout this ES, it is not considered that any alternative sites would provide a more suitable alterative location.

4 Planning Policy and Legislation

4.1 Reference should be made to document ref: 2776-008-A for an in-depth review of relevant local and national planning policies which demonstrates that the proposals fully accord with all relevant policies.

5 Socio-Economic Assessment

5.1 Introduction

5.1.1 This chapter includes an assessment of the potential socio-economic impacts associated with the proposed development. In determining the current baseline position, reference has been made to the Nomis website[2], which contains official labour market statistics.

5.2 Assessment Methodology

5.2.1 Table 5.1 below outlines the criteria used for assessing magnitude of socio-economic impacts.

Table 5.1 - Criteria Used for Assessing Magnitude of Socio-Economic Impacts

Magnitude of Change	Criteria	
Substantial	Jobs & Employment	Significant number of Jobs created/lost on a local, regional and national scale
	Businesses	Significant impact on local, regional and national businesses
	Tourism & Recreation	Impact on tourism/recreational activities on a large extent/scale, including large number of people or activities
Moderate	Jobs & Employment	Significant number of jobs created/lost on a local and regional scale
	Businesses	Significant impact on local and regional businesses
	Tourism & Recreation	Extent of impacts on tourism/ recreational activities is on a smaller scale, but still affecting a large number of people or activities
Slight	Jobs & Employment	Significant number of Jobs created/lost on a local scale only
	Businesses	Significant impact on local businesses
	Tourism & Recreation	Extent of impacts on tourism/recreational activities is on a smaller scale, and a small number of people are affected
Negligible	Jobs & Employment	No discernible impacts from job creation/loss
	Businesses	No discernible impact on businesses

[2] www.nomisweb.co.uk

Magnitude of Change	Criteria	
	Tourism & Recreation	No discernible impacts on tourism/recreation

5.2.2 Table 5.2 below outlines the criteria used to determine receptor sensitivity.

Table 5.2 - Criteria for Assessing Socio-Economic Receptor Sensitivity

Receptor Sensitivity	Criteria	
High	Jobs & Employment	Low/limited availability of labour and skills, high unemployment levels
	Businesses	Large number of businesses likely to be affected
	Tourism & Recreation	Receptor or resource of international or national status with a large number of visitors
Medium	Jobs & Employment	Average availability of labour and skills, average unemployment levels
	Businesses	Medium number of businesses likely to be affected
	Tourism & Recreation	Receptor or resource of regional status with a medium number of visitors
Low	Jobs & Employment	High availability of labour and skills, low unemployment levels
	Businesses	Small number of businesses affected
	Tourism & Recreation	Receptor or resource of local status with a low number of visitors

5.3 Baseline Assessment

5.3.1 Employment across West Lancashire

5.3.1.1 Table 5.3 below contains details of the number of people currently economically active, employed and unemployed in West Lancashire with comparison to the North-West region and Great Britain as a whole, between July 2019 and June 2020.

Table 5.3 - Labour Supply Across West Lancashire, North West Region and Great Britain Between July 2020 and June 2021

	West Lancashire (%)	North West (%)	Great Britain (%)
Economically Active	77.8	77.0	78.4
In Employment	73.6	73.1	74.4
Unemployed	4.3	4.9	5.0

5.3.1.2 As is indicated by the tables above, West Lancashire has a higher percentage of people economically active and in employment compared to the North West region, but lower than the nation as a whole. The percentage of people unemployed across West Lancashire is lower than that of the North West region and nation as a whole.

5.3.2 Sensitive Receptors

5.3.2.1 Potential receptors in terms of socio-economic impacts include the local and regional population, local and regional businesses such as construction companies, raw material suppliers, haulage companies and shops.

5.3.2.2 Levels of unemployment across West Lancashire are lower than the region and nation. Therefore, on balance, receptors are considered to be of low sensitivity in terms of job creation/employment opportunities. There is potential for a small number of businesses to be directly impacted upon, therefore sensitivity of other businesses is considered to be medium.

5.4 Construction Phase Impacts

5.4.1 Potential socio-economic impacts during the construction phase include the following:

- Creation of temporary jobs; and,
- Positive impacts on local and regional businesses.

5.4.2 Up to 20 temporary jobs will be demonstrated during construction works. This will generate moderate positive impacts on receptors of low sensitivity, resulting in overall impacts which are minor to moderate beneficial, direct, short term, temporary and reversible in nature. There will also be a requirement for provision of raw materials,

contractors and services from plant hire businesses, which will generate positive impacts on employment and businesses. Such impacts are predicted to be moderate positive at receptors of low and medium sensitivity, resulting in an overall impact significance which is minor to moderate beneficial and direct and indirect, short term, local and regional, temporary and reversible in nature.

5.5 Operational Phase Impacts

5.5.1 Potential socio-economic impacts during the operational phase include the following:

- Creation of jobs both directly and indirectly; and,
- Positive impacts on local and regional businesses.

5.5.2 There will be 12 direct jobs created as a result of the development. It is also anticipated that jobs will be created indirectly as a result of the proposals. Indirect employment is defined as temporary and permanent jobs created in businesses which supply products, materials and services. The number of indirect jobs created by the proposed development can be estimated using employment multipliers contained with former English Partnerships guidance[3]. Out of those presented, the most appropriate multipliers are considered to be those for general industrial developments, which are 1.29 and 1.44 for local and regional areas respectively. Using these multipliers, the number of indirect jobs created is as follows:

a) Indirect medium term local jobs created = (12 x 1.29) – 12 = 3.48 (3)
b) Indirect medium term regional jobs created = (12 x 1.44) – 12 = 5.28 (5)

5.5.3 The impact magnitude of job creation is predicted to be moderate, positive at receptors of low sensitivity, resulting in an overall impact significance which is minor to moderate

3 Additionality Guide: A Standard Approach to Assessing the Additional Impact of Interventions, English Partnerships, 2008.

beneficial, direct/indirect, long term, local and regional, permanent and reversible in nature.

5.5.4 The creation of direct and indirect jobs will inevitably have a positive impact on local and regional business , through additional revenue being spent in local and regional shops. The plant operation will also generate positive impacts on the local and regional area through the need of maintenance contractors and services, plant and machinery hire and raw materials suppliers. The impact magnitude is predicted to be moderate positive at receptors of medium sensitivity, resulting in an overall impact significance which is moderate beneficial, direct/indirect, long term, local and regional, permanent and reversible in nature.

5.6 Mitigation

5.6.1 No mitigation is considered necessary during the construction or operational phase.

5.7 Residual Impacts

5.7.1 No significant adverse residual impacts are predicted during the construction or operational phase. Residual impacts during the operational phase are predicted to be minor to moderate beneficial in terms of impacts on local and regional businesses and job creation.

5.8 Cumulative Impacts

5.8.1 No significant cumulative impacts are predicted during the construction or operational phase.

5.9 Summary of Impacts

5.9.1 The tables below contain a summary of potential socio-economic impacts before and after mitigation for both the construction and operational phases of the development respectively.

Table 5.4 - Summary of Socio-Economic Impacts During the Construction Phase

Receptor Identifier/ Description	Impact Description	Impact Significance (Without Mitigation in Place)	Mitigation Summary	Residual Impact Significance (With Mitigation in Place)
Local and regional population	Creation of jobs in the local and regional area, Requirement for raw materials, plant and machinery hire, contractors	Minor to moderate beneficial, direct and indirect, temporary, short term, reversible, local and regional in nature	None required	Neutral

Table 5.5 - Summary of Socio-Economic Impacts During the Operational Phase

Receptor Identifier/ Description	Impact Description	Impact Significance (Without Mitigation in Place)	Mitigation Summary	Residual Impact Significance (With Mitigation in Place)
Local and regional population	Creation of jobs in the local and regional area	Minor to moderate beneficial, direct and indirect, permanent, long term, reversible, local and regional in nature	None required	Minor to moderate beneficial, direct and indirect, permanent, long term, reversible, local and regional in nature
Local and regional businesses	Increased revenue from money spent in local shops, requirement for provision of raw materials, and maintenance contractors	Moderate beneficial, direct and indirect, permanent, long term, reversible, local and regional in nature	None required	Moderate beneficial, direct and indirect, permanent, long term, reversible, local and regional in nature

5.10 Conclusions

5.10.1 A baseline assessment has been undertaken to determine the current socio-economic position across West Lancashire and the surrounding region. Statistics have shown that there are a lower percentage of people unemployed across West Lancashire in comparison to the North-West region and the nation as a whole. Therefore, receptors are considered to be of low sensitivity to job/employment generation. There is considered to be a potential for a medium number of businesses to be impacted upon (positively and negatively), therefore sensitivity of other businesses is considered to be medium.

5.10.2 The construction phase is anticipated to be short term and temporary, the main constructions activities including the demolition of an existing building, and installation of new purpose built building, exhaust flue and other ancillary structures.

5.10.3 The main socio-economic impacts associated with the operational phase have been predicted to be the following:

- Creation of both directly and indirectly; and,
- Impacts on local and regional businesses.

5.10.4 It is estimated that 12 jobs will be directly created and up to 8 jobs created indirectly in the local and regional area, which is predicted to result in a minor to moderate beneficial impact.

5.10.5 A moderate beneficial impact is predicted on local and regional businesses as a result of requirement for plant/machinery hire, raw material provision and maintenance services.

5.10.6 No significant adverse socio-economic impacts are predicted during the construction or operational phase.

6 Landscape and Visual

6.1 The proposals will be located within an existing industrial estate, which contains several much larger buildings, both in width and/or height. Furthermore, a large scale wind turbine is located adjacent to the industrial estate, which is understood to be 90m in elevation. The site is not located within or close to an Area of Outstanding Natural Beauty (AONB).

6.2 The building to be demolished is of similar height, but much larger footprint than the proposed building. Furthermore, the existing building is in a state of significant disrepair, as illustrated by the site plans within Appendix III. As such, the introduction of a new building and ancillary structures of smaller scale will not generate any significant landscape and visual impacts. Colour schemes will be chosen which are sympathetic to the surrounding environment. The flue to be installed will be of modest height at 14m from ground level. This is in keeping with the industrial nature of the location and indeed considered insignificant in the landscape compared to existing structures, such as the large scale wind turbine. The flue is necessary to provide dilution and dispersion of residual emissions, following abatement.

6.3 Given the above, a Landscape and Visual Impact Assessment (LVIA) has not been required as part of this ES. This was also confirmed by the LCC Scoping Opinion, which stated that landscape issues could be scoped out from inclusion within the ES.

6.4 Despite the above, mitigation will be built into the scheme to ensure that the proposals are suitably integrated into the surrounding environment. Colour schemes will be chosen which are sympathetic to the surrounding environment.

7 Traffic and Transport

7.1 Introduction

7.1.1 This Chapter of the ES has been prepared by SCP and addresses the likely significant effects of the Proposed Development, located on land to the south of Stopgate Lane in Simonswood, on transport during both the construction and operational phases.

7.1.2 It describes the methods used to assess the effects; the baseline conditions; the mitigation measures required to prevent, reduce or offset any substantial adverse effects; and the likely residual effects after these measures have been adopted.

7.1.3 This Chapter is supported by a Transport Statement (TS) which is included within Appendix IV.

7.1.4 No legislation has been used in the assessments within this chapter.

7.2 Assessment Methodology

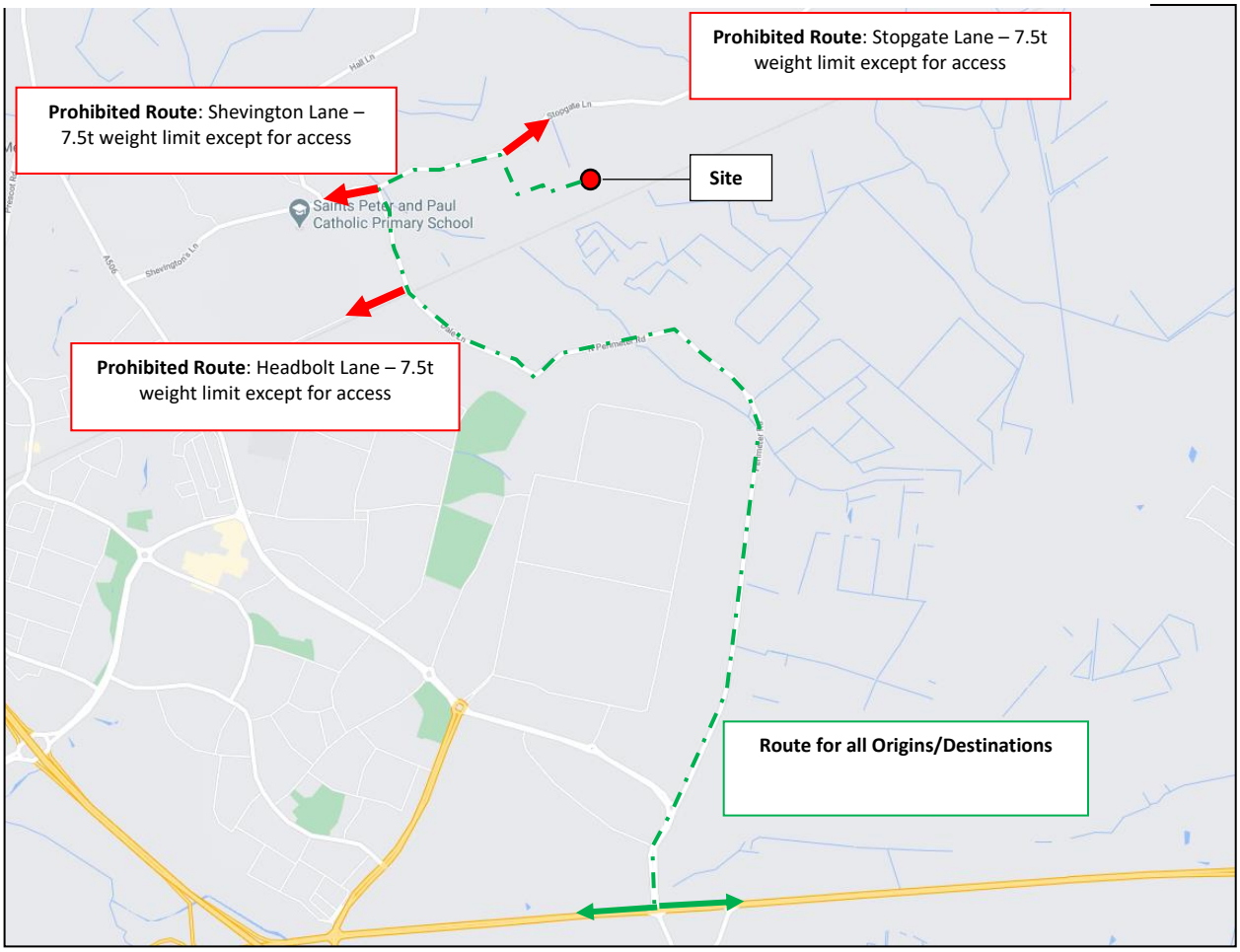
7.2.1 Study Area

7.2.1.1 Following a pre-application and EIA scoping request, Knowsley Council (KC) and LCC provided several comments. The comments confirmed that the proposed development is relatively small scale and following an initial review, it was considered that "*the local highway network can safely accommodate the proposed level of additional vehicles, as described, with no significant impact*" and that a "*simple transport statement would suffice to evaluate the highways and transportation impacts of any application*".

7.2.1.2 Given that it has been agreed with KC/LCC that the proposed development would not have a significant impact on the local highway network, junction capacity modelling has not been undertaken or presented in this Chapter.

7.2.1.3 Furthermore, given that many routes for HGVs are restricted to access only the study area for the purpose of this Chapter comprises the only route permitted for HGVs, as shown on Figure 1 below.

Figure 1 - Vehicle Routing Plan and Study Area



7.2.2 Method of Assessing Significance

7.2.2.1 This chapter has been conducted in line with the above and the following:

- Design Manual for Roads and Bridges, Volume 11, Environmental Assessment (DMRB); and,
- Guidelines for the Environmental Assessment of Road Traffic, Institute of Environment Assessment, 1993 (IEA).

7.2.2.2 To assess the likely significant effects of the Proposed Development and its traffic, the initial stages are:

- Qualify the existing characteristics (baseline);
- Identify the geographical boundaries of assessment (i.e. the study area); and,
- Once this information is established, the predicted impacts are assessed, along with measures to mitigate any negative impact.

7.2.2.3 The submitted TS assesses the impact of the Proposed Development on the highway network during the weekday AM and PM peak periods.

7.2.2.4 IEA guidelines also state that the greatest environmental change will generally be when the development traffic is at the largest proportion of the total flow, which, may not be during the highway network peak hours. Therefore, this ES examines likely effects based on Annual Average Daily Traffic (AADT) flows.

7.2.3 Magnitude of Effect

7.2.3.1 To assess the overall significance of an effect it is necessary to establish the magnitude of the effect occurring i.e. the changes to the existing baseline conditions as a result of the Proposed Development, and the sensitivity or importance of the receiving environment or receptor.

7.2.3.2 The magnitude of potential effects (both beneficial and adverse) on environmental baseline conditions has been identified through the detailed consideration of the Proposed Development taking into account the following:

- Relevant legislation, policy or guidelines;
- The degree to which the environment is potentially affected for example, whether the quality is enhanced or impaired;
- The scale or degree of change from baseline conditions as a result of the Proposed Development;

- The duration of the effect for example, whether it is temporary or permanent and whether it is short, medium or long term; and,
- The reversibility of the effect.

7.2.3.3 The scale of effects is assessed for both the construction and operation phases using the criteria given in the table below which have been established with reference to the various guidance noted above and/or through professional experience and judgement.

Table 7.1 – Scale of Effects

Level of Magnitude	Definition of Magnitude
Substantial	Substantial change from baseline conditions
Moderate	Moderate change from baseline conditions
Slight	Small discernible change from baseline conditions
Negligible	No discernible change from baseline conditions

7.2.3.4 This criteria refers to adverse effects only and where beneficial effects are identified, their magnitude is based on the corresponding positive effect for the same quantum.

7.2.4 Sensitivity of Receptors

7.2.4.1 Receptors will comprise drivers, pedestrians, cyclists and public transport users affected by increased traffic levels resulting from the Proposed Development.

7.2.4.2 The sensitivity of receptors, based on professional judgment and experience, is as follows in the table below

Table 7.2 – Criteria for Assessing Sensitivity of Receptors

Receptor Sensitivity	Description
Very High	Receptor very highly sensitive to change. Receptor has very limited ability to absorb change without very significant change to receptor character or local environment. Receptors within this category are likely to be of international importance
High	Receptor highly sensitive to change. Receptor has limited ability to absorb change without significant change to receptor character or local environment. May include receptors of national/international importance

Receptor Sensitivity	Description
Moderate	Receptor with medium sensitivity to any change with a moderate capacity to absorb change without significantly altering character or local environment. May include assets of national/regional importance
Low	Receptor with low sensitivity to any change. Receptor can accommodate change to character or local environment. May include assets of local importance

7.2.5 Duration of Effect

7.2.5.1 The duration of effects has been assessed based on the following criteria in the table below.

Table 7.3 – Criteria for Assessing Duration of Effect

Duration of Effect	Description
Short Term	0 to 5 years including the construction period and on completion
Medium Term	5 to 15 years including establishment of proposed landscaping
Long Term	15 years onwards for the life of the Proposed Development

7.2.6 Significance of Effect

7.2.6.1 Significance of effect is assessed using the matrix presented within Section 2.8.3.

7.2.6.2 Major effects on driver and bus user delay are considered to be significant in terms of the EIA Regulations.

7.2.6.3 A minor effect on road safety will be considered significant in terms of the EIA Regulations.

7.2.6.4 Effects on pedestrian/cycle/horse-rider delay and amenity, fear and intimidation and severance that are moderate will be considered to be significant in terms of the EIA Regulations.

7.2.7 Cumulative Effects

7.2.7.1 No committed development traffic has been taken into account in either the baseline or proposed assessments.

7.2.8 Proposed Mitigation and Residual Effects

7.2.8.1 This section of the ES Chapter sets out the means by which any likely significant environmental impacts identified in the assessment of construction and operation phase impacts is to be mitigated. The purpose of the mitigation measure will be to prevent, reduce or offset any likely significant environmental effects.

7.2.8.2 Consideration is also given to the provision of any measures of environmental enhancement over and above required mitigation.

7.2.8.3 This final stage of assessment identifies any residual environmental effects and their significance taking account of the application of the mitigation measures outlined above based on the significance matrix.

7.2.9 Consultation

7.2.9.1 Consultation has taken place with KC and LCC regarding the specific scope of the EIA and a pre-application enquiry was also submitted, as detailed in the submitted TS.

7.2.10 Limitations and Assumptions

7.2.10.1 The assessments of effects are based on projections based on various sources of information, which are considered appropriate based on professional experience.

7.2.10.2 Given that it has been agreed with KC/LCC that the proposed development would not have a significant impact on the local highway network, junction capacity modelling has not been undertaken and no results for delay are therefore provided.

7.2.10.3 Similarly, no base traffic surveys have been obtained and the baseline conditions and characteristics have been identified qualitatively rather than quantitively.

7.2.10.4 No committed development traffic has been taken into account in either the baseline or proposed assessments.

7.3 Baseline Assessment

7.3.1 A detailed description of the local highway network and existing infrastructure is provided within the submitted TS.

7.3.2 This includes an assessment of personal injury road traffic accident records for the most recent five-year period which concluded that the area in the vicinity of the site does not have any recurring highway safety problems that could be affected by the development proposals.

7.4 Construction Phase Impacts

7.4.1 Overview

7.4.1.1 Subject to the granting of permission the project is intended to commence construction in 2022.

7.4.1.2 The point of construction access from the adopted highway network will be via the existing Simonswood Industrial Estate access and facilities within the site will be provided for construction workers including car parking, loading and unloading of plant and associated construction materials.

7.4.1.3 Wheel wash facilities will be provided at a position to be agreed with the Local Authority to reduce the incidence of transfer of mud or loose materials onto the public highway during the construction phase and general sweeping of the adjacent road system will be undertaken by mechanical road sweeper.

7.4.1.4 The client confirms that the construction phase will be very short term and temporary, lasting for up to 5 weeks. Over this 5-week construction period, it is anticipated that up to 2 HGVs per day may visit the site to deliver materials.

7.4.1.5 A Construction Environment Management Plan will be prepared following any grant of planning permission and will define the routes for the larger construction delivery vehicles, however, the main routes will generally be via the most direct route to the wider classified road network, avoiding any prohibited routes as detailed in the submitted TS.

7.4.2 Effect on Traffic Flows

7.4.2.1 The Guidelines for the Environmental Assessment of Road Traffic note that highway links should be assessed where total traffic flows or the number of HGVs increase by more than 30%, or 10% in specifically sensitive areas.

7.4.2.2 The increase in 2 HGV movements per day during the construction phase will not result in a material impact on the local highway network, particularly given the surrounding industrial uses which result in numerous HGV movements per day, and is anticipated to be less than 10% on all links local to the development site which will decrease further once distributed on the wider highway network.

7.4.3 Assessment of Effects

7.4.3.1 The traffic flow increase as a result of the construction effect would not meet the levels of percentage increase requiring assessment in accordance with the Guidelines for the Environmental Assessment of Road Traffic and would be lower than during the operational phase. Therefore, the corresponding effect on the following would also be lower:

- Driver delay
- Public transport users
- Pedestrian delay
- Pedestrian amenity
- Severance
- Accidents and road safety

7.4.4 Fear and Intimidation

7.4.4.1 As detailed earlier, the proposed development is only anticipated to generate 2 HGV movements per day during the construction phase which will have a neutral effect on pedestrians in terms of fear and intimidation, particularly given the likely pedestrian movements along Stopgate Lane and the high-quality pedestrian infrastructure on Pingwood Lane and Shevington's Lane.

7.5 Operational Phase Impacts

7.5.1 Effect on Traffic Flows

7.5.1.1 A detailed description of the daily traffic flows estimated to be generated by the Proposed Development is provided within the submitted TS. In summary, it is estimated that the Proposed Development will generate up to 44 two-way vehicular movements per day, 24 of which will be a mixture of HGVs and 7.5t vehicles.

7.5.1.2 The increase in traffic predicted has been used to assess the various transport effects.

7.5.2 Multi-Modal Trip Generation

7.5.2.1 Based on the 'method of travel to work' Census data detailed in the submitted TS, it is estimated that up to 4 daily two-way movements generated by the site will be via public transport, on foot or by bicycle.

7.5.2.2 The destinations for the majority of pedestrian trips are likely to be Simonswood as well as the bus stops on Pingwood Lane / Shevington's Lane, and therefore the assessment of pedestrian-based effects focusses on the routes to these destinations.

7.5.3 Cumulative Effects

7.5.3.1 No committed development traffic has been taken into account in either the baseline or proposed assessments.

7.5.4 Driver Delay

7.5.4.1 As detailed earlier, junction capacity modelling has not been undertaken given that it has been agreed with KC/LCC that the proposed development would not have a significant impact on the local highway network and no results for delay are therefore provided.

7.5.4.2 Notwithstanding the above, the submitted TS concludes that the additional traffic generated by the development during the worst-case peak hour will result in only circa one additional vehicle movement every 6-7 minutes which will not have a material impact on the operation or safety of the local highway network.

7.5.4.3 Having regard to the above, the Proposed Development would have a minor adverse or neutral effect on delay.

7.5.4.4 A minor effect is not considered significant in EIA terms for driver delay.

7.5.4.5 A major effect is considered significant in terms of the EIA regulations.

7.5.5 Public Transport Users

7.5.5.1 As detailed earlier, the Proposed Development would have a minor adverse or neutral effect on delay and therefore, the effect on public transport will also be minor adverse or neutral.

7.5.6 Pedestrian Delay

7.5.6.1 The destinations for the majority of pedestrian trips are likely to be Simonswood as well as the bus stops on Pingwood Lane / Shevington's Lane, and therefore the assessment of pedestrian-based effects focusses on the routes to these destinations.

7.5.6.2 The increase in delay to pedestrians crossing a link as a result of the proposed development will be immaterial when considering the aforementioned additional traffic generations.

7.5.6.3 Therefore, the Proposed Development would have a minor adverse or neutral effect on pedestrian delay.

7.5.7 Pedestrian Amenity

7.5.7.1 Amenity is defined in the DMRB as the relative pleasantness of a journey for pedestrians and others. This is mainly influenced by the volume and type of traffic on an adjacent link. Other key contributory factors are the standard and width of footways/cycleways, the street furniture provided, planting and landscape etc.

7.5.7.2 Stopgate Lane, Pingwood Lane and Shevington's Lane all benefit from a footway on one side of the carriageway, but not the other side, however, a dropped kerb crossing with tactile paving is provided to connect the footway on Stopgate Lane to the footway on Pingwood Lane and Shevington's Lane. Furthermore, the footway on Pingwood Lane and Shevington's Lane is protected by pedestrian guard railings which benefits from a dropped kerb crossing to the southbound bus stop on Pingwood Lane, where no footway is present on either side of the bus stop. The sensitivity is therefore considered to be medium.

7.5.7.3 The increase in flows equates to a negligible magnitude of effect for all routes and therefore, the significance of effect would be neutral in EIA terms.

7.5.8 Fear and Intimidation

7.5.8.1 A further effect that traffic may have on pedestrians and cyclists is described as 'fear and intimidation'. This is influenced by the volume of traffic, HGV content and, in the case of pedestrians, the width of the footpath.

7.5.8.2 As detailed earlier and in the submitted TS, the proposed development is only anticipated to generate 24 two-way HGV/7.5t movements per day during the operational phase which will have a neutral effect on pedestrians in terms of fear and intimidation, particularly when considering the likely pedestrian movements along Stopgate Lane, the pedestrian infrastructure on Pingwood Lane and Shevington's Lane and given that the HGV movements will be spread throughout the day from 06:00-20:00.

7.5.9 Severance

7.5.9.1 The destinations for the majority of pedestrian trips are likely to be Simonswood as well as the bus stops on Pingwood Lane / Shevington's Lane, and therefore the assessment of pedestrian-based effects focusses on the routes to these destinations.

7.5.9.2 The concept of severance is a perceived division that occurs when a traffic link separates part of an existing community. This can occur when a road becomes too heavily trafficked, making crossing the road a problem, or when a new route physically divides existing land. It is particularly relevant to situations where access to an essential amenity is impaired.

7.5.9.3 The Guidelines for Environmental Assessment of Road Traffic note that the term severance is used to describe a complex series of factors. It goes on to state that:

7.5.9.4 "the measurement and prediction of severance is extremely difficult. The correlation between the extent of the severance and the physical barrier of a road is not clear and there are no predictive formulae which give simple relationships between traffic factors and levels of severance."

7.5.9.5 A number of factors are identified in the Guidelines for the Environmental Assessment of Road Traffic to assess new severance relating to new routes, including road width, traffic speeds, crossing facilities, and existing crossing provision. Three main indicators for the assessment of separation have been formulated from studies of changes in traffic flow on observed links and are discussed in the Guidelines for Environmental Assessment of Road Traffic. It should be noted that these are intended as guidelines only and are highly dependent upon ambient traffic levels. The following indicators are set out in the Guidelines:

- <30% flow increase – negligible separation effects
- 30% flow increase – slight separation effects;
- 60% flow increase – moderate separation effects; and
- 90% flow increase – substantial separation effects.

7.5.9.6 Whilst the baseline traffic flows are unknown, the anticipated increase in flows and corresponding effect on severance is considered to equate to a negligible magnitude of effect for all routes and therefore, the significance of effect would be neutral in EIA terms.

7.5.10 Accidents and Road Safety

7.5.10.1 A detailed review of the accident records for the most recent five-year period available is included within the TS and does not identify any material concerns with regard to the Proposed Development given that no accidents were recorded in the area in the vicinity of the site.

7.5.10.2 It is therefore considered that the study area would have a negligible magnitude of effect.

7.5.10.3 The significance of effect would therefore be neutral.

7.6 Mitigation

7.6.1 Construction Phase Mitigation

7.6.1.1 Effects on transport during the construction phase of the Development are below the level requiring assessment and would be lower than the effects of the operational phase. The effect on Fear and Intimidation resulting from heavy goods vehicles during the construction phase was assessed, concluding that there would be no effect.

7.6.1.2 A Construction Environment Management Plan will be prepared following any grant of planning permission to detail the proposed construction traffic routes.

7.6.1.3 During construction appropriate measures will be put in place to limit any secondary effects on transportation. This could include the following measures:

- Limiting HGV hours such that, wherever possible, no movements take place within the sensitive periods; and,
- Ensuring that wheel-washing of construction vehicles and other appropriate cleaning is carried out prior to departing the site, and that all loads are properly secured.

7.6.2 Operational Phase Mitigation

7.6.2.1 KC and LCC noted that there are historic and ongoing issues with HGVs contravening the prohibition of use of Shevington's Lane. In addition to Shevington's Lane, there is a 7.5t weight limit restriction on Headbolt Lane and Stopgate Lane (east of Simonswood Industrial Estate). A routing plan has therefore been produced to inform drivers of the permitted route, via Pingwood Lane, as well as the aforementioned restricted routes, as shown on Figure 1 earlier.

7.6.2.2 All routing information will be communicated to all construction contractors, displayed on-site and passed to all employed drivers who will also be informed that they will face

disciplinary action if caught contravening. It is also anticipated that the HGV routing plan will be conditioned as part of any planning permission.

7.6.2.3 With the exception of the above, there are no mitigation measures proposed as part of the development proposals. Therefore, there are no residual effects to assess.

7.7 Summary of Impacts

7.7.1 The effects of the Proposed Development are detailed in the table below:

Table 7.4 – Summary of Impacts

	Receptor Sensitivity	Magnitude of Effect	Significance of Effect	Residual Effect
Driver Delay	High	Negligible	Neutral	N/A
Public Transport Users	High	Negligible	Neutral	N/A
Pedestrian Delay	Low	Negligible	Neutral	N/A
Pedestrian Amenity	Medium	Negligible	Neutral	N/A
Fear and Intimidation	Medium	Negligible	Neutral	N/A
Severance	Medium	Negligible	Neutral	N/A
Accidents and Road Safety	High	Negligible	Neutral	N/A

7.8 Conclusions

7.8.1 This ES Chapter assesses the likely effects of the Proposed Development on the environment with respect to transport.

7.8.2 Assessments of the effects were undertaken during both the construction and operational stages of the proposed development on the following:

- Driver delay;
- Public transport users;
- Pedestrian delay;
- Pedestrian amenity;
- Fear and intimidation;

- Severance and; and,
- Accidents and road safety.

Construction Phase

7.8.3 Effects on transport during the construction phase of the Development are below the level requiring assessment and would be lower than the effects of the operational phase. The effect on Fear and Intimidation resulting from heavy goods vehicles during the construction phase was assessed, concluding that there would be no effect.

7.8.4 A Construction Environment Management Plan will be prepared following any grant of planning permission to detail the proposed construction traffic routes which will be briefed-out to contractors and suppliers to instruct traffic associated with the construction of the proposed development to use the most appropriate routes.

7.8.5 Facilities within the site will be provided for construction workers including car parking, loading and unloading of plant and associated construction materials. A wheel wash area will be provided at a position to be agreed with the Local Authority to reduce the incidence of transfer of mud or loose materials onto the public highway.

Operational Phase

7.8.6 The adverse residual effects on transport during the operational phase will be neutral.

8 Ecology

8.1 Overview

8.1.1 An Ecological Impact Assessment (EcIA) supported by Preliminary Ecological Appraisal (PEA), Bat Scoping Survey Report and Biodiversity Net Gain Assessment has been undertaken by United Environmental Services. Reference should be made to Appendix V for the reports which contain full details of the survey method, results and conclusions/recommendations, which are reproduced below.

8.2 EcIA Conclusions

8.2.1 The land parcel has an area of approximately 0.7ha and comprises a single building and areas of hardstanding and bare ground. Vegetation on site is limited to very small and sporadic stands of ephemeral / short perennial vegetation. There are no hedgerows or trees present on site.

8.2.2 The EcIA has identified various impacts up to a local level due to the presence, or potential presence, of protected or priority species within the site boundary or the surrounding area.

8.2.3 Mitigation and compensation measures are provided within section the EcIA in order to reduce the impacts to insignificant levels. Furthermore, recommendations for enhancements have been provided, which could improve the habitats locally following the development, resulting in a minor positive outcome. This is therefore compliant with West Lancashire Council's local planning policies.

8.2.4 Provided the measures within the report are followed, it is considered that the proposed development will be compliant with all relevant legislation and planning policy and that the aforementioned ecological receptors will not be significantly negatively impacted.

9 Geology, Hydrogeology and Hydrology

9.1 Overview

9.1.1 The EIA Scoping Opinion from LCC confirmed that geology and hydrology issues could be scoped out from inclusion within the ES, given the scale of the location and small scale nature of the proposals. Within the pre-application response, LCC have requested that a Flood Risk Assessment (FRA) be prepared as part of the planning application, incorporating details of proposals for sustainable drainage. However, in accordance with government guidance, a FRA is not required as the proposals are located within Flood Zone 1 and the site is less than 1 ha. However, the following sections outlines sustainable drainage measures which will be incorporated into the proposals.

9.2 Sustainable Drainage Measures

9.2.1 The proposals will incorporate sustainable drainage measures within the proposals wherever possible. The proposals will incorporate rainwater harvesting, with water re-used for on-site operations, such as bin washing and general site cleaning. This represents a drainage improvement compared to the existing use of the land as rain water is not currently harvested for re-use within the existing site. References should be made to Appendix IX for details of the sustainable drainage scheme.

9.3 Impacts on Land and Water Resources

9.3.1 No impacts on land or water resources are predicted as a result of the proposed operations. There will be no discharges other than clean surface water. Any effluents arising from the process will kept separate from clean surface water drainage, contained and tankered away from site for disposal. Emissions to water/land will be controlled under the EP. Therefore, confidence is high that there will be no significant adverse impacts in this regard.

10 Air Quality and Climate

10.1 Introduction

10.1.1 This chapter includes an assessment of potential impacts on local air quality and climate during the construction and operational phase of the development.

10.2 Air Quality Legislation, Standards and Guidance

10.2.1 Air Quality Standards, Limits and Objectives

10.2.1.1 The European Union (EU) established an Air Quality Assessment and Management Framework in 1996, Directive 96/62/EC. This identified twelve pollutants for which limit values would subsequently be set. These limits were outlined within four subsequent 'daughter' directives. Directives 99/30/EC, 2000/69/EC and 2004/107/EC defined ambient air limit values for nitrogen dioxide (NO_2), NO_x, sulphur dioxide (SO_2), lead, benzene, carbon monoxide (CO) and particulate matter. Health based limits were also set for polycyclic aromatic hydrocarbons (PAHs), cadmium, arsenic and mercury, for which there is a requirement to reduce exposure to as low as is reasonably achievable.

10.2.1.2 Within the United Kingdom (UK), AQLVs for ambient air were originally outlined within The Air Quality Standards Regulations 2007, which came into force on 15th February 2007. These regulations transposed AQLVs from the four EU daughter Directives into UK legislation, and outlined dates by which limit values were required to be achieved, in line with EU obligations. In the UK, the Air Quality Strategy is used to implement AQLVs and also for providing a framework for improving air quality.

10.2.1.3 EU Directive 2008/50/EC on 'ambient air quality and cleaner air for Europe' came into force on 21st May 2008. This directive aimed to simplify existing EU air quality legislation through consolidating previous directives into one single directive. The directive also introduced a new control framework for particulate matter less than 2.5µm in

aerodynamic diameter ($PM_{2.5}$).[4] The provisions of this directive were required to be transposed into member states' legislation by 10th June 2010. Within the UK, this legislation was transposed within the Air Quality Standards Regulations 2010 on 11th June 2010, at which point the Air Quality Standards Regulations 2007 were revoked.

10.2.1.4 Table 10.1 and Table 10.2 contain the AQLVs and AQS which are relevant to this assessment. These have been obtained from the government permitting risk assessment website.

Table 10.1 - Air Quality Limit Values

Pollutant	Measured As	Purpose	Air Quality Limit Values
Nitrogen dioxide (NO_2)	1-hour mean	Protection of human health	200μg.m^{-3} (not to be exceeded more than 18 times per calendar year)
	Annual mean	Protection of human health	40μg.m^{-3}
Particulate matter less than 10μm in aerodynamic diameter (PM_{10})	24-hour mean	Protection of human health	50μg.m^{-3} (not to be exceeded more than 35 times per calendar year)
	Annual mean	Protection of human health	40μg.m^{-3}
Particulate matter less than 2.5μm in aerodynamic diameter ($PM_{2.5}$)	Annual mean	Protection of human health	20μg.m^{-3}
Sulphur dioxide (SO_2)	1-hour mean	Protection of human health	350μg.m^{-3} (not to be exceeded more than 24 times per calendar year)
	24-hour mean	Protection of human health	125μg.m^{-3} (not to be exceeded more than 3 times per calendar year)
Carbon monoxide (CO)	Maximum daily running 8-hour mean	Protection of human health	10mg.m^{-3}

[4] Consultation on the Transposition of Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on Ambient Air Quality and Cleaner Air for Europe, DEFRA, 2009.

Pollutant	Measured As	Purpose	Air Quality Limit Values
Benzene	Annual mean	Protection of human health	5µg.m^{-3}
Lead	Annual mean	Protection of human health	0.5 µg.m^{-3}

Table 10.2 - Ambient Air Directive Target Values and UK Air Quality Strategy Objectives

Pollutant	Measured As	Purpose	Ambient Air Directive Target Values and UK Air Quality Strategy Objectives
Arsenic (total content in PM_{10} fraction)	Annual mean	Protection of human health	6ng.m^{-3}
Cadmium (total content in PM_{10} fraction)	Annual mean	Protection of human health	5ng.m^{-3}
Nickel (total content in PM_{10} fraction)	Annual mean	Protection of human health	20ng.m^{-3}
Lead	Annual mean	Protection of human health	0.25µg.m^{-3}
SO_2	15-minute mean	Protection of human health	266µg.m^{-3} (not to be exceeded more than 35 times per calendar year)

10.2.2 Environmental Assessment Levels

10.2.2.1 A list of short and long-term EALs relevant to this assessment are presented in the table below. These have been obtained from the government website[5].

Table 10.3 - Environmental Assessment Levels

Substance	EALs			
	Long Term Annual Limit (µg.m^{-3})	Short Term Hourly Limit (µg.m^{-3})	24-Hour Mean (µg.m^{-3})	Monthly Mean Limit (µg.m^{-3})
Mercury	0.25	7.5	-	-
Vanadium	5	1	-	-

[5] https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit

Substance	EALs			
	Long Term Annual Limit ($\mu g.m^{-3}$)	Short Term Hourly Limit ($\mu g.m^{-3}$)	24-Hour Mean ($\mu g.m^{-3}$)	Monthly Mean Limit ($\mu g.m^{-3}$)
Manganese	0.15	1500	-	-
Arsenic	0.006	-	-	-
Antimony	5	150	-	-
Copper	10	200	-	-
Benzene	5	-	30	-
Chromium III	5	150	-	-
Chromium (VI)	0.00025	-	-	-
Hydrogen Chloride (HCL)	-	750	-	-
Hydrogen Fluoride (HF)	-	160	-	16

10.2.3 Critical Levels for Protection of Vegetation and Ecosystems

10.2.3.1 Table 10.1 contains critical levels for the protection of vegetation at nature conservation sites, obtained from permitting risk assessment guidance on the government website.

Table 10.4 - Critical Levels for the Protection of Vegetation

Pollutant	EALs	
	Concentration (µg.m-3)	Measured As
Nitrogen oxide (NO_x, expressed as NO_2	30	Annual mean
	75	Daily mean
SO_2	20 ($10\mu g.m^{-3}$ where lichens or bryophytes are present)	Annual mean
HF	5	Daily mean
	0.5	Weekly mean

10.2.4 Critical Loads for Protection of Vegetation and Ecosystems

10.2.4.1 Critical loads are assigned for nitrogen and acid deposition at sensitive ecological sites, above which it is suggested harmful effects on vegetation may occur. There are no Sites of Special Scientific Interest (SSSI) within 2km of the site and no Special Areas of Conservation (SAC), Special Protection Areas (SPAs) or Ramsar sites within 10km of the site. There are no ancient woodland areas or Local Nature Reserves within 2km of the site. There are some Local Wildlife Sites (LWS) within 2km of the site. However, no site

specific information is available on critical loads. Therefore, the table below contains worst case critical loads to ensure a precautionary assessment.

Table 10.5 - Site Specific Critical Loads for Nitrogen Deposition

Site	Worst Case Critical Load for Nitrogen Deposition (Kg $N.ha^{-1}.Year^{-1}$)
All LWS within 2km	3

Table 10.6 - Site Specific Critical Loads for Acid Deposition

Site	Worst Case Critical Load for Acid Deposition ($keq.ha^{-1}.Year^{-1}$)	
	Nitrogen	Sulphur
All LWS within 2km	0.1	0.1

10.2.5 Environmental Regulation

10.2.5.1 An Environmental Permit (EP) will be required under Schedule 13 of the permitting regulations. This will be required to be in place before the site can operate. The Schedule 13 Permit will be regulated by West Lancashire Borough Council. The requirement for an EP to be in place means that potential impacts on air as a result of site operations will be fully regulated and controlled under the permitting regime. In accordance with the NPPF, these controls and regulation should not be duplicated under the planning regime. An application for a Schedule 13 EP will be submitted to WLBC.

10.2.6 Dust

10.2.6.1 The Local Authority is obliged, where statutory complaint about dust nuisance is made, to take steps to investigate in accordance with Part III of the Environmental Protection Act (1990). Where assessment of 'nuisance' dust impacts is made within this assessment, consideration has been given to potential to cause statutory nuisance.

10.2.6.2 The term 'nuisance dust' is so defined as a result of the potential to lead to statutory nuisance complaints, if present in high enough concentration. Nuisance related dust

includes coarser particulate matter >10µm in diameter, which will have the potential to travel varied distances from a source, dependent on particle size. Particles >30µm in diameter will largely deposit within 100m of a source, whilst intermediate sized particles (10-30µm) may travel up to 500m from a source. Although such dust has the potential to cause short and long term chronic health impacts, this is defined as nuisance dust since if the rate of soiling (deposition) becomes rapid enough, it may lead to nuisance complaints.

10.2.6.3 There are no UK or European standards for nuisance related dust. However, in the UK, a dust deposition rate of 200mg.m^{-2}.day^{-1} is generally used as the threshold above which complaints are possible. Literature suggests that significant impacts on vegetation are not likely to occur at deposition rates of less than 1000mg.m^{-2}.day^{-1}.[6]

10.2.6.4 Finer particulate matter (PM_{10}), which would be expected to make up the smallest proportion of particulate emissions from the proposed activities, will be deposited more slowly and may travel up to 1,000m from a source. AQLVs for PM_{10} which are in place for the protection of human health, were outlined in the previous section.

10.2.6.5 Dust may directly impact on plants through physically smothering leaves. If the level of dust deposition is high enough, it can lead to adverse impacts upon photosynthesis, respiration and transpiration. It has been reported in literature that most sensitive vegetation species are affected by dust deposition levels in excess of 1,000mg.m^{-2}.day^{-1} and that even the most sensitive vegetation species appear to be unaffected until dust deposition are at levels considerably greater than this[6]

10.2.6.6 Emissions of dust during operations will be controlled and regulated through conditions within the EP.

[6] Interim Advice Note 61/05 – Guidance for Undertaking Environmental Assessment of Air Quality for Sensitive Ecosystems in Internationally Designated Nature Conservation Sites and SSSIs (Supplement to DMRB 11.3.1).

10.3 Assessment Methodology

10.3.1 Construction Phase Dust Emissions

10.3.1.1 The estimation of potential dust impacts from construction works is subjective and the risk that an adverse impact will arise will depend on a number of factors such as handling methods, distance between site and sensitive receptors and also the weather conditions, such as wind speed and direction and rainfall.

10.3.1.2 In order to quantify potential dust impacts associated with construction works, reference has been made to guidance issued by the Institute of Air Quality Management (IAQM)[7] on the Impacts of dust from demolition and construction.

10.3.1.3 The IAQM guidance advises a five step process to assessing potential construction phase dust impact as follows:

- **STEP 1** – Screen the requirement for a more detailed assessment – no further assessment required if there are no receptors within a certain distance of the works;
- **STEP 2** – Assess the risk of dust impacts for four construction categories, including demolition, earthworks, construction and trackout;
- **STEP 3** – determine site specific mitigation for each category in STEP 2;
- **STEP 4** – Examine residual effects and determine whether or not these are significant; and,
- **STEP 5** – Prepare the dust assessment report.

[7] Guidance on the Assessment of Dust from Demolition and Construction, IAQM, 2014.

STEP 1 – Screening the Need for More Detailed Dust Assessment

10.3.1.4 IAQM guidance states that an assessment (of dust) will normally be required when there is:

- a 'human receptor' within:
  - 350 m of the boundary of the site; or
  - 50 m of the route(s) used by construction vehicles on the public highway, up to -
  - 500 m from the site entrance(s); or,
- an 'ecological receptor' within:
  - 50 m of the boundary of the site; or
  - 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s).

10.3.1.5 As there are dust sensitive receptors within 350m, an assessment of potential dust impacts has been undertaken following Steps 2, 3, 4 and 5 of the IAQM method, which are detailed below.

STEP 2 – Assessing Risk of Dust Impacts

10.3.1.6 The risk of dust arising is evaluated using four risk categories, negligible, low, medium and high risk. The risk category is determined based on the following two factors:

- The scale and nature of the works, which determines the potential dust emission magnitude as small, medium or large (STEP 2A); and
- The sensitivity of the area to dust impacts (STEP 2B), which is defined as low, medium or high sensitivity.

STEP 2A – Defining the Potential Dust Emission Magnitude

10.3.1.7 The following table outlines the generic criteria used to assess dust emission magnitude, based on the IAQM guidance.

Table 10.7 – Generic Criteria for Assessing Potential Dust Emission Magnitude

Dust Emission Magnitude	Criteria
Large	Dust – Earthworks Total site area >10,000m^2, potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes Dust – Construction Total Building volume >100,000m^3, on site concrete batching, sandblasting Dust – Trackout >50 HDV (>3.5t) outward movements in any one day potentially dusty surface material (e.g. high clay content), unpaved road length >100m
Medium	Dust - Earthworks Total site area 2,500m^2 – 10,000m^2, moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 4m - 8 m in height, total material moved 20,000 tonnes – 100,000 tonnes Dust – Construction Total building volume 25,000m^3 – 100,000m^3, potentially dusty construction material (e.g. concrete), on site concrete batching Dust - Trackout 10-50 HDV (>3.5t) outward movements in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50 m – 100 m
Small	Dust - Earthworks Total site area <2,500m^2, soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <4 m in height, total material moved <20,000 tonnes, earthworks during wetter months Dust – Construction Total building volume <25,000m^3, construction material with low potential for dust release (e.g. metal cladding or timber) Dust - Trackout <10 HDV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length <50 m.

STEP 2B – Defining the Sensitivity of an Area

10.3.1.8 The IAQM guidance advises that the sensitivity of an area takes account of a number of factors as follows:

- The specific sensitivities of receptors in the area;

- The proximity and number of those receptors;
- In the case of PM_{10}, the local background concentration; and
- Site-specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust.

10.3.1.9 The table below outlines criteria used to assess sensitivity of individual receptors to dust soiling (nuisance) and health effects of PM_{10}, based on the IAQM guidance.

Table 10.8 – Receptor Sensitivity Criteria for Dust Emissions

Sensitivity of Receptor	Criteria
High	Nuisance related dust Indicative examples include dwellings, schools, museums and other culturally important collections, medium and long term car parks and car showrooms. Internationally designated European sites PM_{10} Arising from Dust from Construction Works Residential properties, hospitals, schools and residential care homes
Medium	Nuisance related dust Indicative examples include parks and places of work. Nationally designated European sites. PM_{10} Arising from Dust from Construction Works Office and shop workers
Low	Nuisance related dust Indicative examples include playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short term car parks and roads. Ecological sites of local importance. PM_{10} Arising from Dust from Construction Works Public footpaths, playing fields, parks and shopping streets

10.3.1.10 The tables below show the matrices used to define the sensitivity of an area to dust impacts for nuisance and health related effects, which are based upon the IAQM guidance.

Table 10.9 – Criteria Used for Assessing Sensitivity of Area to Dust Soiling (Nuisance) Effects on People and Property

Sensitivity of Receptor	Number of Receptors	Distance from the Source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table 10.10 – Criteria Used for Assessing Sensitivity of Area to Human Health Impacts from PM_{10} Associated with Dust Arising from Construction Works

Sensitivity of Receptor	Annual Mean PM_{10} Concentration	Number of Receptors	Distance from the Source (m)				
			<20	<50	<100	<200	<350
High	>32µg.m^{-3}	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32µg.m^{-3}	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28µg.m^{-3}	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24µg.m^{-3}	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	-	>10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low	Low

STEP 2C – Defining the Risk of Dust Impacts

10.3.1.11 In accordance with the IAQM guidance, the dust emission magnitude is combined with the defined sensitivity of an area to determine the risk of dust impacts with no mitigation applied. The IAQM guidance advises that for cases where a 'negligible' risk category is assigned, no mitigation measures beyond those required by legislation will be required. The method for assigning the level of risk for each construction activity is outlined in the tables below, based on the IAQM guidance.

Table 10.11 – Criteria Used for Assessing Risk of Dust Impacts from Earthworks

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible Risk

Table 10.12 – Criteria Used for Assessing Risk of Dust Impacts from Construction

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible Risk

Table 10.13 – Criteria Used for Assessing Risk of Dust Impacts from Trackout

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible Risk
Low	Low Risk	Low Risk	Negligible Risk

STEP 3 – Site Specific Mitigation

10.3.1.12 The dust risk categories determined in STEP 2C above should be used to define appropriate mitigation. The IAQM guidance outlines suitable mitigation measures for high, medium and low risk sites.

STEP 4 – Determining Significant Effects

10.3.1.13 Throughout this ES, potential significance of impacts have been assessed before and after mitigation to assess the effectiveness of mitigation. However, IAQM recommends that significance is only assigned to the effect after mitigation, stating that in the case of demolition/construction, it is assumed that mitigation (secured by planning conditions, legal requirements or required by regulations) will ensure that a potential significant

adverse effect will not occur, so the residual effect will normally be 'not significant'. The same IAQM guidance also states that for almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation, experience showing that this is normally possible. Therefore, the residual effect will normally be 'not significant'. As such, the IAQM guidance does not provide a method for determining significance of pre-mitigation impacts, which have therefore not been considered in this assessment.

10.3.2 Odour Emissions

10.3.2.1 The tables below outline the indicative criteria used to assess sensitivity of receptors to odour emissions and receptor sensitivity.

Table 10.14 – Criteria Used to Assess Magnitude of Impact from Vehicle Exhaust Emissions and Odour

Magnitude of Change	Criteria
Substantial	Vehicle Exhaust Emissions Change in ambient pollution concentration >10% of annual mean AQLV Odour Substantial risk of statutory nuisance
Moderate	Vehicle Exhaust Emissions Change in ambient pollution concentration of 5-10% of annual mean AQLV Odour Moderate risk of statutory nuisance
Slight	Vehicle Exhaust Emissions Change in ambient pollution concentration of 1-5% of annual mean AQLV Odour Slight risk of statutory nuisance
Negligible	Vehicle Exhaust Emissions Change in ambient pollution concentration <1% of annual mean AQLV Odour Negligible risk of statutory nuisance

Table 10.15 – Criteria Used to Assess Sensitivity of Receptor to odour and Vehicle Exhaust Emissions

Sensitivity of Receptor	Criteria
High	Vehicle Exhaust Emissions Background pollutant concentrations ≥75% of AQLV Odour Residential areas, recreational areas
Medium	Vehicle Exhaust Emissions Background pollutant concentrations ≥50%<75 % of AQLV Odour Offices
Low	Vehicle Exhaust Emissions Background pollutant concentrations <50% of AQLV Odour Industrial workplaces

10.3.3 Stack Emissions

10.3.3.1 A detailed dispersion modelling assessment has been undertaken to assess potential impacts from residual emissions arising from the stack. Reference should be made to Appendix VI for this assessment, for full details of methodology and results. As the plant will be regulated by an EP, the assessment was undertaken to meet permitting requirements. In addition, a quantitative human health risk assessment has been undertaken to assess potential impacts from potential polychlorinated dibenzo dioxin (PCDD) and polychlorinated dibenzo furan (PCDF) emissions that may arise from the proposed plant. Reference should be made to Appendix VII for the Human Health Risk Assessment.

10.4 Baseline Conditions

10.4.1 Existing Sources of Emissions

10.4.1.1 The site is location adjacent an existing waste management site in addition to other industrial processes. Therefore, there is already potential for emissions within the vicinity of the site.

10.4.2 Review of Air Quality Across West Lancashire

10.4.2.1 WLBC are required to undertake a review and assessment of air quality within their area of jurisdiction under Section 82 part IV of the Environment Act (1995). Local Authorities (LAs) are obligated to prepare an Annual Status Report (ASR) each year. For areas where AQLVs are not expected to be achieved, the LA will undertake further assessment. Subsequently, if AQLVs are not predicted to be met following detailed assessment, the LA must declare an Air Quality Management Area (AQMA).

10.4.2.2 The latest ASR report available on the WLBC website is the 2019 Air Quality ASR[8]. No continuous monitoring is undertaken by WLBC at present. Monitoring is limited to the deployment of NO_2 diffusion tubes which are located within the AQMA. The AQMA is declared as follow:

- Ormskirk AQMA – declared for annual mean NO_2. An area encompassing properties in Moor Street and Stanley Street in Ormskirk

10.4.2 The declared AQMA is not in close proximity to the proposed site, being located approximately 7.5km to the North-North-West. Therefore, it has not been considered further within this assessment.

10.4.1 Air Quality Monitoring Data

Continuous Monitoring Data

10.4.1.1 The Automatic Urban and Rural Network (AURN) is a network of air pollution monitoring stations across the UK, managed by Bureau Veritas on behalf of DEFRA. The main purpose

[8] Air Quality ASR, WLBC, 2019.

of the network is to enable the government to assess air quality at different locations to aid with the implementation of suitable policy measures for protection of human health.

10.4.1.2 The closest AURN monitoring station to the proposed site is St Helens Linkway. This is an urban traffic monitoring location situated approximately 10km to the South-East of the proposed site. Given the proximity to the proposed site and nature of the monitoring location, which is a major urban environment, adjacent to arterial roads, it was not considered that it would provide a suitable source of background data for use in this assessment.

10.4.1.3 WLBC do not maintain any continuous monitoring sites within their area of jurisdiction.

Diffusion Tubes

10.4.1.4 WLBC undertake NO_2 diffusion tube monitoring at several locations across their area of jurisdiction. However, these are all located within the AQMA, several kilometres from the site. As such, it was not considered that these would provide a suitable source of background data for use in this assessment.

10.4.2 Background Pollutant Mapping Data

10.4.2.1 The DEFRA website contains background pollutant mapping data for NO_2, PM_{10} and $PM_{2.5}$, on a 1km by 1km grid square basis across the UK. This data is routinely used for assessing background pollutant concentrations where no suitably representative air pollution monitoring data exists. The archive is maintained by AEA on behalf of DEFRA. NO_2, PM_{10} and $PM_{2.5}$ data is available for each grid square for the years 2018 to 2030. The table below contains background pollutant concentrations for the grid square containing the site.

Table 10.16 - Background Pollutant Mapping Data for Grid Square 343500, 400500

Pollutant	2020 Annual Mean Concentration ($\mu g.m^{-3}$) within Grid Square Containing Site
NO_2	10.13
PM_{10}	11.83
$PM_{2.5}$	7.37

10.4.3 Dust Sensitive Receptors

10.4.3.1 The tables below outline the sensitivity of areas to dust within each distance band from the dust sources assessed, which has been assessed in accordance with the methodology outlined in Section 10.3. The number of receptors within each sensitivity class and distance banding have been estimated, and the sensitivity of the area classified in accordance with the methodology outlined in Section 10.3.1. In accordance with the IAQM guidance, only the highest defined area sensitivity from each table has been considered further. In order to ensure a worst case assessment in the case of dust from construction works on site, distances have been measured from the proposed site boundary to ensure a worst case scenario. In summary, receptors have been assessed to be of low sensitivity to all potential forms of dust impact during construction works.

Table 10.17 – Sensitivity of Area to Nuisance Related Dust from Construction Works on Site

Distance from Source (m)	Receptor Sensitivity	Number of Receptors Within Each Sensitivity Class Within Distance Band	Sensitivity of Area
<20	Low	0	Not sensitive
	Medium	0	Not sensitive
	High	0	Not sensitive
<50	Low	0	Not sensitive
	Medium	0	Not sensitive
	High	0	Not sensitive
<100	Low	>1	Low
	Medium	0	Not sensitive

Distance from Source (m)	Receptor Sensitivity	Number of Receptors Within Each Sensitivity Class Within Distance Band	Sensitivity of Area
	High	0	Not sensitive
<350	Low	>1	Low
	Medium	0	Not sensitive
	High	1	Low
OVERALL SENSITIVITY OF AREA			**LOW**

Table 10.18 – Sensitivity of Area to Nuisance Related Dust from Trackout

Distance from Source (m)	Receptor Sensitivity	Number of Receptors Within Each Sensitivity Class Within Distance Band	Sensitivity of Area
<20	Low	>1	Low
	Medium	0	Not sensitive
	High	0	Not sensitive
<50	Low	>1	Low
	Medium	0	Not sensitive
	High	0	Not sensitive
OVERALL SENSITIVITY OF AREA			**LOW**

Table 10.19 – Sensitivity of Area to Health Related Impacts from PM_{10} Associated with Dust from Construction Works

Distance from Source (m)	Receptor Sensitivity	Number of Receptors Within Each Sensitivity Class Within Distance Band	Sensitivity of Area
<20	Low	0	Not sensitive
	Medium	0	Not sensitive
	High	0	Not sensitive
<50	Low	0	Not sensitive
	Medium	0	Not sensitive
	High	0	No sensitive
<100	Low	0	Not sensitive
	Medium	0	Not sensitive
	High	0	Not sensitive

Distance from Source (m)	Receptor Sensitivity	Number of Receptors Within Each Sensitivity Class Within Distance Band	Sensitivity of Area
<200	Low	>1	Low
	Medium	0	Not sensitive
	High	0	Not sensitive
<350	Low	>1	Not sensitive
	Medium	0	Not sensitive
	High	1	Low
OVERALL SENSITIVITY OF AREA			**LOW**

Table 10.20 – Sensitivity of Area to Health Related Impacts from PM_{10} Associated with Dust from Trackout

Distance from Source (m)	Receptor Sensitivity	Number of Receptors Within Each Sensitivity Class Within Distance Band	Sensitivity of Area
<20	Low	>1	Low
	Medium	0	Not sensitive
	High	0	Not sensitive
<50	Low	>1	Low
	Medium	0	Not sensitive
	High	0	Not sensitive
OVERALL SENSITIVITY OF AREA			**LOW**

10.4.3.2 The table below contains a list of all identified vehicle exhaust emission sensitive receptors. The locations identified are those which are in closest proximity to vehicle routes to ensure a worst-case assessment. Reference should be made to Appendix IX for a graphical representation of these locations.

Table 10.21 – Identified Vehicle Exhaust Emission Sensitive Receptors

Receptor Identifier	Receptor description	NGR (m)		Sensitivity of Receptor
		X	Y	
V1	Residential property off Pingwood Lane	342154.6	400558	Low

10.5 Construction Phase Impacts

10.5.1 Overview

10.5.2 Potential air quality impacts during construction works includes the following:

- Wind blown dust during site excavation, preparation and construction works;
- Release of asbestos during building demolition works;
- Emissions from construction phase road traffic; and,
- Release of volatile organic compounds (VOCs) from stored liquids on site.

10.5.1 Dust

10.5.1.1 Emissions of dust may arise during the construction phase as a result of the following activities:

- Demolition of existing building;
- Excavation and ground works;
- Building construction works;
- Storage of materials in external stockpiles; and,
- Delivery of materials to site.

10.5.1.2 Fugitive emissions of dust may occur from wind whipping of raw materials in open stockpiles, from dust raised from the ground by construction phase traffic, during unloading of raw materials from delivery trucks, during demolition work and excavation of material to prepare site and during the construction of structures. The level of potential dust impact will depend on a number of factors including the type of activities, duration of activities, proximity to receptors and prevailing meteorological conditions. The potential for significant impacts from nuisance dust would normally be expected to occur within 100m of a construction site. Beyond 200m, impacts would not normally be expected to be significant. The sensitivity of the surrounding area has been determined to be low, in accordance with IAQM guidance. Using this same guidance, potential dust

risk has been quantified in the table below. The dust emission magnitude for each activity has been determined in accordance with IAQM guidance.

10.5.1.3 The building to be demolished is understood to be between 20,000m^3 and 50,000m^3. However, it is in a state of disrepair and contains no side panelling. The remaining parts of the structure are predominantly metal frame with some small amounts of timber. It is also understood that the building is a maximum height of 8-10m. As such, a small dust emission magnitude is predicted for demolition works. Given that the main site area for construction works is between 2,500m^2 and 10,000m^2, a medium dust emission magnitude has been predicted for earthworks. Given that the volume of the building(s) to be constructed will be <25,000m^3 in volume, a small dust emission magnitude has been predicted for the construction activity.

10.5.1.4 Based on the dust emission magnitude and sensitivity of receptors, potential unmitigated dust risk has been quantified in the table below. For the demolition, construction and trackout categories, the risk of dust impact is negligible. For the earthworks category, the risk of dust impact is low. Therefore, any potential unmitigated dust impacts are predicted to be minor at worst and can be adequately mitigated by the measures recommended in Section 10.7.

Table 10.22 – Potential Unmitigated Dust Emission Impact Magnitude and Overall Dust Risk at Sensitive Receptors

Activity	Dust Emission Magnitude	Dust Risk – Dust soiling (nuisance)	Dust Risk – Human Health
Demolition	Small	Negligible	Negligible
Earthworks	Medium	Low Risk	Low Risk
Construction	Small	Negligible	Negligible
Trackout	Small	Negligible	Negligible

10.5.1.5 Given that the building to be demolished may contain asbestos within roof panels, this presents a risk as a result of asbestos becoming airborne during demolition works.. However, demolition works must be undertaken in accordance with relevant Health and

Safety Executive guidelines and accord with all relevant legislation. Provided such procedures are followed, potential impacts are not predicted to be significant.

10.5.2 Vehicle Exhaust Emissions

10.5.2.1 The relevant guidance[9] indicates that detailed assessment of vehicle exhaust emissions should be undertaken if the following thresholds are exceeded:

- A change of Light Duty Vehicle (LDV) flow of:
  - more than 100 AADT within or adjacent to an Air Quality Management Area (AQMA); and/or
  - more than 500 AADT elsewhere; and/or,
- A change of Heavy Duty Vehicle (HDV) flows of:
  - more than 25 AADT within or adjacent to an AQMA; and/or
  - more than 100 AADT elsewhere

10.5.2.2 The construction phase will be short term and temporary, anticipated to last for up 5 weeks. During this time, it is anticipated that up to 2 HGVs may visit the site each day, on average, to deliver materials required for the construction process. In addition, 20 cars/vans (LGVs) may visit the site each day associated with site workers. The predicted HGV and LGV numbers are significantly below the thresholds in the relevant guidance, above which modelling would be required therefore the air quality impacts from vehicle exhaust emissions associated with construction works is described as ‘no significant’.

10.5.2.3 Impacts from vehicle exhaust emissions are predicted to be negligible in magnitude at receptors of low sensitivity, resulting in an overall impact significant which is neutral. This is a qualitative prediction which has been made based on the anticipated increase in pollution concentrations and existing background pollutant concentrations.

[9] Land-Use Planning & Development Control: Planning for Air Quality, EPUK and IAQM, January 2017.

10.5.3 Release of Volatile Organic Compounds from Stored Liquids

10.5.3.1 Fugitive release of VOC compounds may occur during storage of liquids used in the construction process. Fugitive VOC release can occur due to leaks, spillages and container overloading. This can potentially lead to health impacts on the construction workforce and impacts on local air quality. This has potential to generate unmitigated impacts which are slight negative in magnitude at receptors of medium sensitivity, resulting in an unmitigated impact significance which is minor to moderate, adverse. However, a series of good practice measures are outlined later within this chapter. Provided these are implemented, it is considered that these should be sufficient to adequately control any potential impacts.

10.6 Operational Phase Impacts

10.6.1 Overview

10.6.2 Potential air quality impacts during operations includes the following:

- Vehicle exhaust emissions including PM_{10} and NO_2 associated with HGVs and cars visiting the site;
- Residual emissions from the stack serving the treatment plant;
- Odour associated with wastes; and,
- Climate impacts

10.6.1 Vehicle Exhaust Emissions

10.6.1.1 It is anticipated that up to 12 HGV trips (24 movements) will be generated by the development each day and up to 12 daily car trips (24 movements) associated with site staff.

10.6.1.2 The number of car and HGV movements associated with site operations are significantly less than the thresholds identified within the IAQM guidance. As such, a qualitative assessment of operational phase vehicle exhaust emissions has been undertaken.

10.6.1.3 Impacts from vehicle exhaust emissions are predicted to be negligible in magnitude at receptors of low sensitivity, resulting in an overall impact significant which is neutral. This is a qualitative prediction which has been made based on the anticipated increase in pollution concentrations and existing background pollutant concentrations.

10.6.2 Odour

10.6.2.1 A Schedule 13 EP will be required to be in place for operations at the site, controlling emissions to air, land and water, including odour. As such, odour controls will be agreed with the regulator as part of the permitting process. In accordance with the NPPF, such control should not be duplicated under the planning regime.

10.6.2.2 The potential for odour may arise from the wastes imported to site for disposal. However, all such wastes will be transported within enclosed/sealed containers, preventing release of odour. Containers will not be opened until within the building and introduction to the process. The enclosure of the process within the building will provide sufficient control of any potential odours.

10.6.2.3 Without mitigation, potential for odour impacts is considered to be slight negative at receptors of high sensitivity, resulting in an unmitigated impact which is moderate, adverse and direct, long term, permanent and reversible in nature.

10.6.3 Residual Emissions from Stack Serving Treatment Process

10.6.3.1 Similarly to odour, emissions from the plant will be controlled under an EP, regulated by and in accordance with the NPPF, such controls should not be duplicated under the planning process. However, modelling of potential impacts as a result of stack emissions has been undertaken in accordance with permitting requirements. The scope of the assessment was agreed with the regulator. Reference should be made to Appendix VI for the assessment. This has demonstrated that potential impacts will not be significant, based on a proposed flue height of 14m. In addition, a quantitative Human Health Risk Assessment has been undertaken to assess potential impacts as a result of worst case residual dioxin and furan emissions from the process. Reference should be made to

Appendix VII for this assessment, which contains full details of method and results. This has demonstrated that the potential human intake of dioxins/furans as a result of residual dioxin and furan emissions from the process will be significantly below the Tolerable Daily Intake. As such, no significant health impacts as a result of exposure to residual dioxin emissions from the process are predicted.

10.6.4 Impacts on Climate

10.6.4.1 The ES Scoping Opinion from LCC states that the ES should include an assessment of impact on calculating the greenhouse gas emissions in terms of carbon dioxide (CO_2) from the operation of the development and comparing it to the Greenhouse Gas (GHG) emissions that would result from the baseline case of the same quantity of waste being disposed to landfill. However, it should be noted that such a comparison is not relevant, since High Temperature thermal treatment is the only disposal option for the waste stream concerned. Sourcing of the medical waste to be thermally treated will be based on future tenders and framework contracts with the National Health Service (NHS). The applicant will naturally seek to take medical waste from the closest NHS facilities for economic reasons, some of which is understood to be treated well outside the boundaries of the North West region at present. Economic viability for such projects is intrinsically linked to efficiency and therefore associated environmental impacts and therefore it is in the operator's interest to transport waste over as short a distance as possible. As such, the facility will reduce road miles over which the specialist waste is transported, which has not only safety benefits, but will also result in a reduced level of vehicle emissions, including greenhouse gas emissions, such as CO_2.

10.6.4.2 Furthermore, the proposals include the addition of wood drying process, using residual heat from the process, which would otherwise be dried using heat produced from raw fossil fuels. Therefore, this will result in a further reduction in CO_2 emissions whilst also maximising the sustainability of the process. Therefore, given that the proposals are for a process which represents the only viable disposal option for this waste, which cannot be recycled, the inclusion of a facility for capturing heat for wood drying ensures that

heat is captured as far as is possible and that the proposals accord with the waste hierarchy.

10.6.4.3 Given that there is no definitive information on exactly where wastes to be used are currently transported to, or the associated heat recovery that may or may not be used at these alternative sites, it is not possible to provide calculations of carbon savings, however, confidence is high that such savings will be achieved for the reasons outlined above.

10.7 Mitigation

10.7.1 Construction Phase Mitigation

10.7.1.1 The construction phase will be short term and temporary, anticipated to last for approximately 5 weeks. Therefore, the potential minor unmitigated impacts predicted in the previous section will not be long term. However, the following outlines a series of dust mitigation measures for use during construction works. This is largely a set of good practice measures which are considered adequate to control potential dust impacts that may occur during construction works:

- Sheeting of vehicles transporting potentially dusty loads to site;
- Wetting of any materials stockpiles to prevent wind whipping of materials;
- Material drop heights should be kept to a minimum;
- Use of a water bowser or hose on site for dust suppression;
- Use of road sweeper, as necessary, to remove and prevent trackout of material onto the highway; and,
- Cleaning of any spillages using wet cleaning methods.

10.7.1.2 In order to control potential impacts from asbestos during demolition of the existing building, all relevant legislation and HSE guidelines must be followed during such works.

10.7.1.3 In order to minimise risk of VOC release from liquids used in construction process, the following statutory guidelines should be followed during the construction phase of the development:

- Pollution Prevention Guideline 2: Above Ground Oil Storage Tanks; and,
- Pollution Prevention Guideline 26: Storage and Handling of Drums and Bulk Containers.

10.7.1.4 Specifically, the following guidelines should be adhered to:

- The primary storage containers will be of sufficient strength and integrity to ensure they do not burst or leak;
- A secondary container should be used to contain any spillages that may occur from the primary container;
- Secondary containers should have sufficient capacity to store 25% of the total volume of liquids being stored, or 110% of the largest container, whichever is the greater;
- There should be no drainage outlets from storage containers;
- Containment facilities should be inspected regularly; and,
- Spill kits and suitable personal protective equipment should be made available on site.

10.7.2 Operational Phase Mitigation

10.7.2.1 The following operational phase mitigation measures are considered adequate to control potential air quality impacts during site operations.

Odour Control

10.7.2.2 Wastes will be delivered to site in sealed containers, thus preventing odour release during transportation to site. Waste container will only be opened within the building at the point of introduction to the process. Waste containers/bins will be washed out within the

building, with effluent from the process contained. Given the above, sufficient mitigation is in place to control any potential odour impacts to a negligible level.

Control of Emissions from Thermal Treatment Process

10.7.2.3 Residual emissions from the process will need to comply with the stringent Emission Limit Values (ELVs) within the Industrial Emissions Directive (IED). The EP will contain a series of emission limits for the plant, in accordance with IED, which the operator will be required to comply with. Compliance will need to be demonstrated by continuous and periodic monitoring. In order to achieve compliance with the limits, the following abatement measures will be used:

- Solids/dust removal with a trace heated cyclone prior to oxidiser. This is to reduce the soot loading on the thermal oxidiser and reduce volatile metals in the combusted gases;
- Selective Non-Catalytic Reduction for NO_x control;
- Gas cooling to approx. 220-250°C prior to gas cleaning/filtration to give optimal conditions for sodium bicarbonate reaction and metals and dioxins and furans adsorption onto the Powdered Activated Carbon (PAC).
- Ceramic filtration for particulate matter removal;
- Abatement of acid gases using sodium bicarbonate;
- Capture of Volatile metals using PAC; and,
- Dioxin and furan removal using PAC – this ends up in the gas cleaning residues.

10.7.2 The pyrolysis process includes the controlled heating of wastes in an oxygen free environment, which is undertaken within an initial chamber. Wastes are initially pyrolysed to produce syngas and char. The char is removed from the process by a filtration system. The syngas is then directed to a secondary chamber, where the gases are combusted at a minimum temperature of 1100C for at least two seconds to provide sufficient destruction of dioxins and furans, in accordance with legislation. Due to the design of the chamber, the gases will be resident for approximately 7 seconds. The heat

within the secondary chamber exhaust gases are routed past the main, primary chamber, with the heat being utilised to keep the primary chamber continuously heated.

10.7.1.1 In addition to the physical and operational abatement measures, a flue/stack is required to dilute and disperse residual emissions of pollutants arising from the plant, to ensure that resulting pollution at surrounding ground level locations does not lead to significant adverse impacts on Air Quality Standards. As such, a 14m high flue will be installed. The detailed modelling within Appendix VI has verified the flue to be of sufficient height.

10.8 Residual Impacts

10.8.1 Construction Phase

10.8.1.1 Provided the mitigation measures identified in the previous section are followed/implemented, all potential impacts arising from construction works are predicted to be negligible in magnitude, neutral in significance. Despite the increase in vehicle movements on the surrounding highway network, residual impacts from vehicle exhaust emissions have been assessed to be neutral in significance at all identified receptors.

10.8.2 Operational Phase

10.8.2.1 Provided the mitigation measures identified in the previous section are followed/implemented, all potential adverse operational phase air quality impacts are predicted to be negligible in magnitude, neutral in significance.

10.9 Cumulative Impacts

10.9.1 The assessment of potential impacts has taken account other processes within the vicinity, through assessment of existing baseline conditions. A search was undertaken on the LCC and WLBC planning public access websites to identify other significant processes with point source emissions within the vicinity of the proposed site. This search was extended up to 1km from the proposed site. Examples of other relevant processes would

include other waste combustion or thermal treatment operations, which have not yet been brought into operation. This has identified that planning consent was issued in 2017 for the operation of four biomass boilers, fuelled by clean waste wood, located on the adjacent waste site at City Centre Commercials Waste Limited (ref: LCC/2017/0007). As a precautionary assessment, it has been assumed that these boilers have not yet been brought into full operation and therefore will not have been accounted for within the baseline assessment of existing background pollutant concentrations. These have therefore been included within an in-combination assessment with the proposals, included as part of the emissions modelling report within Appendix VI. This has demonstrated that in-combination impacts will not be significant.

10.10 Summary of Impacts

10.10.1 The tables below contain a summary of potential impacts before and after mitigation for both the construction and operational phases of the development respectively.

Table 10.23 - Summary of Impacts for the Construction Phase

Receptor Identifier/ Description	Impact Description	Impact Significance (Without Mitigation in Place)	Mitigation Summary	Residual Impact Significance (With Mitigation in Place)
Dust sensitive receptors	Dust from demolition, Earthworks, construction and trackout	N/A	• Sheeting of vehicles transporting potentially dusty loads to site; • Wetting of any materials stockpiles to prevent wind whipping of materials; • material drop heights should be kept to a minimum; • Use of a water bowser or hose on site for dust suppression; • Use of road sweeper, as necessary, to remove and prevent trackout of material onto the highway; and, • Cleaning of any spillages using wet cleaning methods.	Neutral
V1	Vehicle exhaust emissions – impact on local air quality	Neutral	None required	Neutral
Construction workforce, local air quality	VOCs from liquids used in construction works	Minor to moderate adverse, short term, direct, temporary, reversible and local in nature	All liquids to be stored and handled in accordance with Pollution Prevention Guidelines 2 and 26, as applicable	Neutral

Table 10.24 - Summary of Impacts for the Operational Phase

Receptor Identifier/ Description	Impact Description	Impact Significance (Without Mitigation in Place)	Mitigation Summary	Residual Impact Significance (With Mitigation in Place)
V1	Vehicle exhaust emissions – impact on local air quality	Neutral	None required	Neutral
Odour Sensitive receptors	Statutory nuisance	Moderate adverse, direct, long term, permanent and reversible	All potentially odourous wastes to be transported to site in sealed containers/bins. Waste only unloaded from containers during introduction to the process, within enclosed building. Empty waste containers to be washed/cleaned within the building and effluent captured in sealed tank, preventing odour release	Neutral
Residual emissions from stack serving process	Impacts on local air quality	N/A	Elevated flue for dilution and dispersion of residual emissions. Compliance with the provisions of IED. Secondary abatement used to control emissions, including urea injection, sodium bicarbonate for acid gas control, ceramic filtration for particulate matter control and activated carbon for control of VOCs.	Neutral

10.11 Conclusions

10.11.1 An assessment has been undertaken of baseline air quality within the vicinity of the proposed site. The site is not located within an AQMA, and background mapping data indicates that levels of NO_2 and PM_{10} are significantly below annual mean AQLVs in the vicinity of the site.

10.11.2 The potential air quality impacts during the construction phase includes dust from demolition works, construction works on site, including earthworks and construction activities, dust raised by vehicles travelling to and from site (trackout), VOCs from stored liquids used in the construction process and exhaust emissions from HGVs transporting materials to site. Impacts from construction phase vehicle exhaust emissions have been assessed to be insignificant.

10.11.3 Provided relevant statutory Pollution Prevention Guidelines are implemented, impacts from VOCs are not predicted to be significant. A series of good practice dust mitigation measures have been outlined which are predicted to control any minor dust impacts to a negligible level as follows:

- Sheeting of vehicles transporting potentially dusty loads to site;
- Wetting of any materials stockpiles to prevent wind whipping of materials;
- Material drop heights should be kept to a minimum;
- Use of a water bowser or hose on site for dust suppression;
- Use of road sweeper, as necessary, to remove and prevent trackout of material onto the highway; and,
- Cleaning of any spillages using wet cleaning methods.

10.11.4 The potential air quality impacts during the operational phase includes:

- Stack exhaust emissions from thermal treatment process;
- Odour from stored wastes; and,
- Vehicle exhaust emissions including PM_{10} and NO_2 associated with HGVs and cars visiting the site.

10.11.5 Given the number of additional vehicle movements, impacts from vehicle exhaust emissions are not predicted to be significant.

10.11.6 Odour and stack exhaust emissions will be controlled under an EP. Given that wastes are to be stored within an enclosed building, odour is not anticipated to be a significant issue.

10.11.7 In order to achieve compliance with air emission limits, the following abatement measures will be used prior to discharge of exhaust from the stack:

- Solids/dust removal with a trace heated cyclone prior to oxidiser. This is to reduce the soot loading on the thermal oxidiser and reduce volatile metals in the combusted gases;
- Selective Non-Catalytic Reduction for NO_x control;
- Gas cooling to approx. 220-250°C prior to gas cleaning/filtration to give optimal conditions for sodium bicarbonate reaction and metals and dioxins and furans adsorption onto the Powdered Activated Carbon (PAC);
- Ceramic filtration for particulate matter removal;
- Abatement of acid gases using sodium bicarbonate;
- Capture of Volatile metals using PAC; and,
- Dioxin and furan removal using PAC – this ends up in the gas cleaning residues.

10.11.8 Emissions modelling has been undertaken, which has demonstrated that residual emissions from the stack will not generate any significant impacts on local air quality. A Human Health Risk Assessment has been undertaken for dioxin and furan emissions, which has demonstrated that associated health risks as a result of exposure to dioxins and furans will not be significant.

11 Noise and Vibration

11.1.1 Construction Phase

11.1.1.1 Assessment of potential construction phase noise impacts has been undertaken on a qualitative basis. It is not possible to assess construction phase noise impacts quantitatively, as at this stage, there are no specific details on the construction programme and plant to be used. However, construction phase noise impacts will only be temporary. Potential construction phase impacts have been qualitatively assessed based on the anticipated construction activities with reference to BS 5228 guidance and good practice mitigation.

11.1.2 Operational Phase

11.1.2.1 Potential operational phase noise impacts from on-site noise sources have been quantified within a BS4142 assessment. Reference should be made to Appendix VIII for a copy of this assessment, outlining methodology and results. The table contains the indicative criteria used to determine magnitude of noise impacts.

Table 11.1 - Indicative Criteria Used for Assessing Magnitude of Noise Impacts

Impact Magnitude	Criteria/Change in Ambient Noise Level
Substantial	Substantial risk of statutory nuisance, change in ambient noise level of >10dBA
Moderate	Moderate risk of statutory nuisance, change in ambient noise level of >5dBA<10dBA
Slight	Slight risk of statutory nuisance, change in ambient noise level of >3dBA<5dBA
Negligible	Negligible risk of statutory nuisance, change in ambient noise level of ≤3dBA

11.1.2.2 Table 11.2 contains the criteria uses to assess sensitivity of noise sensitive receptors.

Table 11.2 - Indicative Criteria for Assessing Sensitivity of Noise Receptors

Sensitivity of Receptor	Criteria
High	Residential properties, hospitals, retirement homes, nursing homes at night time
Medium	Residential properties, hospitals, retirement homes, nursing homes during day time
Low	Offices, shops, outdoor recreational areas, leisure centres, places of worship

11.2 Baseline Assessment

11.2.1 Background Noise Levels

11.2.2 Existing noise levels within the vicinity of the site at sensitive receptor locations have been quantified within the BS4142 assessment within Appendix VIII.

11.2.1 Noise Sensitive Receptors

11.2.1.1 Table 11.3 below contains a list of identified noise sensitive receptors. These are representative of worst case exposure. Receptor locations are illustrated within the BS4142 noise assessment within Appendix VIII.

Table 11.3 - Noise Sensitive Receptors

Receptor Identifier	Receptor Description	Receptor Sensitivity
N1	Residential property off Siding's Lane	High
N2	Keepers House	High

11.3 Construction Phase Impacts

11.3.1 Potential noise impacts associated with the construction phase includes:

- HGVs used for the delivery of construction materials to site; and,

- Noise from construction works on site.

11.3.2 The construction phase will be short term and temporary, Therefore, such sources will not generate significant levels of noise over a prolonged period of time. Furthermore, the constructions works will be located withing an existing waste management site and therefore likely to be in keeping with noise from existing operations.

11.3.3 There is potential for noise to be generated by plant and machinery used on site during site preparation and construction works. Site preparation works and preparation of foundations are anticipated to be the major source of noise during construction works. However, site preparation work will not be undertaken during the whole of the construction programme. To a lesser degree, there is potential for noise impacts from the erection of the structures and vehicle movements on the surrounding road network. However, vehicle movements generated during the construction phase will not be significant, anticipated to average out at 2 HGVs visiting the site each day over the course of construction works.

11.3.4 The main area of the construction site will be located at least 300m from the nearest noise sensitive receptors. Given the distance to nearest receptors and the short term and temporary nature of construction works, the distance from the site to sensitive receptors in itself will provide a significant degree of noise mitigation. Without mitigation, unmitigated construction phase noise impacts are predicted to be slight negative in magnitude at sensitive receptors of high sensitivity, resulting in an overall impact significance which is moderate adverse and direct, short term, temporary, reversible and local in nature. A series of good practice noise mitigation measures are included with this chapter, which are considered adequate to control any potential noise impacts during construction works.

11.4 Operational Phase Impacts

11.4.1 Potential noise impacts associated with the operation of the site are as follows:

- Noise from HGVs on-site; and,

- Noise from operation of plant and machinery.

11.4.2 Potential impacts as a result of the above noise sources have been quantified within the BS4142 noise assessment within Appendix VIII. This has demonstrated that the proposals will not generate any significant noise impacts, with resulting noise levels within existing background levels at sensitive receptors. As such, noise impacts are predicted to be negligible in magnitude, neutral in significance.

11.5 Mitigation

11.5.1 Construction Phase Mitigation

11.5.1.1 The contractor will be instructed to have regard to guidance in BS5228 and use best practicable measures to minimise noise impacts during construction works. The following outlines relevant mitigation measures from the guidance:

- Minimising drop heights during unloading of materials;
- Careful placement of materials;
- Avoiding unnecessary revving of engines and switching of engines when plant and machinery not in use;
- Siting any stationary plant and equipment used in construction works as far away from sensitive receptors as practicably possible;
- Use of plant and machinery in accordance with manufacture specifications and ensure plant and machinery is appropriately maintained; and,
- Starting up plant and machinery sequentially rather than simultaneously.

11.5.2 Operational Phase Mitigation

11.5.2.1 Operational phase mitigation is outlined within the BS4142 noise assessment within Appendix VIII. No additional mitigation has been determined to be necessary over and above site design measures.

11.6 Residual Impacts

11.6.1 Provided the mitigation measures outlined above are followed/implemented on-site, residual impacts during the construction and operational phase are predicted to be negligible in magnitude, neutral in significance.

11.7 Cumulative Impacts

11.7.1 No significant cumulative impacts are predicted during the construction or operational phase.

11.8 Summary of Impacts

11.8.1 The tables below summarise potential noise impacts during the construction and operational phase.

Table 11.4 - Summary of Impacts for the Construction Phase

Receptor Identifier / Description	Impact Description	Impact Significance (Without Mitigation in Place)	Mitigation Summary	Residual Impact Significance (With Mitigation in Place)
N1 and N2	Noise from construction activities creating nuisance at closest sensitive receptors	Moderate adverse, short term, direct, temporary, reversible and local in nature	• Minimising drop heights during unloading of materials; • Careful placement of materials; • Avoiding unnecessary revving of engines and switching of engines when plant and machinery not in use; • Siting any stationary plant and equipment used in construction works as far away from sensitive receptors as practicably possible; • Use of plant and machinery in accordance with manufacture specifications and ensure plant and machinery is appropriately maintained; and, • Starting up plant and machinery sequentially rather than simultaneously.	Neutral

Table 11.5 - Summary of Impacts for the Operational Phase

Receptor Identifier/ Description	Impact Description	Impact Significance (Without Additional Mitigation in Place)	Mitigation Summary	Residual Impact Significance (With Mitigation in Place)
N1 and N2	Noise from construction activities creating nuisance at closest sensitive receptors	Neutral	No additional mitigation required over and above design measures	Neutral

11.9 Conclusions

11.9.1 A baseline assessment has been undertaken to assess existing levels of noise and receptors sensitive to noise surrounding the site. Receptors sensitive to noise are all a significant distance from the site, located at least 300m from the main site operations.

11.9.2 During construction works, there is potential for noise impacts as a result of site preparation works, demolition work, construction of the building and external structures and from HGVs visiting the site. However, provided the following good practice mitigation measures are followed, residual construction phase noise impacts are predicted to be negligible in magnitude, neutral in significance.

- Restriction of construction works to daytime hours only;
- Minimising drop heights during unloading of materials;
- Careful placement of materials;
- Avoiding unnecessary revving of engines and switching off engines when plant and machinery not in use;
- Siting any stationary plant and equipment used in construction works as far away from sensitive receptors as practicably possible;
- Use of plant and machinery in accordance with manufacturer specifications and ensure plant and machinery is appropriately maintained; and,
- Starting up plant and machinery sequentially rather than simultaneously.

11.9.3 During the operational phase, there is potential for noise impacts as a result of HGVs used for the delivery and export of wates/fuels and from operation of the process itself. However, such impacts have been quantified within a BS4142 noise assessment, which has demonstrated that resulting noise levels will be within background levels at sensitive receptors and therefore impacts are predicted to be negligible in magnitude, neutral in significance.

11.9.4 No significant cumulative noise impacts are predicted.

12 Archaeology and Cultural Heritage

12.1 Reference should be made to the EIA Scoping Opinion within Appendix I. LCC confirmed that matters relating to archaeology could be 'scoped out' from inclusion within the ES. As such, these matters have not been considered within this ES with no significant effects predicted on archaeology and cultural heritage. The site is already developed from current and previous industrial uses. As such, potential for impact on archaeological artefacts below the surface of the site is negligible given that the land has been heavily disturbed from current and past uses. There are no statutory cultural heritage receptors in close proximity to the proposed site, the nearest asset including a Grade II* listed building, located approximately 1.5km to the West-North-West. Given the distance to the nearest heritage receptors and the heavily industrial context of the location, there will not be any significant adverse impacts on the setting of heritage assets.

13 Cumulative Impacts

13.1 Introduction

13.1.1 The EIA regulations require that as part of the EIA process, and wherever possible, projects should assess the potential for any beneficial or adverse impacts on the wider environment as a result of cumulative effects with other projects/developments. The EIA regulations do not contain any guidance for assessment of cumulative impacts. European Commission (EC) guidance[10] describes cumulative impacts as incremental changes caused by other past, present or reasonably foreseeable actions together with the project.

13.2 Assessment Methodology

13.2.1 The main types of potential cumulative impact associated are as follows, adapted from definitions in the EC guidance:

i) Incremental impacts from a number of separate developments, e.g. combined noise, dust, odour, landscape and visual effects etc from multiple developments;
ii) Combined effect of individual impacts, e.g. noise, dust and visual, from one development on a particular receptor; and,
iii) Several developments with insignificant impacts individually, but which together may have a cumulative impact.

13.2.2 This cumulative impact assessment has been undertaken on a qualitative and quantitative basis using professional judgement, also drawing upon the findings/conclusions of the various technical assessments.

[10] Guidelines for the Assessment of Indirect and Cumulative Impacts as Well as Impact Interventions, European Commission, 1999.

13.3 Assessment of Potential Cumulative Impacts

Identified Third Party Projects with Potential to Contribute to Cumulative Impacts

13.3.1 A search has been undertaken on the HCC planning website to identify major/significant projects in the vicinity of the proposed site which may have potential to contribute to cumulative impacts with the proposed development. Major/significant developments include, for example, proposals which have been EIA development. Furthermore, the scope includes other developments which may have potential to generate similar impacts, eg other waste thermal treatment processes/combustion processes/waste operations. It is important to note that if a development has already been completed and brought into operation, then this does not require consideration within the assessment of cumulative impacts. This is since the effects of the development(s) will have been accounted for within relevant baseline assessments within this ES and therefore, these are ignored to prevent double counting.

13.3.2 This search was extended up to 1km from the site on the WLBC and LCC planning websites for full planning applications within the past five years. This identified a single application which may be relevant in terms of potential cumulative impacts, a planning consent issued in 2017 for the operation of four biomass boilers, fuelled by clean waste wood, located on the adjacent waste site at City Centre Commercials Waste Limited (ref: LCC/2017/0007). As a precautionary assessment, it has been assumed that these boilers have not yet been brought into full operation and therefore will not have been accounted for within the baseline assessment of existing background pollutant concentrations.

13.3.3 The main potential for cumulative impact with the above identified development is from stack emissions. These potential impacts were considered within the air quality chapter of this ES, demonstrating potential in-combination impacts to be insignificant.

13.3.4 As confirmed by the scoping opinion, traffic and transport, landscape, archaeology, geology, ecology and hydrology issues were scoped out from requirement for inclusion within this ES by LCC. As such, it is demonstrated that the proposals will not contribute to any significant cumulative impacts in this regard.

Potential Cumulative Impacts as a Result of Potential Interaction of Impacts from Proposed Development

13.3.5 Potential cumulative impacts may arise as a result of a combination of individual impacts from the same development. However, the various reports included within this ES have demonstrated that with mitigation in place, residual adverse impacts will not be significant and no significant cumulative impacts have identified within any of the reports included within this ES. As such, it is considered that potential for cumulative impacts from the development itself is not significant.

ES Appendix I

EIA Scoping Opinion and Pre-Application Advice

Lancashire County Council

David Young
Oaktree Environmental Ltd
Lime House
2 Road Two
Winsford
Cheshire
CW7 3QZ

Phone: 01772 534130
Email: DevCon@lancashire.gov.uk
Your ref:
Our ref: SCP/2020/001
Date: 18th November 2020

Dear Mr Young

APPLICATION: SCP/2020/0001
TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 - SCOPING OPINION FOR A PROPOSED MEDICAL WASTE INCINERATION FACILITY AT SIMONSWOOD INDUSTRIAL ESTATE, KIRKBY

I refer to your letter of 29th September 2020 and request for an EIA scoping opinion for a proposed application for a medical waste incineration facility at Simonswood Industrial Estate, Kirkby.

As you will be aware there are certain requirements within the 2017 EIA Regulations that set out the information that an ES must contain. These are contained within Regulation 18 and Schedule 4 of the Regulations and any ES that you submit must address the requirements set out in those provisions.

In particular your ES should contain the following:

a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development
b) a description of the likely significant effects of the proposed development on the environment
c) a description of any features of the proposed development or measures envisaged in order to avoid, prevent or reduce and if possible, off set likely significant effects on the environment.
d) a description of the reasonable alternatives studied by the developer which are relevant to the proposed development and its specific characteristics and an indication of the main reasons for the option chosen taking into account the effects of the development on the environment.
e) A non technical summary of the information referred to in paragraphs a) to d)
f) Any additional information specified in Schedule 4 relevant to the site specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

The ES must include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment taking into

account current knowledge and methods of assessment. It should be prepared taking into account the results of any relevant UK environmental assessments which are reasonably available to the person preparing the environmental statement with a view to avoiding duplication of assessment.

The ES shall be prepared by competent experts and must contain a statement from the developer outlining the relevant expertise or qualifications of such experts.

Comments on specific topic areas

You have set out the broad topic areas for the ES within section 3 of your document. However, given the location and scale of the proposed development, I consider that the issues of traffic and transport, ecology, geology and hydrology, landscape and archaeology can be scoped out of your ES. You should still include some information on these issues within your planning application and I have provided further advice on these matters within my response to the pre application request.

With regard to noise issues, I would not regard this to be a likely significant environmental effect of the development given the nature and location of the development. However, given the comments that have been received from the Borough Council you may wish to include noise within your ES and I have therefore included some discussion of this issue within the scoping opinion.

The following comments are provided in relation to the detailed assessment that should be undertaken within each of these topic areas:

Air Quality

The potential air quality impacts from stack emissions are the main potential issues with this development and needs to be the focus of the ES.

I note the text in your scoping report regarding air quality impacts from road traffic. However, given the predicted traffic increases, it is not considered that modelling of air quality impacts from this source needs to be specifically covered by the air quality section of the ES.

The scoping report does not contain much detail as to how the air quality impacts from the stack will be modelled and assessed. The following guidance is given in relation to this topic.

The air quality section of the ES should consider impacts on local air quality and human health impacts including the following:-

- Establishing the relevant European, national and local air quality standards and assessment levels which are relevant to this installation. This should include consideration of any local air quality management areas that would be affected by this development and the targets / limits that are set for particular pollutants and for metals.

- An emissions modelling study. This should be based upon a recognised methodology for carrying such studies and utilise appropriate local weather data. The model should be used to predict the ground level concentration of pollutants on a long and short term basis across a grid of points. It should also be used to predict the concentration at specified points such as the nearest residential receptors. This should include the properties located on Sidings Lane and those to the west of Pingwood Lane in Kirkby.
- The assessment should explain any assumptions that have been used in the assessment of impacts
- An explanation of the odour potential from any of the wastes to be processed and how any such risks would be managed.
- A human health risk assessment. This should be undertaken according to a recognised methodology having regard to the nature of the waste materials to be managed at the site.

Climate Change

The ES should assess the impact on climate change by calculating the green house gas emissions in terms of CO^2 from the operation of the development and comparing it to the GHG emissions that would result from the baseline case of the same quantity of waste being disposed to landfill. The calculation should have regard to any CO^2 savings resulting from the recovery of any energy that may take place within the process.

Noise

The plant would be located on an industrial estate where there are a wide range of industrial uses. It is therefore considered that noise impacts during the daytime period are unlikely to be a significant environmental effect given the distance to the nearest properties and the existing day time noise levels. However, it is noted that the plant would operate at night and therefore noise impacts during those times are likely to be more significant. The ES should therefore contain an assessment of night time noise impacts at the nearest residential properties on Sidings Lane. The assessment should be based upon a survey of existing background night time noise levels at these properties and should assess the likely noise impact during the proposed hours of operation. The noise assessment should be undertaken in accordance with recognised guidance (BS4142:2014 and the Noise Policy Statement for England)

Please do not hesitate to contact the case officer, Jonathan Haine, if you wish to discuss further the content of any ES or submit a draft ES for initial consideration.

Yours sincerely

A Mullaney

Andrew Mullaney
Head of Planning and Environment

Lancashire County Council

David Young
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CW7 3QZ

Phone: 01772 534130
Fax:
Email: DevCon@lancashire.gov.uk
Your ref:
Our ref: JMH PRE/2020/0028
Date: 09 November 2020

Dear Mr Young

PRE APPLICATION ADVICE REQUEST FOR PROPOSED MEDICAL WASTE INCINERATION PLANT AT SIMONSWOOD INDUSTRIAL ESTATE, KIRKBY

I refer to the email of 23rd September 2020 from Peter Miller of MTB Town Planning Ltd requesting pre application advice in relation to a proposed development of a medical waste incineration plant on land at Simonswood Industrial Estate.

This advice is based upon the information that you have supplied together with that which has been provided with your related request for an EIA scoping opinion. This pre application advice and the scoping opinion should be read together to inform the preparation of your planning application and ES. However, should the proposal substantially change from that which has been previously described, you should seek further advice. The advice that is provided in this letter is given without prejudice to the determination of any planning application.

Information required to support the planning application

This development will fall with schedule 1 of the EIA Regulations and therefore you will have to submit an ES with the application. The associated scoping opinion explains the information that should be included within your ES. Due to the scale and location of the development, I do consider that many issues can be scoped out of the ES. However, there should still be some discussion of any 'scoped out' issues within the planning application and there are several issues that will to be covered within the planning application as they will be validation requirements. The following issues should be included within your planning application:

- Full drawings showing the elevations of the building and layout of any external yard area and car parking
- A description of the equipment to be installed within the building and its operation including hours of operation

Andy Mullaney • Head of Service for Planning and Environment
Development Management • PO Box 100 • County Hall • Preston • PR1 0LD

- A description of the types and volumes of waste that will be accepted at the site and how they will be transported to the site and stored and managed whilst at the site.
- A description of any residues and waste products and how they will be dealt with.
- An assessment of the proposal against relevant national planning policy and local development plan policy (see list of policies below)
- Highway impacts – a description of the highway impacts during construction and during the operation of the facility including the types of vehicles that will be used to transport wastes to the site.
- Ecology : an assessment of the ecological value of the existing site and building. This should focus on the value of the existing and its potential for bats and breeding birds. If the surveys find any evidence of value for these species, the proposals should be accompanied by suitable mitigation measures
- Noise – given the location of the site and the inclusion of the plant within the building, I would not expect noise to be a particular concern. However, it will be useful for you to include some information relating to the noise levels that would be generated by the equipment that would be installed within the building.
- A Flood Risk Assessment which should include proposals for the disposal of surface water from the building and site taking into account sustainable drainage principles.
- Air pollution – this will be the main potential impact of the development and it is considered that this should be covered within the ES
- Climate Change – this issue will need to be addressed within the ES

Relevant Planning Policy

The relevant planning policies that you should address in your application are as follows:-

National Planning Policy Framework

Paragraphs 11, 108 -109 127, 163, 165, 180, 181 and 183 of the NPPF are considered to be especially relevant to this proposal

National Policy for Waste – Paragraphs 4, 5 and 7 are especially relevant. Appendix A is relevant in terms of the waste hierarchy.

West Lancashire Local Plan

Policy GN3 – Criteria for Sustainable Development

Policy EC1 – Economy and employment land

Policy IF2 – Enhancing Sustainable Transport Choice

Policy EN1 – Low Carbon development and energy infrastructure

Policy EN2 – Preserving and Enhancing West Lancashire's Natural Environment

Lancashire Minerals and Waste Local Plan

Core Strategy :

Policy CS8 – Identifying capacity for managing our waste

Policy CS9 – Achieving Sustainable Waste Management

Site Allocations and Development Management Policies

Policy DM2 – Development Management

Policy DM4 – Energy from waste

Policy WM1 – Capacity of Waste Management Facilities

Policy WM2 – Large Scale Waste Management Facilities

Comments on Policy Context : Your planning application should include an assessment against the above policies. In terms of the policies dealing with the broad location of your development, the proposed site would appear to be supported by Policy EC1 of the West Lancashire Borough Local Plan. The Simonswood Industrial Estate is also considered suitable for large scale built waste management facilities under Policy WM2 of the Lancashire Minerals and Waste Local Plan. Whilst the proposal facility would not appear to be large scale in terms of tonnage per annum, it would appear to fall within the types of facilities considered suitable for the strategic locations with Appendix B.

Policy DM4 of the Lancashire Minerals and Waste Local Plan covers energy from waste developments and requires all developments that include processes capable of recovering energy from waste to include measures to capture any heat produced as a by product of the treatment process and either use it on site or export it to the national grid or local energy or heat consumer. The proposal is for the incineration of waste but does not appear to include any facilities for the recovery of the heat produced. The proposal is therefore only for the disposal of waste which is the lowest level of the waste hierarchy. The proposal should address the requirements of Policy WM4. It is appreciated that there will probably not be a recycling option for these waste streams but information should be included regarding the waste management techniques which are currently used to treat these waste streams to demonstrate at the very least that the proposal will not result in a move to a lower level in the hierarchy. Preferably, and to address the requirements of Policy WM4, the proposal should incorporate measures to capture the energy produced from the incineration process.

Main planning issues :

Policy : The main issue will be for you to demonstrate compliance with policy DM4 of the Lancashire Minerals and Waste Local Plan.

Air pollution : The main planning issue will relate to air pollution and this will be covered with the ES. The information requirements for this topic are set out within the scoping opinion. You will also need to cover the climate change issue within the ES.

Highways : Some of the roads in the area around Simonswood Industrial Estate are subject to traffic regulation orders (weight restrictions). Within Lancashire this relates to

Stopgate Lane to the east of the industrial estate entrance through to Bickerstaff. I understand that there are also similar weight restrictions within Kirkby. In Lancashire, there have been considerable issues with HGV traffic from the industrial estate not complying with the TRO's. I would therefore like to explore measures within this planning application to encourage / ensure that traffic from this development does not use routes that are unauthorised.

The existing access to the industrial estate is in a very poor condition both visually would benefit from some enhancement. The highway surface on the access is also in very poor condition which leads to issues of debris being tracked onto Stopgate Lane which is a regular source of complaint. It is appreciated that any improvement should be in scale with the proposed development. However, your proposal will make a contribution towards HGV movements at the industrial estate access and therefore these issues should be investigated and addressed as part of this proposal.

You should demonstrate that the site is large enough for HGVs to turn within the site. The application should also include layout plans for car parking including disabled parking and to address the other requirements of Policy IF2 of the West Lancashire Borough Local Plan.

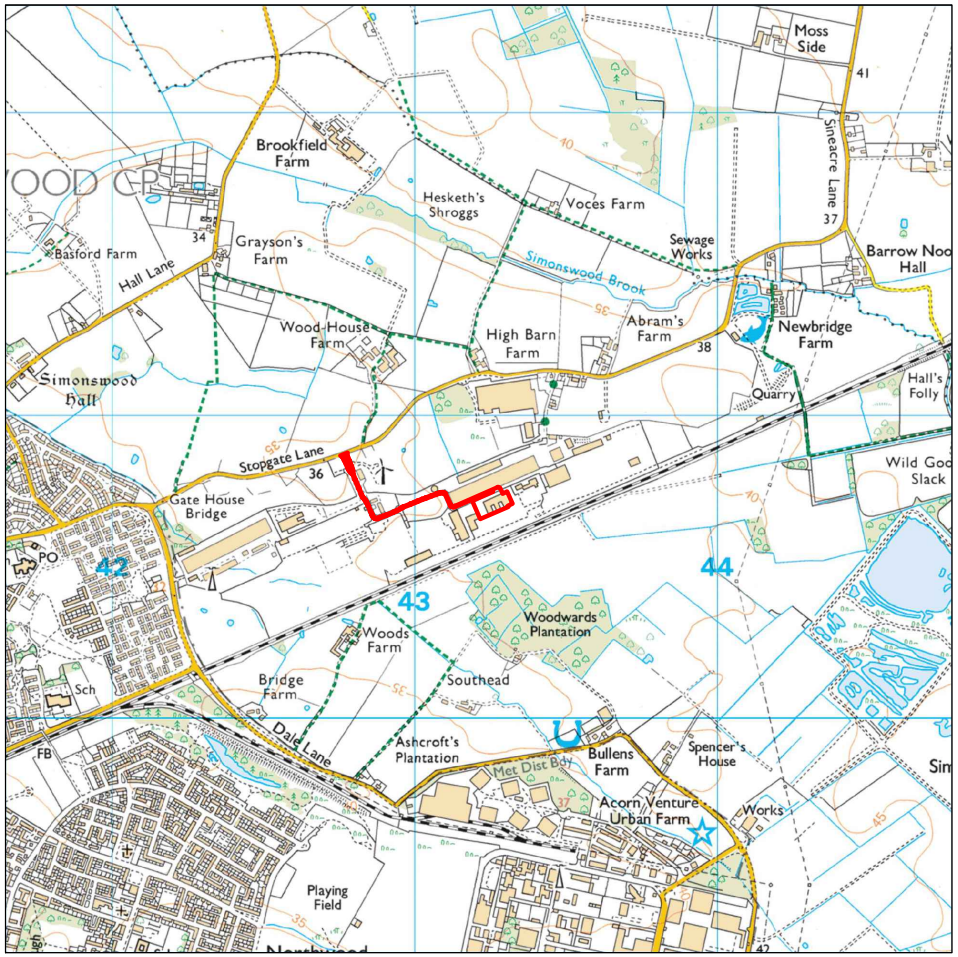
Yours faithfully,

Jonathan Haine

Jonathan Haine
Team Leader Development Management.

ES Appendix II

Site Location Plan



Scale Bar (1:25,000)

0 km 1 km 2 km

NOTES

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REVISION HISTORY

Rev:	Date:	Init:	Description:
-	30.11.21	RS	Initial drawing
A	01.12.21	RS	Boundary amended
B	08.12.21	RS	Minor amendment

KEY:

Site location (planning boundary)

Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants

DRAWING TITLE
SITE LOCATION MAP

CLIENT
Culzean W2E Limited

PROJECT/SITE
Proposed High Temperature Treatment Facility, Stopgate Lane, Simonswood

SCALE @ A4	CLIENT NO	JOB NO
1:25,000	2776	008

DRAWING NUMBER	REV	STATUS
2776-008-01	B	Issued

DRAWN BY	CHECKED	DATE
RS	RS	08.12.21

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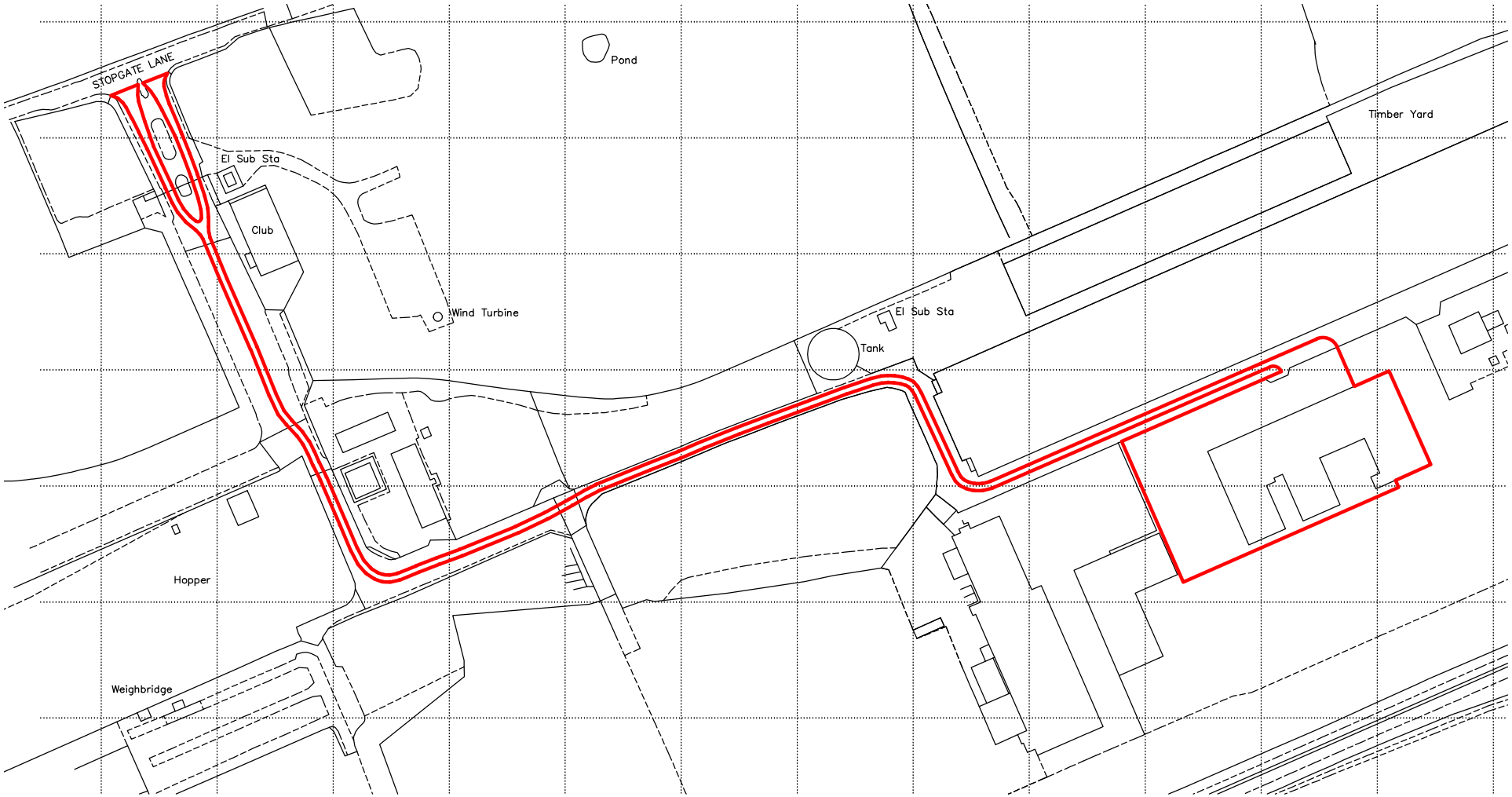

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SITE LOCATION MAP

CLIENT
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DRAWING NUMBER	REV	STATUS
2776-008-02	B	Issued

DRAWN BY	CHECKED	DATE
RS	RS	08.12.21

KEY

Planning application boundary

N

Scale Bar (1:2,500)

0 m 20 40 60 80 100 m

NOTES

REVISION HISTORY

Rev:	Date:	Init:	Description:
-	30.11.21	RS	Initial drawing
A	01.12.21	RS	Boundary amended
B	08.12.21	RS	Minor amendment