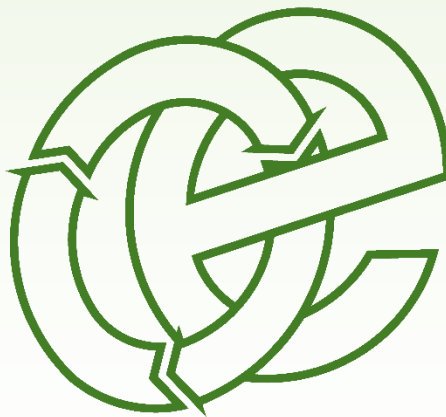


NON-TECHNICAL SUMMARY

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

Culzean W2E Limited

Version:	1.2	Date:	13 December 2021		
Doc. Ref:	2776-005-C	Author(s):	DY	Checked:	
Client No:	2776	Job No:	005		



Oaktree Environmental Ltd
Waste, Planning & Environmental Consultants



Oaktree Environmental Ltd, Lime House, 2 Road Two, Winsford, CW7 3QZ
Tel: 01606 558833 | Fax: 01606 861183 | E-Mail: sales@oaktree-environmental.co.uk | Web: www.oaktree-environmental.co.uk
REGISTERED IN THE UK | COMPANY NO. 4850754

Document History:

<i>Version</i>	<i>Issue date</i>	<i>Author</i>	<i>Checked</i>	<i>Description</i>
1.0	30 November 2021	DY	CW2E	Draft for applicant review
1.1	06 December 2021	DY	CW2E	Updated draft
1.2	13 December 2021	DY	CW2E	Application submission version

Non-Technical Summary

Overview

An Environmental Statement has been undertaken for the proposed development of a High Temperature Treatment Facility for management of Medical Waste at Stopgate Lane, Simonswood, in order to assess potential impacts on air, land, water and local economy associated with the proposed development. This Non-Technical summary summarises the findings and conclusions of the Environment Statement in non-technical language.

The planning application for these proposals has been submitted to Lancashire County Council. Where significant adverse impacts have been identified, mitigation measures have been outlined in order to control impacts to an acceptable/negligible level.

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 wastes 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.

Site Description

The centre of the site is located at approximate National Grid Reference 343260, 400708. 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. The site is situated off Stopgate Lane, Simonswood. The site location is illustrated within Appendix I.

Description of Proposals

The proposals are for a high temperature treatment facility for management of medical wastes. This will include acceptance of up to 3,6 50 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.

Reference should be made to the drawings in Appendix I 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 in Appendix I. The proposals also include the demolition of an existing ageing building on-site, to make way for the footprint of the new development/building.

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.

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.

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.

Wheeled Bins (1100 litre and 240/700 litre capacity) are to be delivered to site by articulated lorry (double stacked) for processing.

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 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).

Upon delivery of the bins to the site, the bins will be weighed. 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.

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.

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

The development will generate up to 12 full time jobs.

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.

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.

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.

The site will require an Environmental Permit to operate. This will be a Schedule 13 permit, regulated by West Lancashire Borough Council. Emissions from the process will be controlled and regulated under the Environmental Permit.

The precise details of the thermal treatment process/design are outside the scope of the planning application and will be required to be agreed with West Lancashire Borough Council 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.

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.

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. 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.

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.

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

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 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.
- Ceramic filtration for particulate matter removal;
- Abatement of acid gases using sodium bicarbonate;
- Capture of Volatile metals using Powdered Activated Carbon; and,
- Dioxin and furan removal using Powdered Activated Carbon – this ends up in the gas cleaning residues.

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.

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.

Consideration of Alternative Options

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.

'Do Nothing' Scenario

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 to be 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.

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

Alternative Treatment/Recovery Options for Feedstocks

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

Alternative Sites

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 the Environmental Statement, it is not considered that any alternative sites would provide a more suitable alternative location.

Environmental Impact Assessment

The following sections summarise the main conclusions of the Environmental Impact Assessment.

Socio-Economic Impacts

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.

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.

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.

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.

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.

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

Traffic and Highways

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

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.

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.

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

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

Ecology

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.

The Ecological Impact Assessment 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.

Mitigation and compensation measures are provided within section the Ecological Impact Assessment 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.

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.

Air Quality

An assessment has been undertaken of baseline air quality within the vicinity of the proposed site. The site is not located within an Air Quality Management Area and background mapping data indicates that levels of nitrogen dioxide and particulate matter less than 10µm in aerodynamic diameter are significantly below annual mean Air Quality Limit Values in the vicinity of the site.

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), release of asbestos during building demolition works, Volatile Organic Compounds from stored liquids used in the construction process and

exhaust emissions from Heavy Goods Vehicles transporting materials to site. Impacts from construction phase vehicle exhaust emissions have been assessed to be insignificant.

Provided relevant statutory Pollution Prevention Guidelines are implemented, impacts from Volatile Organic Compounds 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.

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.

The potential air quality impacts during the operational phase includes:

- Stack exhaust emissions from the process;
- Odour from stored wastes; and,
- Vehicle exhaust emissions including PM₁₀ and NO₂ associated with HGVs and cars visiting the site.

Given the number of additional vehicle movements, impacts from vehicle exhaust emissions are not predicted to be significant. Odour and stack exhaust emissions will be controlled under an

Environmental Permit. Given that wastes are to be stored within an enclosed building, odour is not anticipated to be a significant issue.

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 nitrogen oxides 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;
- Ceramic filtration for particulate matter removal;
- Abatement of acid gases using sodium bicarbonate;
- Capture of Volatile metals using Powdered Activated Carbon; and,
- Dioxin and furan removal using Powdered Activated Carbon – this ends up in the gas cleaning residues.

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.

Noise

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.

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 Heavy

Goods Vehicles visiting the site. However, provided the following good practice mitigation measures are followed, residual construction phase noise impacts are predicted to be negligible:

- 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.

During the operational phase, there is potential for noise impacts as a result of Heavy Goods Vehicles 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.

No significant cumulative noise impacts are predicted.

Other Aspects

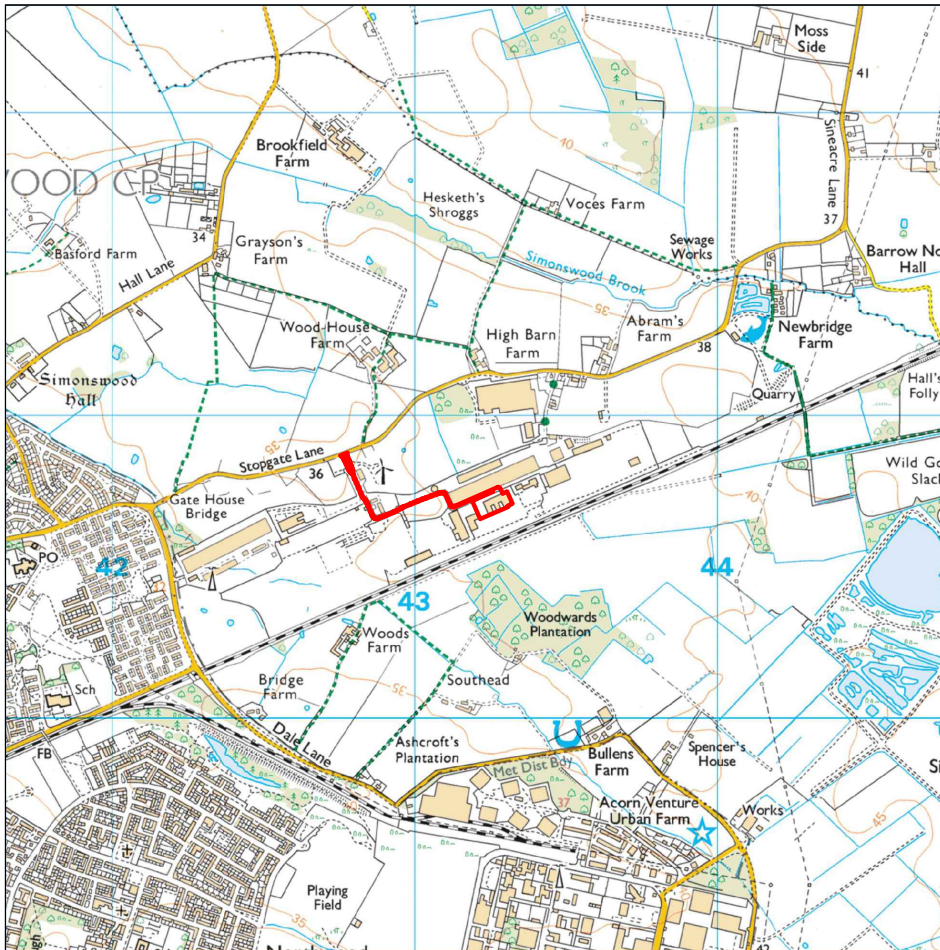
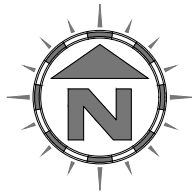
The scoping opinion received from Lancashire County Council confirmed that traffic and transport, landscape, archaeology, geology, hydrology and ecology issues could be scoped out from requirement for inclusion within this ES. However, ecology and transport matters were considered in detail, as outlined above.

Cumulative Effects

No significant cumulative impacts are predicted as a result of the development.

Appendix I

Site Location and Layout Plans



Scale Bar (1:25,000)

0 km 1 km 2 km

NOTES

Drawing for indication only. Reproduced with the permission of the controller of H.M.S.O. Crown copyright licence No. 100022432. This drawing is copyright and property of Oaktree Environmental Ltd.

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

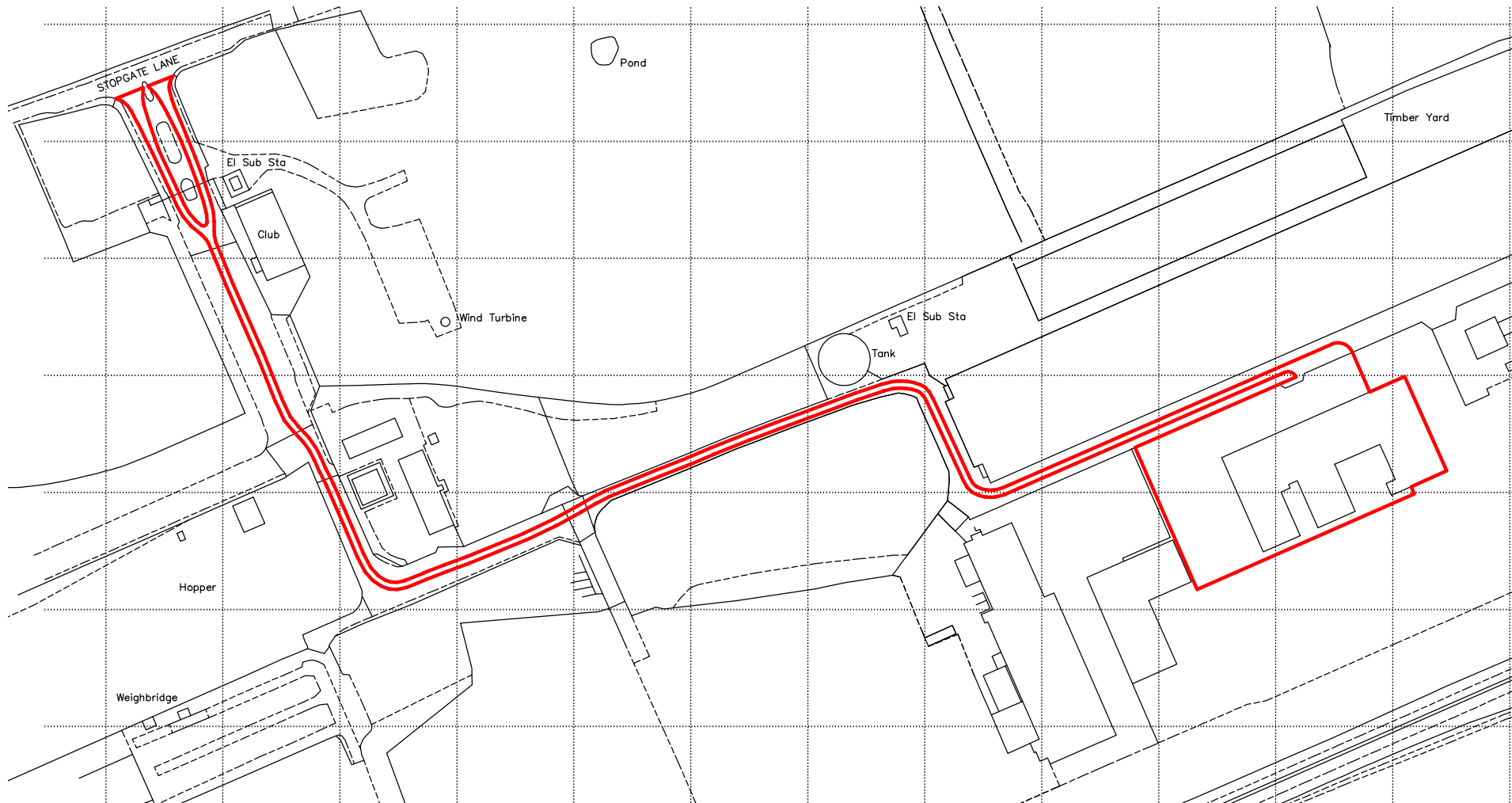
PROJECT/SITE
Proposed High Temperature Treatment Facility, Stopgate Lane, Simonswood

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

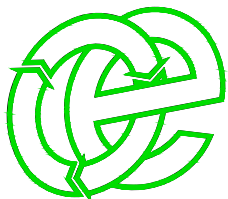
DRAWING NUMBER 2776-008-01	REV B	STATUS Issued
--------------------------------------	-----------------	-------------------------

DRAWN BY RS	CHECKED RS	DATE 08.12.21
-----------------------	----------------------	-------------------------

Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk



Oaktree Environmental Ltd
Waste, Planning and Environmental Consultants



Lime House, Road Two, Winsford, Cheshire, CW7 3QZ
t: 01606 558833 | e: sales@oaktree-environmental.co.uk

DRAWING TITLE
SITE LOCATION MAP

CLIENT
Culzean W2E Limited

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

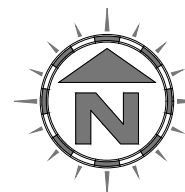
SCALE @ A4	CLIENT NO	JOB NO
1:2,500	2776	008

DRAWING NUMBER	REV	STATUS
2776-008-02	B	Issued

DRAWN BY	CHECKED	DATE
RS	RS	08.12.21

KEY

— Planning application boundary



Scale Bar (1:2,500)
0 m 20 40 60 80 100 m

NOTES

Drawing for indication only. Reproduced with the permission of the controller of H.M.S.O. Crown copyright licence No. 100022432. This drawing is copyright and property of Oaktree Environmental Ltd.

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