

VOLUME 1 - NON-TECHNICAL SUMMARY

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Proposed Replacement of Renewable Energy Plant
Redmondstown, Clonmel, County Tipperary

Prepared for: Medite DAC Europe

SLR Ref: 501.V00785.00001
Version No: Draft
January 2024



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INTRODUCTION

Overview

This Environmental Impact Assessment Report (EIAR) **Non-Technical Summary** provides supporting information to accompany a planning application to An Bord Pleanála, to replace the existing energy systems at the Medite factory.

Medite operates two production lines producing up to 425,000m³ of finished MDF product annually. MDF is produced on the site using 650,000 tonnes of product feedstock per annum. The plant has two biomass boilers and a gas-fired thermal fluid heater providing thermal energy to production line 1 and a biomass fired thermal fluid heater providing thermal energy to production line 2.

The Proposed Development will replace three existing aging thermal energy systems serving both of Medite's two production lines, specifically:

- the two wood biomass fired boilers (18MW each) serving Production Line 1.
- the wood biomass fired Thermal Fluid Heater (19MW) serving Production Line 2.

These systems will be replaced with 2 new renewable energy plants. These renewable energy plants will have rated thermal input capacity of up to 60 MW for the system serving Production Line 1 and 30 MW for the system serving Production Line 2. The plants will take the form of wood biomass fired Thermal Fluid Heaters. The existing natural gas-fired Thermal Fluid Heater (TFH) (6MW) serving Production Line 1, will remain as a back-up system on site.

As the existing boilers are approaching the end of their design life, their replacements will have substantially better technology that will guarantee the continued operation of the plant, secure greater energy efficiency, and reduce environmental emissions. Importantly, the project will sustain continued employment in the region. From a national and regional perspective, the project is critical to enable Medite to maintain its competitiveness internationally.

The Proposed Development will ensure that the factory's significant heat requirement is met. The new energy system will see the introduction of a new, modern combustion, air filtration, and treatment system in line with European emissions performance for the best available technology. The Proposed Development will bring several benefits to Medite both in terms of competitiveness and efficiency as a manufacturing facility but also in respect of its ability to meet new environmental targets for carbon emissions reductions. The benefits include:

- Reduced carbon emissions by reducing natural gas consumption and use of production residue as fuel.
- Energy savings via improved thermal efficiency.

The Applicant

Medite DAC is a market-leading manufacturer of environmentally produced, sustainable timber panel boards, specifically, medium-density fibreboard (MDF).

MDF is a wood based sheet material manufactured from wood fibre bonded together with a synthetic resin adhesive. Various grades are manufactured at Medite using different adhesives and additives. The facility which manufactures MDF was established in Clonmel in 1982 and employs 170 full time staff. The main production processes operate 24 hours per day, 7 days per week.

Site Location & Context

The Planning Application site is located at Medite's manufacturing plant in Redmondstown, Co. Tipperary. The site lies 4 km east of the centre of Clonmel, Co. Tipperary and approximately 50m from a local access road, the L2506, which connects the site to the N24 National Secondary Road, running between Limerick and Waterford. (Refer to Figure NTS-1).

The Planning Application Boundary has an area of 29.7ha (Refer to Figure NTS-2) which is part of the overall Medite Europe DAC landholding of 69ha. The Applicant's freehold land ownership at Medite's facility is shown in Figure NTS-2. The Planning Application boundary is also shown and is located entirely within the Applicant's ownership and extends to an area of 29.7 hectares.

Figure NTS-3 shows the existing layout of the application site, key elements of the associated site infrastructure and the various features and developments within the vicinity of the site.

Medite's existing manufacturing plant at Redmondstown was established in 1982. The site is composed of the main production plant buildings and materials storage areas. All areas associated with the facility's operations are located on hardstanding and the sealed surfaces are typically of concrete and asphalt construction. A number of landscaped areas are located along the perimeter of the site.

The 1:50,000 scale Ordnance Survey of Ireland map (OSI) indicates that the site is located at elevation of 20m to 35mOD and slopes in a south-easterly direction towards the River Anner, which is a tributary of the River Suir. Prior to construction of the Medite facility, the original land surface sloped from 45mOD in the northwest of the site to 20mOD in the southeast. During the construction of the facility in 1982 the topography of the site was regraded to form a level working area. This has resulted in the formation of steep embankments along the northwest boundary of the site.

The site is largely obscured from view from the site boundaries by a variety of shrubs and trees.

The existing manufacturing plant and Planning Application site is accessed via a local access road, the L2506, which is accessed off the N24. The existing buildings in the Medite facility are situated approximately 50m back from this local access road. There are two existing entrances to the site, a southern access, which is the main operational entrance for the facility and a northern access, which provides a secondary access point.

DESCRIPTION OF THE DEVELOPMENT

Surrounding Land-Use

Land use within the vicinity of the site is predominantly low density residential and agricultural with the exception of an industrial area which is located immediately to the south of the site at Annerville.

The River Anner flows to the east of the site and connects as a tributary to the River Suir (it is part of the Lower River Suir SAC). Redmondstown Cottages are located immediately south of the Proposed Development site.

There are no protected structures or recorded monuments located within the Planning Application Boundary. However, it should be noted that there is an archaeological feature within the Applicant's landholding, to the east of the Planning Application area and to the west of the L2506. This feature is recorded under record number TS083-010 is classified as a Ringfort – rath.

Existing Site Description

Initial site works and construction of the MDF plant were completed in the period between 1981 and 1983 and over the course of many years, additional works have taken place on the site as the operations expanded.

The site is composed of the main production plant building and materials storage areas. With the exception of log storage, almost all areas associated with the facility's operations are located on hardstanding. A number of landscaped areas are located along the perimeter of the site. The land in the area of the subject site slopes in a south-easterly direction towards the River Anner, with an elevation range of 20m to 35mOD.

The application site is situated in what can be characterised predominantly as a green field and agricultural area, located approximately 4 km east of the centre of Clonmel town and approximately 0.9 km north of the N24. The site is accessed through a local road that connects directly to the N24. The subject site is well screened and the existing buildings within the industrial facility are situated 50m back from the local access road and are largely obscured from view due to the presence of abundant shrub and tree plantations at the site boundaries.

The River Anner flows to the east of the subject site and connects as a tributary to the River Suir, which is approximately 1 km south of the subject site. The River Suir (including the River Anner) is part of the Lower River Suir SAC.

Current Usage of Proposed Development Areas

The Medite industrial facility was established in 1982 and has become a market-leading manufacturer of environmentally produced, sustainable timber panel boards, specifically, MDF. This is a successful and innovative export-driven business employing approximately 170 people directly in Clonmel and supporting further employment through the supply chain across the southeast region. The main processes operate 24 hours per day, 7 days per week.

The areas within the site where the Proposed Development will take place are shown in Figure NTS-4 and referred to in this report as Development area 1, Development area 2 and Development area 3.

Development area 1 includes portions of the current Logyard, the Fuelyard, and Chipyard, and contains the following structures and plant;

- Debarker building
- Line 1 biomass boilers fuel infeed system
- Outdoor Fuel Storage / Fuel Shed
- Chip storage silos
- Dust silos
- Edge trim Silo (Line 1 Sander Dust Silos)

- MTX Building and associated plant

Development area 2 includes a small area planted with trees (c. 0.4 ha) and elements of Production Line 1. It also contains the following structures and plant;

- Line 1 Boiler building (in which the 2 biomass boilers are housed)
- Line 1 Dryer building (in which the 2 dryers are housed)
- Line 1 Ancillary building (including gas fired TFH room)
- DAF Building & associated water treatment plant (Water Treatment Plant (WWTP))
- Production Chip Screening Plant (Chip Storage/Yard)
- LPG tank
- A section of the Fuel stores
- External laydown/storage area

Development area 3 includes a hardstanding area, most recently used for temporary contractor facilities necessitated by the COVID-19 pandemic, and elements of the Production Line 2. It also contains the following structures and plant;

- Line 2 Thermal Fluid Heater and associated plant (ITEM 1.25)

Existing Site Operations

The Medite industrial facility operates two MDF production lines 24 hours per day, 7 days per week. The combined maximum production capacity of both lines in Medite is 425,000m³ of MDF using up to 650,000 tonnes of wood.

The maximum production capacity of the plant of 425,000m³ is based on the capacity of production equipment and a number of commercial and technical factors. This maximum production has only been achieved 2 times in the past 8 years.

Production Line 1, (constructed in 1982 and redeveloped in 2002), and Production Line 2, (constructed in 1995) can operate either independently or in parallel. Both lines share the same Log and Chip Handling stage. The fuel for both systems is unloaded and prepared in the same area for both lines but each have their own dedicated energy plant.

This comprises two boilers, a thermal fluid heater (production line 1) and a combined energy plant (production line 2) on site to provide heat streams to the process. Steam is used in the wood refining process, flue gas used in the wood fibre drying process, and the high temperature fluid used for heating the board press.

As an installation for the manufacture of medium density fibre (MDF) board Medite operates under Industrial Emissions licence (P0027-04). The activity is classed under

- Class 8.7: The production of one or more of the following wood-based panels: fibreboard with a production capacity exceeding 600 m³ per day.
- Class 2.1: Combustion of fuels in installations with a total rated thermal input of 50 MW or more.

Manufacturing Process

MDF is an engineered wood-based panel manufactured in accordance with internationally recognised standards and specifications.

To manufacture MDF, wood chip residues from sawmills or chipped pulp wood are refined into a wood fibre, dried, and then combined with resin to form an MDF panel.

The production process for MDF has six stages.

Log And Chip Handling

Pulpwood logs arrive by truck and are unloaded and stored in the log yard prior to use. An operator-driven grab machine loads the logs onto the debarker infeed conveyor (circa L 100.8 x W varies 1.7-3.7m x H varies 0-22.0m) and conveyed into the Drum Debarker.

Bark is removed by friction in the Drum Debarker within the Debarker Building (circa L 73.3m x W 16.6m x H varies 18-22.9m). The removed bark is conveyed outside the debarker building onto the fuel yard for use as a biomass fuel in the plants energy systems or as a product for the horticultural industry

The debarked log is then conveyed into a chipper where it is chipped before onward conveying to the chip storage area. Wood chips are also brought directly from sawmills to site by both 'Chipliner' trucks and trucks utilising 'walking floor' trailers. Chipliners are offloaded through an automatic truck tipper; the truck is tilted on its side to an angle and the off-loaded chips are conveyed directly to the chip storage yard. Walking floor truck trailer combinations unload directly in chip storage yard without the use of the truck tipper.

A front-loader is used to feed chips from the chip storage yard into a chip-infeed hopper. The chips are screened in the 'ClassiCleaner' unit (circa L 17.1m x W 13.8m x H 17.9m), oversize chips are re-chipped, fines (i.e., sawdust) and metal objects removed, and the chips are then conveyed to a wood chip storage silo.

Refining

There are three refining systems at the Medite facility: two in Production Line 1 (Face system & Core system) and one in Production Line 2. All three systems are contained in the Refiner Building (circa L 26.6m x W 24.6m x H 22.3m).

The chips are conveyed, in enclosed belt conveyors, from the wood chip storage silo, first to a pre-steaming vessel where the chips are softened and then through a Plug Feeder to a Steam Digester Column where the chips are subjected to high-pressure steam. As the chips are fed through the Plug Feeder, excess water is squeezed out and is sent to the wastewater treatment plant. The softened chips are then passed through the refiner plates where the action of two grinding discs creates the wood fibre from the softened chips. This wet fibre is transported from the Refiner to the dryer system via a 100-mm diameter 'Blowline pipe'

Resin and other additives as required (dyes, urea, MDI, fire retardant chemicals) are injected into the Blowline.

Drying

The wood fibre is conveyed and dried by hot air in flash dryers. The Production Line 1 dryers (circa L 34.0m x W 27.3m x H 35.2m), located in the Line 1 Dryer Building, are heated indirectly by steam from the Line 1 wood biomass fired boilers (circa L 30.5m x W 26.2m x H 19.5m), and also directly by the flue gases from the same boilers.

The Production Line 2 dryer (circa L 15.5m x W 12.2m x H 35.3m) is heated directly by flue gases from the Line 2 wood biomass fired Thermal Fluid Heater.

All dryers utilise flash drying technology with cyclones to separate the dried fibre from the wet air. The wet air is released to atmosphere at the top of the dryer (emission point references A2-5, A2-6 and A2-21 as per IE Licence P0027-04).

The dried fibre (3-14% moisture) passes over a continuous weigh belt and is conveyed to Fibre Handling Building / Storage Bins, ready for the next stage.

Forming

A wood fibre mat is formed by even controlled spreading of the dried, resin infused wood fibre through 3 Forming Heads in the Production Line 1 Building, and through 1 Forming Head in the Production Line 2 Building, onto a continuously moving conveyor belt. The depth and width of wood fibre spread is pre-set according to the thickness, width and density required.

The mat is then compressed down to a more compact form. Excess wood fibre is trimmed off the edges of the mat and re-cycled back into the wood fibre forming system. A weight scanner measures the weight and evenness of spread across the mat width.

Pressing

The Hot Presses are continuous presses, which consists of an upper and lower continuously moving heated steel belt, through which the mat moves at a rate proportional to the thickness being produced. The Line 1 press is in the Line 1 Production Building and the Line 2 press is in the Line 2 Production Building. Press temperature varies, depending on the MDF board thickness being produced. The pressed board is cross-cut to the required length, then cooled, stacked and removed for either immediate storage or sanding.

Finishing

The finishing systems for both production lines are in the Warehouse. The board is sanded to remove the pre-cure and any superficial blemishes from the surface by passing it through a series of sanding heads with varying grit sizes.

The sander dust generated is removed by pneumatic conveying system to dust silos for follow on use as a fuel source by conveying to either the Line 1 wood biomass boilers or the Line 2 wood biomass fired Thermal Fluid Heater.

The sanded board is then cut to size. The sawn off-cuts generated are shredded and conveyed pneumatically to the edge trim silo for use as a fuel in Line 1 wood biomass boilers. The stacked boards are then packaged and loaded by forklift onto flatbed covered trailers and secured for transport.

Current Energy Infrastructure

Thermal Energy

The manufacturing process uses a significant amount of thermal energy. Heat is required in the following MDF production stages:

Refining	Direct steam (12Barg) is used to soften the wood chip before grinding into fibre
Drying	Indirect Steam (27Barg) and direct Flue Gases (150 ^o -200 ^o C for Line 1, and 350 ^o -400 ^o C for Line 2) are used to dry the wet fibre to a target moisture
Pressing	Heated Thermal Fluid (270 ^o -285 ^o C) indirectly provides heat to the steel belt in the press

The quantum of thermal energy required by each stage of the production process varies due to a range of factors, such as; ambient temperature, moisture content of the feed stock, wood chip quality & dimensions, MDF product type, MDF product thickness.

Production Line 1 is served by two wood biomass fired boilers (18MW each), and a natural gas-fired Thermal Fluid Heater (TFH) (6MW).

The steam generated by the boilers is used in the Line 1 refining stage, where it is directly injected into the wood chip. Steam is also used in the drying stage where it indirectly heats the air stream in the Line 1 dryers. The flue gases from the boiler are also used in the drying stage where they are directly added to the Line 1 dryer air stream.

The TFH heats thermal fluid which is pumped to the Production Line 1 Press to heat the steel belt.

Production Line 2 is served by a single wood biomass fired Thermal Fluid Heater (19MW).

The flue gases from the TFH are used in the drying stage where they are directly added to the Line 2 dryer air stream to provide all the required thermal energy. This differs somewhat from Production Line 1 where steam is also used in conjunction with flue gases for drying.

The TFH heats thermal fluid which is pumped to the Production Line 2 Press to heat the steel belt, and also pumped to a steam generator to provide steam for the refining stage, where it is directly injected into the wood chip.

Other Energy Requirements

The production process also uses significant electrical energy (Peak 15MW approx.).

Diesel Fuel (approx. 245,000 litres per annum) is used in the front-end loaders and Liquefied Petroleum Gas (LPG) (approx. 100,000 litres per annum) is used in the forklifts that support the production process.

Support Infrastructure

Additional support infrastructure to the production systems and the energy systems includes the following:

- Finished goods Warehouse;
- MTX Building for storage and transport of acetylated wood chip for the production of Medite Tricoya eXtreme, a highly water resistant MDF product;
- An activated sludge treatment plant to treat domestic sewage and process effluent (mostly water squeezed from the wood chip during the refining stage);
- Surface water interceptor settling lagoons;
- Bulk and drum chemical storage;
- Maintenance area;
- A laboratory;
- Administration offices;
- Stores;
- Fire water storage ponds;
- Medical Centre; and
- Pneumatic Conveying systems, including blowers, fans & filters to capture & transport production residues.

Normal Hours of Operation

The MDF manufacturing process runs continuously 24 hours a day, 7 days a week. The Debarker runs from 07:00 to 23:00 Monday to Friday and the weighbridge operates from 06:00 to 22:00 Monday to Thursday and 06:00 to 20:00 on Fridays. Currently, all biomass fuel for the energy systems is delivered to site during the operating hours of the weighbridge.

Although the majority of all other HGV movements to and from the site also take place during the operating hours of the weighbridge, some production wood chip is delivered Mon-Sat (excluding bank holidays) outside of Weighbridge hours with automated Fob system on the weighbridge. The same is true of resin deliveries and shipped goods departing site.

PROPOSED DEVELOPMENT

Development Overview

Medite operates two production lines producing up to 425,000m³ of finished MDF product annually. MDF is produced on the site using 650,000 tonnes of product feedstock per annum. The plant has two biomass boilers and a gas-fired thermal fluid heater providing thermal energy to production line 1 and a biomass fired thermal fluid heater providing thermal energy to production line 2.

The Proposed Development will replace three existing aging thermal energy systems serving both of Medite's two production lines, specifically;

- the two wood biomass fired boilers (18MW each) (ITEM 1.6).
- the wood biomass fired Thermal Fluid Heater (19MW) serving Production Line 2. (ITEM 1.9).

The existing natural gas-fired Thermal Fluid Heater (TFH) (6MW) serving Production Line 1, will remain as a back-up system on site.

Energy will be generated from the combustion of up to 186,000 tonnes a year from a range of biomass fuels including by-products from the Medite manufacturing process and forestry and sawmill residue. This increase from the existing throughput of 111,000 tonnes per annum will not result in an increase in the production of MDF but is required to reflect a change in the fuel inputs. The additional amount will replace the energy currently derived from a gas fired thermal fluid heater and reflects the increasing variability in moisture content of biomass wood fuel which is transported to the site from within the island of Ireland. The Proposed Development will realise carbon savings of 2951 tCO₂e/yr.

Of the 186,000 tonnes of proposed fuel intake, 71,000 will comprise Medite production residues which are sourced on site and 115,000 tonnes will comprise forestry and sawmill residues. Accounting for the existing fuel intake, the net increase will correspond to an additional 75,000 tonnes. The proposed development utilises the optimum technology and fuel menu to support the ongoing operation of the Medite facility.

These systems will be replaced with 2 new renewable energy plants. These renewable energy plants will have rated thermal input capacity of up to 60 MW for the system serving Production Line 1 and 30 MW for the system serving Production Line 2. The plants will take the form of wood biomass fired Thermal Fluid Heaters.

The new renewable energy plants will provide thermal energy to the manufacturing process in following ways.

- Treated flue gases from each of the new plants will be ducted to the existing Dryers in both production lines, H 35.3m. (**Item 1.7 / Item 1.8**).
- Heated thermal fluid will be sent to the existing Presses.
- Heated thermal fluid will be sent to new Steam Generators that will form part of the development. (**Item 3.9**).
- Steam (generated by the new Steam Generators) will be sent to the existing refining equipment, H 22.3m (**Item 1.23**) in both production lines.

The Proposed Development will include pipes/ducts and associated supporting infrastructure to transfer the thermal energy to the various heat users within each of the production lines, including the necessary modifications to the Line 1 Dryers (**Item 1.7**) to take all required heat in the form of flue gas, rather than the current combination of flue gas and steam.

The pipes and ducts will run from the energy plants to the heat consumers within the existing Medite plant buildings and along the corridors formed by the existing roadways.

The Proposed Development will incorporate and modify an existing wood chip storage and conveying facility (MTX Building & associated plant Item 1.19) which is currently used to store and transport acetylated wood chip

into the MDF production process. The system will then be used to store and transport fuel wood into the new energy systems.

Development Areas

The proposed development will be located within the confines of the existing Medite site and within three primary development areas. They are:

- **Development Area 1** will accommodate the fuel reception, storage and conveying/screening plant and associated infrastructure works, including the modified MTX building and associated plant.
- **Development Area 2** will accommodate the new Line 1 energy plant which will be located to the south of the Medite site. The two existing wood biomass fired boilers (18MW each) that serve Line 1 will be decommissioned and the existing equipment will be retained on site. The natural gas-fired Thermal Fluid Heater will be retained as a backup energy source. Trees will be removed to facilitate the proposed development at this location.
- **Development Area 3** will accommodate the new Line 2 energy plant which will be located adjacent to the existing Line 2 Energy Plant. The existing single wood biomass fired Thermal Fluid Heater (19MW) serving Line 2 will be decommissioned and the existing Thermal Fluid Heater equipment will be dismantled and removed from the site.

SITE PREPARATION WORKS

A Construction Environmental Management Plan (CEMP) has been prepared for the proposed development at Medite's site which is included as an Appendix to Chapter 2 of the EIAR.

Health and Safety

Design and Construction Health and Safety

The Proposed Development has been designed in accordance with the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005) as amended and the Safety, Health and Welfare at Work (General Application) Regulations 2007-2016 (S.I. 299 of 2007, S.I. 445 of 2012, S.I. 36 of 2016) as amended and associated regulations.

The Proposed Development has been designed by skilled personnel in accordance with internationally recognised standards, design codes, legislation, good practice and experience based on a number of similar developments.

General operational health and safety

During construction, there is the potential for temporary nuisance impacts from traffic, dust, noise and construction waste, if not carefully managed. All contractors will be required to implement a CEMP to ensure each of these potential impacts are minimised.

Description of Construction Phase

The construction of the Proposed Development will comprise four main stages.

- **Phase 1** which will include the development of the Line 1 Energy Plant and fuel reception, storage and conveying/screening equipment (Proposed development identified for Areas 1 and 2). The anticipated timescale for this phase is 2025 – 2027¹
- **Phase 2** will include decommissioning of the two existing wood biomass fired boilers (18MW each) that serve Line 1 and the LPG Fuel Tank. The anticipated timescale for this phase is 2027-2029
- **Phase 3** which will include the development of the Line 2 Energy Plant and associated storage area. The anticipated timescale for this phase is 2030-2033
- **Phase 4** which will include the decommissioning of the existing single wood biomass fired Thermal Fluid Heater (19MW) serving Line 2. This existing Thermal Fluid Heater equipment will be dismantled and removed from the site. The anticipated timescale for this phase is 2034-2035.

The Applicant is seeking a ten-year permission for the Proposed Development to facilitate a phased development process which will allow existing manufacturing operations to continue at the site for the duration of the construction phase.

¹ The proposed fuel consumption (as per table 2.11 above) comes into effect as soon as the Line 1 replacement is completed

Site Infrastructure

Utilities and Services

The existing 110 kV electrical sub-station, located on the northern boundary of the site, provides power to the site. An existing medium pressure Gas Networks Ireland gas pipeline traverses the southern boundary of the site.

Fibre is available to be provided from several sources, for security of supply. No above ground works are required as internet providers have infrastructure already in place.

Site Screening

The site is situated on developed industrial lands in the townland of Redmondstown, Clonmel, Co. Tipperary, E91 V584. Land use within the vicinity of the site is predominantly low density residential and agricultural. The site is largely obscured from view from the site boundaries by a variety of shrubs and trees.

The lands surrounding the manufacturing plant and application site are characterised as rural and predominantly low density residential and agricultural, with the exception of an industrial area to the south of the site. Local fields comprise a mix of grassland and tillage.

The River Anner flows to the east of the site and connects as a tributary to the River Suir (part of the Lower River Suir SAC). A large industrial facility located just south of the subject site is owned by C&C Group PLC and produces the Bulmers brand of cider as well as other products. The C&C Group PLC facility bounds the N24 and is accessed through entrances positioned along this national primary road.

Following a desk-based review of the National Inventory of Architectural Heritage, the National Monuments Service and the Record of Monuments and Places, it is concluded that no protected structures or recorded monuments are located within the application site. However, it should be noted that there is a feature near the application site, which is east of application area and west of the local road. This feature recorded under record number TS083-010 is classified as a Ringfort – rath.

Landscape and Visual Impacts arising from proposed development are considered in Chapter 13 of this EIAR.

Site Access

The application site relates to Medite's manufacturing plant in Redmondstown, Co. Tipperary. The site lies 4 km east of the centre of Clonmel, Co. Tipperary and approximately 50m from a local access road connecting to the N24 National Secondary Road, which runs locally between Limerick and Waterford.

The existing manufacturing plant and application site is accessed via a local access road off the N24. The existing buildings in the Medite facility are situated approximately 50m back from this local access road.

The access arrangements and traffic impacts are considered in Chapter 14 of this EIAR.

Site Security

At the present time, the following measures are in place at the Medite facility to secure the external perimeter and restrict access in order to protect the property and safeguard public safety:

- Stockproof fencing has been erected along the site boundary (in accordance with Safety, Health and Welfare at Work Act 2005).
- Existing perimeter hedgerows species have been reinforced where required to provide an impenetrable barrier around the property.
- A large, robust metal gate is in place at the entrance to the site. The gate is locked, at times outside operational hours and when there is no ongoing activity at the site.

There is no other vehicular access to the site other than from the L2506 Local Road. Two access points are available from this point, the southern access gate and the northern access gate. The northern site access gate will be used for construction traffic.

All heavy good vehicles (HGVs) importing construction material for the proposed development will be required to pass through security before accessing the northern access road leading to the construction compound.

CCTV cameras are installed around the site and used to inspect all activities at the facility.

Site Roads and Parking

The internal access roads are surfaced/paved. There is a monitored barrier system with Number Plate Recognition cameras that prevents unauthorised access to the site. There are also Medite personnel located in the weighbridge building inside the entrance.

Vehicles entering the site keep left to access the existing asphalt carpark. This car park has 112 spaces located adjacent to the Office/Stores/Workshop Area. Couriers and other van/truck deliveries to stores gain access through this carpark.

HGV accessing the site go through security and either go to the loading bays to the south or east of the main warehouse or use the paved roads to the unloading areas. The northern site access gate will be the main entrance for construction traffic. The access arrangements and potential traffic safety impacts are considered in Chapter 14 - Traffic.

Off Site Traffic Movements

The Proposed Development will result in an increase in traffic owing to the delivery of materials to and from the site during construction and the delivery of additional fuel during the operational phase.

With an average of approximately 50 construction staff forecast for the duration of the construction period, rising to a peak of 240 expected over a period of 14 months of Phase 1. A Construction Traffic Management Plan (TMP) will be prepared prior to commencement of the proposed development.

When fully operational, there will be no change from current situation where there are 120 employees on site each day. However, as a result of additional fuel requirements, it is predicted there will be a total of 25 HGVs per day (50 two-way movements) which is an increase of 10 HGVs per day (20 two-way movements) on the existing baseline of 15 HGVs per day (30 two-way movements).

The wider area has excellent links to the national primary routes. Further details in relation to the potential impact of the proposed development (construction and operation) in terms of traffic are presented in Chapter 14 - Traffic.

Lighting

All of the service roads and pathways are provided with low illumination levels of downward only lighting for use on an occasional basis, they will not be turned on normally and controlled from the gate house for specific usage. Vehicles coming to the site will use headlights to access the buildings. External plant areas are fitted with external lighting and task lighting sockets, but again these will be used for emergency maintenance support. There is lighting to the admin areas of each building, so some limited spill of lighting will occur to the admin area facades, but they are limited, and all lighting is controlled.

In terms of security, the whole site will be covered by CCTV cameras but will not require external lighting to be on to operate, instead they will use infra-red coverage to allow the cameras to operate. External lighting is for safety reasons and not operational at night unless in an emergency and for site evacuation. There will be no light spill on any features suitable for bat foraging and commuting.

Fuel Storage

Fuel, comprising Diesel and LPG, is stored in the existing bunded fuel storage tanks on the site. All bunds will be capable of containing 110% of the volume of the largest drum/tank within the bund or 25% of the total volume of the substance stored and will be designed in accordance with the EPA's guidelines for the storage and transfer of materials for scheduled activities (EPA, 2004). Fuel oil will continue to be delivered to the site by HGV road tankers, with an average of one to two tankers expected to be travelling to and from the site per month. The Proposed Development will not result in any increase in fuel oil deliveries to the site.

Existing Equipment Storage Areas

Large mobile plant and equipment used in operations are stored on hardstand areas within the application site. As access to the site is restricted and monitored, it is not considered necessary to provide a dedicated, secure compound for plant and equipment within the facility.

Storage for small items of plant and equipment, replacement parts, minor quantities of hydraulic oil and/or lubricants, storage of minor quantities of liquid (oil) waste, safety clothing and equipment is provided in the existing garage / workshop at the eastern side of the site, adjacent to the site entrance, at the location shown on the site layout plan in Figure NTS-3.

In addition to providing for storage of potentially hazardous oils / waste liquids over spill pallets, internal bunding may also be provided to contain any potential leaks or spills of potentially hazardous oils or waste liquid.

EXISTING ENVIRONMENTAL MANAGEMENT AND MONITORING

General

Medite operates an Environmental Management System (EMS), required under Condition 2.1 of their licence (IE Licence no. P0027-04). The Environment Management System Manual (ISO 14001:2015) is in place, the purpose of which is to gain a high-level understanding of all relevant internal and external issues that impact or have the potential to impact, positively or negatively, the ability of the EMS to achieve its intended outcomes. Please refer to **Error! Reference source not found.**2.2 of Chapter 2.

The scope of the EMS is the activities and products of the company. The scope of the EMS is also the external processes associated with the company over which it can exert a degree of control or influence. These processes/activities are:

- Raw Material Inwards and Storage
- Debarker and chipper
- Refiner
- Dryer
- Fibre handling
- Press
- Sander, Saw, Packaging, Dispatch
- Boilers
- Yard, Chemical Storage, Waste Storage Area, Waste Transport
- Air Conditioning Units
- Engineering and maintenance activities
- Offices, Canteens, Toilets.

The spatial boundaries are as per the site boundaries of the Facility. The organisational personnel structures are as per EM 5.3 – Organisational roles, responsibilities and authorities of the Environmental Manual. This scope of the EMS is available to interested parties on request.

Any additional control measures, over and above those outlined below, which may be instructed on foot of the proposed planning application, will also be implemented.

Site Drainage

Site drainage from the overall site (including the application area) is managed by Medite in compliance with existing EPA licence P0027-04.

Collected surface water is used in the ancillary manufacturing processes and for dust suppression. Excess overall site drainage water is collected and treated in the overall site water management system before being discharged to the local stream in accordance with a discharge licence obtained from Tipperary County Council (refer to EIAR Chapter 7 Water for further details).

Water Management and Treatment Systems

There is an existing water management system at the site to manage, treat and discharge storm water runoff and process water used at the site. The EMS, referred to above facilitates the management of the environmental impacts of their activities at the site. Medite's Environmental Management System is externally certified to the ISO14001 Environmental Standard. Personnel at the site are trained in the implementation of the EMS at the site.

In addition, as part of the overall site management system, Medite implement a programme of Planned Preventative Maintenance (PPM) which includes:

- Routine round the clock maintenance programme for plant equipment;
- Routine 8-hour planned maintenance shutdown; and
- Annual maintenance shutdown for one/two week per production line.

The site is composed of the main production plant building and materials storage areas. All areas associated with the facility's operations are located on hardstanding.

Surface Water Management will largely remain unchanged except for three areas of additional hard standing to facilitate the development of both energy plants and fuel infrastructure. The additional hard standing at the site is c. 1.1 ha. within an overall site application area of c. 29.7 ha. Therefore, the additional area or hard standing at the site is considered to be relatively insignificant in the context of the overall site.

In terms of additional hard standing areas at the site the three areas are:

- Development Area 1 - Permeable Hardstanding to be replaced with non-permeable hardstanding area of 4640 m²;
- Development Area 2 - New non-permeable hardstanding area of 6,400 m²; and
- Development Area 3 - Permeable Hardstanding to be replaced with non-permeable hardstanding area of 410 m².

Approximately 1,154 m³/day of water is abstracted from the Anner River to supply process activities at the site while approximately 41 m³/day of potable (mains) water is used at the site. There is no plan to increase the current water usage at the site, however, the installation of the new more efficient boilers at the site will lead to a reduction in water abstracted from the Anner River, this will be a positive benefit for river flows.

The surface water abstraction at the site is registered with the EPA (Abstraction Registration No. R00013). The and the current abstraction rate of c. 1,154 m³/day from the river is less than 1% of the lowest recorded mean daily flow in the river.

Support infrastructure relevant to this water impact assessment include the following:

- An activated sludge treatment plant to treat domestic sewage and process effluent (mostly water squeezed from the wood chip during the refining stage); and
- Surface water interceptor settling lagoons.

Raw and auxiliary materials/substances stored on site are outlined in the EIAR.

During the refining and drying processes, the wood chips / fibres are subjected to heating / wetting by the use of steam. Any excess water from the process is sent to the on-site wastewater treatment plant, which subsequently generates approx. 8,000 tonnes of wood sludge which is treated. Further details of the MDF manufacturing process is outlined in the EIAR.

The water management at the site is described in detail in the EIAR. The onsite Waste Water Treatment Plant (WWTP) comprises Dissolved Air Flotation (DAF), followed by Moving Bed Biofilm Reactor (MBBR) tank and an aeration basin. The wastewater treatment involves Primary Screening to remove larger solids, followed by the DAF and MBBR process, following this is an aeration basin and system of Active Sludge Clarifiers and settlement before the treated water is discharged off site to the Anner River.

There is a risk assessment and firewater management plan for the site.

There is a hydrocarbon separator at the site and all storm water runoff passes through the separator prior to discharge offsite.

Surface and Groundwater Management

There are monitoring programmes currently in place at the site as per the IE licence for both surface water and groundwater quality. These monitoring programmes are outlined below and will continue to be in place at the site in compliance with the licence requirements.

Groundwater monitoring under the conditions of the facility's IE licence will continue on a quarterly basis at all monitoring wells (AGW1 - AGW10). Annual groundwater monitoring reports are produced based on this monitoring and will continue to be submitted to the EPA.

The parameters included in the groundwater monitoring programme are those set out in Schedule 4(ii) of the EPA IE licence. These parameters are:

- pH;
- Trace organics (as per USEPA Method 524.4);
- Major anions;
- Major cations;
- Individual heavy metals; and
- Ammonia.

The water levels in all monitoring wells will continue to be monitored on a quarterly basis to confirm the direction/variability of groundwater flow beneath the site. The landfill gas and leachate level monitoring will also continue on a biannual basis.

Surface water runoff from the northern part of the site, including internal haul roads and the log storage area, is located on a permeable surface within the site, allowing for the natural infiltration of rainwater to the ground. Storm runoff from this location is collected and goes to a small drain before discharging to a drain leading to the Anner River at SW1, the Northern Discharge point. The discharge here is intermittent and dependent on rainfall.

Surface water runoff from the main process yard area and from the process plant is subject to both coarse and fine screening before discharge into three settlement lagoons. The treated surface water from the lagoons goes through a hydrocarbon separator before meeting the clarified effluent from the Waste Water Treatment Plant (WWTP) and the combined flow is discharged to the River Anner at SW2, the Southern Discharge point.

Surface Water Management and Treatment systems in place at the site will continue to be adhered to. Discharge monitoring under the facility's IE licence requirements will continue at the two discharge points, SW1 and SW2 on a quarterly basis. Water quality results for these two sampling points are screened against the limits set out in the licence and the results are reported to the EPA.

Surface water quality in the Anner River will also continue to be monitored upstream and downstream of these discharge points on a quarterly basis. Surface water quality results are screened against the environmental quality standards outlined in the Surface Waters (Amendment) Regulations 2009 (as amended). The results will be available for inspection by the EPA or TCC as required.

Dust Control

The site measures and monitors, on a regular basis, the key characteristics of its operations and activities that can have a significant impact on the environment, as detailed in EM 8.1 – Operational planning and control and those as required by compliance obligations, at intervals as required.

Environmental measuring and monitoring is carried out by suitable testing equipment/facilities in accordance with approved environmental procedures. The results of environmental measuring and monitoring are recorded on the appropriate environmental records, refer to Chapter 8 for monitoring details. The site's environmental performance is reported on a quarterly basis to the EPA.

Fire Control

Evacuation procedures, in case of fire or leak, are detailed in the Health and Safety Emergency response procedures. Major incident handling is covered by the ERT Plan and training. Chemical Spill response procedures are covered in Health and Safety Emergency response procedures.

Environmental Considerations

Medite Europe DAC is proposing to the replacement of existing aging biomass boilers, biomass thermal fluid heater and gas fired thermal fluid heater, serving both of Medite's two production lines. The new renewable energy plants will have a rated thermal capacity of up to 60 MW and 30 MW for Line 1 and Line 2 production lines respectively, at the existing MDF manufacturing plant in the townland of Redmondstown, Clonmel, Co. Tipperary.

Industrial Emissions Licence

Medite Europe DAC was granted an Industrial Emission Licence (P0027-04) by the EPA on the 7th of March 2017, a copy of the licence is provided in an appendix to the EIAR. It sets a range of emission limit values (ELVs) for air emissions, dust emissions, noise emissions, and surface water emissions, and applies parameters regarding monitoring and reporting of the same.

Medite was first granted a licence by the EPA on 16 April 1996 (Reg. No. P0027-01). A revised IE licence was granted on 30 November 2001 (P0027-02) to remove the total site mass emission limit for formaldehyde and replace it with an ambient air quality monitoring programme and the installation of a continuous press to replace the existing Line 1 multidaylight press at that time.

Medite applied for a review of licence register no. P0027-02 in 2015 to accommodate new emissions to air associated with an enclosed cleaning and pneumatic transport system for woodchip, called a 'classcleaner' with storage in a new silo for woodchip, seven additional particulate filters, maintenance of two particulate filters, a new press extraction scrubber and a new heater. The current Industrial Emissions licence (P0027-04) was granted in response to that application on 7th March 2017.

Related development and cumulative effects

The Proposed Development is designed to support energy demand for the existing development on site. A detailed description of the existing development and other applications on the site is provided in this Chapter.

As part of the assessment of the impact of the Proposed Development, the potential cumulative impacts with other developments that are currently permitted or under construction within the vicinity of the site, neighbouring industrial parks and surrounding areas have been assessed. A list of these developments considered is provided in an appendix to the EIAR. The cumulative impact assessment of the Proposed Development with these other developments is provided in each chapter of the EIAR.

PROPOSED ENVIRONMENTAL MANAGEMENT AND MONITORING

Dust

During the construction and decommissioning phases of the Proposed Development mitigation measures as identified in Chapter 8 of the EIAR will be implemented to ensure that any potential impacts arising from the construction phase of the Proposed Development are reduced and, where possible, completely removed.

Given the outcomes of the assessment on Air Quality in Chapter 8, during the Operational Phase mitigation measures, over and above those already embedded into the site's design, in relation to operational effects are not considered to be necessary. No mitigation is therefore proposed.

Noise

Chapter 10 of the EIAR assesses the effects of the proposed development on Noise. It details the assessment undertaken to determine the potential effects of both the construction and operation of the proposed development on the baseline noise. It outlines the embedded design measures and good practice methods which have been incorporated into the design and would be used during the construction and operation of the proposed development to prevent or reduce identified effects and risks. Further mitigation methods to ameliorate any potential effects are proposed, where appropriate, and residual effects assessed.

With implementation of mitigation, the noise assessment concluded that construction noise will be a short-term effect during day-time hours, with negligible effect at all receptors.

Groundwater and Surface Water

Mitigation measures at the site will continue to be implemented through the Surface Water Management Plan; a summary of the water management and treatment systems is outlined within Chapter 7 of the EIAR.

In addition, the following specific mitigation measures will continue to be implemented at the site:

- Fuel is stored in bunded tanks;
- There are hard standing areas for refuelling and surface water runoff from these hard stands is directed to the surface water management systems and WWTP on-site.
- All plant and machinery is regularly maintained and inspected daily for leaks of fuels, lubricating oil or other contaminating liquids/liquors;
- A spill kit is kept on-site to stop the migration of any accidental spillages, should they occur;
- All wastewater generated on site is collected and passed through the on-site WWTP before being discharged from site via a licenced and monitored discharge point at the Anner River;
- The company Environmental Management System (EMS) is implemented at the site and facilitates the management of the environmental impacts of their activities at the site

Silt traps have been implemented to reduce Suspended Solids discharged at SW1 to comply with the licence limit value. The silt traps are monitored visually on a regular basis by Medite and will be cleaned out as and when required to maintain capacity.

These measures have and will continue to be implemented at the site to reduce the potential impacts identified and outlined above.

Taken together, these mitigation measures will reduce the identified potential impacts on the surface water receptor and groundwater body beneath the site to ensure that the significance of any effect will be 'not significant' for all impacts.

Residual Impact Assessment

Examination of the identified potential impacts on the receiving environment show that with the mitigation measures in place, there are no significant residual impacts with respect to groundwater and surface water during the construction / operational / post-operational stages of the Medite facility. Following mitigation, the significance of all potential impacts identified will be reduced to Not Significant for all environmental factors.

In summary, based on the evidence and assessment undertaken in the EIAR, it is considered that the Proposed development at the Medite facility will not be contrary to the objectives of the WFD to maintain Good Ecological Status in the Anner River and to achieve Good Ecological Status in the River Suir by 2027.

THE EXISTING ENVIRONMENT, EFFECTS AND MITIGATION MEASURES

Population and Human Health

The Environmental Protection Agency guidelines in relation to environmental impact assessment (2022) indicate that the consideration of human health and population relates to employment, human health and amenity. For the purposes of environmental impact assessment, human health is considered in the light of the relevant topics or 'pathways' addressed by the EIAR, such as noise, air and water, and in the light of established, acceptable limits for exposure.

The Study Area has been defined by a 2km buffer zone from the development site area and includes the Electoral Divisions (EDs) of Clonmel Rural, Gurteen, Kilsheelan / Killaloan and St. Mary's located within this area. In total, there are 462 potential residential receptors within the study area, with 40 of those located within 500m of the development site. The proposed development site is located on the periphery and to the northeast of Clonmel town and its wider urban area. The Anner River flows through the forested area and is located in close proximity to the eastern boundary of the application site. An industrial area is located to the south.

The closest residential dwellings to the application area include dwellings located to the north and south along the local L2506 road to the east of the site. EIAR Figure 4-1 identifies residential properties and other receptors within 500m and 1km offsets from the application boundary.

The scale of community facilities and amenities available to local residents is considered to be in proportion with their rural location. The proposed development, itself, will not introduce new communities to the local area and is not expected to create any additional demand on services.

The construction phase of the proposed development has potential to create between approximately 50 and 240 jobs. It is expected that the operational phase of the proposed development will facilitate the sustainable retention of 170 long term jobs at the Medite facility. The employment of tradespeople, labourers, and specialised contractors for the construction phase will have a direct short-term, positive impact on the local economy, bringing significant benefits to local service providers and businesses with a direct and indirect financial benefit to the local community and once operational the Proposed Development will enable Clonmel to continue fulfil its regional role and perform as the primary economic development centre of County Tipperary. In addition, the proposed development will support and enhance the knowledge base in relation to relatively new bioenergy technology and will help develop a local supply base, which can be nurtured to enable the region, and country, to secure a greater share of the economic benefits of bioenergy technology growth.

In terms of human health, the sensitivity of the population is considered to be low, given the fact that the facility is already operational and has co-existed successfully with the local population for numerous years. Mitigation measures in relation to potential emissions such as noise, air and water will continue to be implemented at the site and are specifically identified within the relevant specialist chapters of the EIAR. Similarly, identified land use, tourism, amenity and services receptors have been operating in tandem with the permitted and operational Medite Europe DAC manufacturing plant for a number of years and it is not considered that there will be any significant impacts to these features.

Biodiversity

The proposed development at the Site within the existing Medite facility, Redmondstown, Clonmel, Co. Tipperary will result in some localized effects on the ecology within the Site. The loss of habitat will be limited to a small area of broadleaved woodland within Development Area 2. With the implementation of mitigation and compensatory measures identified, there will be no likely significant effects on any surrounding Natura 2000 Sites or Natural Heritage sites. There will also be no likely significant effects on the ecology, water and air quality

or additional environmental noise on the Site or surrounding areas. It is recommended that the mitigation measures be incorporated into the CEMP and implemented on-site by the contractor, and this made a condition of the planning permission if granted.

Provided that the proposed development is undertaken in accordance with the proposed design and best practice that is described within the EIAR, significant effects on ecology are not anticipated. As such, the proposed development is in line with environmental and biodiversity planning policy.

Land, Soils and Geology

The existing land, soils and geological setting at the regional, local and site scale are described and potential impacts on sensitive receptors identified and assessed without mitigation measures. Following that an ultimate assessment of potential residual impact with mitigation measures in place.

Land as a resource has a beneficial use for society, including agricultural land-use, industrial land use and urban residential land-use. Excess or unnecessary land take that could result in the loss or sterilisation of key land resources is not a feature of the proposed development.

Land-use surrounding the site includes agricultural land with dispersed residential properties, the Bulmers site to the south and the urban areas of Clonmel Town.

The local soils at the site are described as Acid Brown Earths and Brown Podzolics which are deep well drained and mainly acidic. A small area of the soils at the site is the soil group Surface water Gleys and Groundwater Gleys which are poorly drained and mainly acidic. To the east of the site is a c. 200 m wide strip of alluvium soils along the floodplain of the River Anner.

The soils at the site are shown on the Teagasc mapping as being classified as 'made ground' which comprise reworked and regraded soils and subsoils, with a concrete cover to facilitate the current land use at the site.

The Quaternary subsoils in the vicinity of the site consist of glacial till derived from Namurian sandstones and shales, with alluvium material along the Anner River and the Suir to the south.

The site is underlain by the Waulsortian Limestone Formation from the Dinantian Series bedrock. Boreholes at the site indicates the presence of dolomitised limestones which has the effect of increasing the porosity and thus permeability of limestone. Dinantian Series Limestones are known to host karstic landforms and subterranean features. The GSI karst landform map shows there are no known mapped karst features at the site or its surrounds.

The boreholes indicate a variable depth to bedrock beneath the site which is indicative of a mature karst bedrock landscape. This bedrock also contains some cavities which are filled with calcareous cement.

There are no geological heritage sites at or in the vicinity of the site. The closest geological heritage site is located c. 7 km south-west of the site.

Two sensitive receptors have been identified, Soils and subsoils consisting of tills derived from sandstone and shale and the Waulsortian Limestone bedrock.

The Geological Heritage Site at Marlfield is not considered a sensitive receptor due to the distance to this site.

Standard site operational mitigation measures are identified and proposed, and it is considered that with the measures in place the residual impact of the proposed development on the Land, Soil and Geology at the site will be negligible.

Water

The surface water and groundwater setting at the regional, local and site scale are described, and sensitive receptors are identified and assessed without mitigation measures, and finally the residual impacts are assessed with mitigation measures in place.

The site is located in the Suir catchment; the River Suir flows eastwards c. 1 km south of the site. The Anner River, a tributary of the River Suir, flows to the east of the site in a southerly direction and joins the River Suir approximately 1 km downstream of the site.

A Strategic Flood Risk Assessment (SFRA) was undertaken to inform the Draft Clonmel and Environs Local Area Plan (2024-2030) and identifies areas of Flood Zone A and Flood Zone B along the Anner River. The Medite site is located outside of Flood Zones A and B and therefore the site is considered to have a low probability of flooding, based on the criteria in the flood planning guidelines.

The bedrock formation at the site is classified as a Regionally Important Aquifer dominated by diffuse flow via karstified conduits. The site is located within the Clonmel Groundwater Body under the Water Framework Directive (WFD) and is in the County Tipperary Groundwater Protection Scheme.

The groundwater beneath the main factory site is mapped as Moderate (M) vulnerability with areas of High (H) vulnerability extending to the west. An area of Extreme (E/X) vulnerability coincides with the mapped topographic high west of the site.

Annual groundwater monitoring reports are produced for the site and a groundwater monitoring plan is implemented under the IE Licence.

The groundwater levels indicate a regional groundwater flow direction from the northwest to the southeast following the site topography towards the River Anner and River Suir; this flow direction is consistent with the GWB description, where regional groundwater flows are towards the major rivers.

There are a number of wells in the vicinity of the site based on the GSI well database and there is an industrial supply well approximately 570 m to the south at the Bulmers site.

There is an existing water management system at the site to manage, treat and discharge storm water runoff and process water used at the site. The combined storm water runoff and treated process water discharge results indicate that the discharge is in compliance with the emission limit values as set out in the IE licence.

Water is abstracted from the Anner River for the site processes, and it is not proposed to increase the current rate of abstraction. The surface water abstraction is registered with the EPA. In addition, there is a mains supply to the site for potable water.

The Anner River is classified as being of Good Ecological status according to the EPA River Waterbody WFD Status and is currently classified as 'not at risk' of deteriorating in status under the third-cycle (2022-2027) of the WFD, indicating that it is on track to maintain its Good status objective by the 2027 deadline. The surface water of the River Suir downstream of the Anner River and downgradient of the site is classified as being overall Moderate ecological status and Good chemical status. The River Suir here is classified as being at risk of failing to meet its Good Ecological status objective due to issues such as nutrient pollution, organic and sedimentation issues.

There is an existing historic uncapped landfill site within the overall Medite site area which is monitored in terms of groundwater quality down gradient.

The following sensitive receptors have been identified, the Anner River, the regionally important karst aquifer, local groundwater supply wells and the industrial groundwater supply boreholes.

Mitigation measures are proposed and it is assessed that with these measures in place the residual risk to the surface water and groundwater receptors is not significant.

Air Quality

An air quality assessment has been undertaken to consider the potential air quality effects arising from construction, operation and decommissioning activities associated with the Proposed Development on the surrounding environment.

The Proposed Development will replace all four existing aging thermal energy systems serving Production Lines 1 and 2 and associated infrastructure. This will be conducted in a phased manner (i.e. Line 1 and Line 2 separately), over a ten-year period. The Proposed Development represents a continuation of operational activities and will not result in an increase in the production of medium-density fibreboard (MDF). However, the Proposed Development will result in an increase in biomass fuels used as part of the combustion process. It is intended to utilise on-site residues initially, with additional biomass wood transported to the site by road.

In summary, the scope of the air quality assessment comprised:

- qualitative assessment of fugitive dust emissions arising from anticipated construction activities;
- assessment of road traffic vehicle movements generated by construction and operational activities;
- quantitative assessment of combustion emissions to air resulting from the replacement of two biomass boiler lines (Line 1 and Line 2); and
- qualitative assessment of decommissioning impacts, where possible / known.

The scope has been informed by both national and local planning policy and guidance, established best practice and experience, as well as via the consultation process with relevant consultees. The assessment scope is consistent with the approach proposed within the Preliminary EIA Scoping Report, taking into account consultation comments received to date, where relevant.

International guidance documents have been used in lieu of domestic guidance. These international documents relate to established best practice for the assessment of air quality, accepted for use within Ireland, so are considered appropriate.

Where required, the air quality assessment has been undertaken with use of conservative assumptions, to provide certainty with respect to the assessment outcomes. Furthermore, a number of mitigation measures identified to ameliorate potential air quality effects have been embedded into the project design. This ensures that, where considered, reduced potential for air quality impacts is secured by design.

Baseline conditions at human receptor locations have primarily been characterised with use of publicly available data, reported by the Environment Protection Agency. To complement existing monitoring sources and provide an indication of localised baseline pollutant conditions at sensitive locations, a noise monitoring survey of the existing noise environment has been undertaken.

A qualitative assessment of potential impacts associated with dust generated from construction activities on human and ecological receptors has been undertaken. This represents an industry standard approach. Potential dust effects are considered to be temporary and short-term and may only arise at particular times (i.e. certain activities and / or meteorological conditions). A list of management controls are proposed to avoid and reduce air quality impacts and the information contained within Chapter 8 of the EIAR shows that with the implementation of these, the potential effects are considered to be not significant. These measures will be secured by implementation of a Construction Environment Management Plan.

A screening assessment of potential increased road traffic movements has been undertaken with reference to established thresholds. Predicted flows generated by the proposed development are not found to exceed any of the screening criteria presented, hence effects on human ecological receptors were considered to be insignificant screened out of further consideration.

A quantitative assessment of emissions to air resulting from the phased replacement of two production lines (Line 1 and Line 2) was undertaken with use of dispersion modelling. This considered impacts upon human health and sensitive ecosystems within proximity of the application site. Relevant existing emission points across the wider Medite site (i.e. those that emit the same pollutants as the biomass plant) have been included in the dispersion modelling assessment, to facilitate a cumulative assessment. Furthermore, the modelling exercise has incorporated local baseline datasets (where available) to ensure other relevant local emission sources are accounted for. Impacts upon sensitive human and ecological receptors were assessed as insignificant.

Climate

The Medite factory currently meets its heat requirements with a 6MW gas powered TFH, and 36MW total biomass boiler for Production Line 1 and a 19MW boiler on Production Line 2. The Proposed Development will retain the gas boiler as a backup only and replace the two biomass boilers with new renewable energy plant with thermal input capacity of up to 60MW boiler on Production Line 1 and 30 MW on Production Line 2. The existing boilers are approaching the end of their design life. Their replacements will guarantee the continued operation of the plant.

The climate assessment outlines the aspects of the proposed development that have been considered in terms of resilience to climate change impacts. An estimate has been made to quantify the extent of Greenhouse Gas emissions that will result from the proposed development annually and shows that the proportion of the relevant sector annual carbon budget is very small (0.02%), hence deemed minimal and not significant.

The Proposed Development will be designed to consider the potential future impacts of the changing climate and adhere to a CEMP to limit greenhouse gas emissions during the construction phase. During operation, the Proposed Development will use biomass solely sourced from sustainable sources ensuring compliance with the Renewable Energy Directive and reducing operational emissions. The biomass fuels will be forest residue in the form of brash or pulp wood or industrial residues such as sawdust. The Proposed Development is a retrofit of an existing site to allow it to make better use of its biomass residues and renewable energy which complies with the Clonmel and Environs Development Plan 2013 and the Draft Clonmel and Environs Local Area Plan 2024-2030. It will allow for the extended use of the site rather than the need for new greenfield development.

The alternative scenario studied during the analysis of this chapter is based on the current boilers being replaced with a like for like replacement. These boilers are nearing the end of life and will require replacements. If this replacement did occur on the site, it would maintain the requirement for natural gas on site for a further 30 years. The larger boilers proposed will allow the Proposed Development to operate with minimal use of fossil fuels and maximise the use of its own biomass residues.

Noise

The Noise Chapter has been completed in accordance with the following:

- Environmental Protection Agency Act 1992
- BS5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise
- Guidance Note for Noise: License Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)

The Noise Sensitive Receptor (NSR) locations assessed and the four noise monitoring locations can be seen on Plate 1 below.



Plate 1: NSR and Noise Monitoring Locations

The Assessments found:

- Construction noise will be a Short-Term Effect. As the Effect would occur during the daytime the Sensitivity of each Receptor is Medium. As can be seen from the Table above at all receptors the noise Impact is Negligible. The Significance of the Effect is Negligible; an Effect which is Not Significant at all receptors.
- The Impact of Long-Term operational noise will be Negligible with a Negligible Effect.

Material Assets

A review was undertaken to establish the service and utilities infrastructure in the vicinity of the application site and the potential for the Proposed Development to impact these. The services considered include utilities such as electricity, telecommunications and gas, sustainable fuel supply, water management and waste management.

The study area for this chapter of the EIAR relates primarily to the Planning Application site and those dwellings and buildings on the roads within c. 1km surrounding the site, which rely on the services that could be impacted. The assessment has been informed by consultation with service providers and desk top review of publicly available information. The location of infrastructure such as overhead and underground lines/pipes associated with electricity, gas and telecommunications have been identified as far as possible and mitigation measures have been identified to ensure that such infrastructure will be protected during the course of the entire development. There will be no major increased demand as a result of the proposals.

The Renewable Energy Directive (RED) (2009/28/EC) and subsequent versions outlines responsibility for the governance of biofuels and bioliquids in the EU. For a biofuel or bioliquid to be classified as sustainable in the EU, it must meet the sustainability criteria set out in the legislation and comply with the verification

requirements. The requirements of RED III (EU/2023/2413) applies to the Medite facility and in turn Member States are required to independently verify if the sustainable requirements for biomass installations within its jurisdiction count towards national obligations. In addition to being environmentally ethical, there is also a financial incentive for Medite to ensure that biomass supplies for fuelstock are sustainably sourced, as if the biomass did not meet the defined sustainability criteria it would no longer be 'zero rated' for carbon for EU ETS reporting, and Medite would therefore have to purchase EUAs to cover the associated emissions. Surface Water Management will largely remain unchanged except for three areas of additional hard standing to facilitate the development of both energy plants and fuel infrastructure.

There will be no increase in current process water usage or the potable (mains) water usage at the site.

Currently, over 99% of the total waste produced at Medite is recovered. Waste that is not recovered at the facility is removed by licensed waste contractors. The proposed development will comply with all waste management responsibilities prescribed by conditions attached to any future grant of planning permission and/or EPA licence.

Cultural Heritage

The archaeological, architectural and cultural heritage assessment consisted of a paper and fieldwork study, carried out in September 2020 – November 2023. The paper survey consulted the:

- Record of Monuments and Places County Tipperary
- The Sites and Monuments Record
- Available remote sensing data
- Cartographic and written sources relating to the study area
- Tipperary County Development Plan 2022-28
- The Clonmel and Environs Development Plan 2013
- The National Inventory of Architectural Heritage

The closest Recorded Monument externally to the application area is a Ringfort – rath in Redmondstown townland RMP TS083-010----. This is located within a fenced and landscaped buffer zone as mandated in P312290 Condition no. 3. The monument has no views of the existing development or the proposed application area and will not be directly or indirectly effected by the current proposal.

The fieldwork identified a potential enclosure in an area for proposed tree planting along the northern boundary of the application site. Planting in this area has the potential to impact the potential enclosure. In the worst-case scenario, the development might disturb previously unknown deposits or artefacts without preservation by record taking place in the undeveloped wooded part of Development Area 2 and in the area proposed for tree planting.

As the proposed tree planting is likely to impact a potential enclosure identified during fieldwork in November 2023, and due to the possibility of the survival of previously unknown subsurface archaeological deposits or finds within undeveloped wooded part of Development Area 2, topsoil-stripping in these areas will be archaeologically monitored under licence from the National Monuments Service. Any archaeological material identified during archaeological monitoring should be preserved by record under licence from the National Monuments Service.

Landscape and Visual

A landscape and visual impact assessment (LVIA) of the proposed development was completed in accordance with accepted best practice guidance.

The 29.7ha planning application area (i.e. the 'project area') is located on the eastern edge of Clonmel, ca. 0.9 km north of the N24 – National Road at the Anner Bridge. It comprises the entire existing production facility,

including associated storage areas, access roads, car parking areas and office buildings, as well as some of the existing screening vegetation surrounding the facility. This project area sits within the wider 69ha landholding boundary, which expands to the nearest local roads to the west (between 200-450m), across the local road and up to the River Anner to the east and across the local road into a neighbouring field to the south.

The proposed development consists of a number of buildings/structures, silos and stacks, which will be constructed to the west / south-west of the existing main factory buildings and will be placed around and tied in with some of the existing structures. The tallest new structures will be the Line 1 Energy Plant at 33m height and the Line 1 and Line 2 Start up Stacks at 30m each. None of the proposed structures will be taller than the existing ones, the tallest of which are the existing stacks at 40m height.

A study area for the LVIA was identified, as an area of approximately 5km surrounding the application area, based on a Zone of Theoretical Visibility Map (ZTV) produced for the project, which indicates potential visibility in many areas within that range. While the ZTV calculation took account of the screening provided by the existing vegetation on the project area boundaries, it did not allow for existing structures or vegetation in the wider landscape. Therefore, the potential visibility indicated by the ZTV represents a worst-case scenario. This was checked during the field survey, which confirmed that the actual visibility is much reduced by hedgerows, forestry plantations and built structures in the wider landscape. Nevertheless, the 5km study area is maintained for the purposes of providing landscape context.

Substantial belts of woodland (in the ownership of the applicant) are located along the boundaries of the project area, with the exception of parts of the northern boundary which are marked by mature hedgerows. Further areas of mixed woodland plantations, in the ownership of the applicant, are located to the immediate west of the project area. Local roads adjoin the project area to the south and east. The neighbouring land surrounding the project area is made up from a mix of agricultural fields, orchards, woodland areas and some residential properties along the local roads.

Levels range from 20m AOD at the site entrance, to 42m AOD in the north-western corner of the project area. The southern two thirds of the project area, containing the main plant are mostly flat rising to 30m AOD north-west of the factory. The northern third of the project area is gently sloping from 23m AOD along the eastern boundary to the 42m AOD highpoint in the north-western corner.

Within 6km to the south-west of the project area, the landscape is dominated by the urban centre of Clonmel. The landscape to the north-west, north and east is dominated by agricultural land, which forms part of the Tipperary Landscape Character Area (LCA) 4 River Suir Central Plain. Landcover is a mix of arable and pasture fields, as well as several orchards in the vicinity of Clonmel. Field sizes range from small to large and are of irregular shapes, but with typically straight boundaries marked with tree lined hedgerows. The few small woodlands present in this landscape are typically associated with riverbanks, steep slopes or old demesne landscapes. Nevertheless, the landscape has a well wooded appearance, as several layers of hedgerows combine and block views of the intervening fields, from many locations within the area. Levels within this rolling landscape range from 20m to 80m AOD, with many local highpoints and ridgelines.

To the south of the project area the River Suir and its floodplain, differ from the agricultural land to the north, due to its flat topography. The floodplain is up to 1km wide, lies at an elevation of 15-20m AOD and is dominated by large arable fields bound mostly by tree-lined hedgerows. To the south of the river / floodplain, the land begins to rise steeply, reaching the summits of Long Hill (404m AOD) and Lachtnafranke (520m AOD) within 2-5km. These form the northern end of the Comeragh Mountains. The land cover on the lower slopes (approximately up to the 200m contour) is dominated by mixed/coniferous forestry plantations and pasture fields, changing to heathland approximately above the 200m contour.

Human activity has strongly shaped the lowland landscape surrounding the project area, including the floodplain of the River Suir. While the natural topography largely remains, the natural landcover has been replaced by agricultural land with straight field boundaries interspersed with many manmade structures, such as roads, residential properties, electricity poles, residential dwellings and farm/industrial buildings. The lower slopes of

the widely visible Comeragh Mountains, as well as Slievenamon at the north-eastern edge of the study area, have also been influenced by human activity in the form of pasture fields and forestry plantations. Only approximately above the 200m contour does the human influence recede and the natural heathland land cover prevail.

The proposed development, which will be contained entirely within the existing Medite facility, will have a similar industrial character to the existing project area. No individual landscape elements, which contribute to the character of the local or wider landscape, will be affected by the proposed development. The landscape character assessments for Tipperary and Waterford describe the landscape character areas/types surrounding the project area as being of low sensitivity to change. Considering all of the above, no sensitive landscape receptors were identified. There will therefore be no landscape effects.

Views of the project area are greatly restricted by roadside and intervening vegetation and existing structures. The main views can be gained from the slightly elevated agricultural landscape within 1-3km to the north/north-east of the project area and from those parts of the northern slopes of the Comeragh Mountains, within 2-5km to the south, where residential properties are orientated to experience views over the River Suir valley or little/no intervening vegetation is present. It should be noted that, while the existing facility is screened in many views, the plumes from the existing stacks are visible in a larger number of views, above the screening vegetation/structures. This is somewhat dependant on the weather conditions, as the plumes are less visible against a white sky and in hot weather and rise higher in calm conditions. In windy conditions, the wind direction further influences the extent of visibility. There will be minimal /no changes to the existing plumes, due to the proposed development.

Visual receptors were identified as residents and road users within the areas with visibility, as listed above. Also, there will be some visual receptors using recreational facilities in the southern half of the study area, such as the Suir Blueway and designated scenic routes and cycleways, as well as footpaths in the Comeragh Mountains. As there are some locally protected / designated viewpoints within the study area, the value of these views was assessed as medium with that of undesignated views assessed as low. The susceptibility to change was assessed as high for residents and recreational users and low for vehicle users, as these do not typically focus their views on the surrounding landscape. The overall sensitivity of the affected residents / recreational users was assessed as medium-high or medium and that of vehicle users as medium-low or low.

The magnitude of change was assessed as slight or negligible for all available views, due to the negligible size/scale of the change in all available views, i.e. only very small parts of the proposed development will become visible in views, which will be seen in context with the existing Medite Facility and therefore barely noticeable, once constructed. This has been illustrated by photomontages, which were produced for the sample viewpoints included in the assessment and included in the EIAR.

In summary, the proposed development will have no effects on landscape receptors and no significant effects on visual receptors. Further to that, no designated landscapes, protected views or scenic routes will be significantly affected.

Traffic

This Chapter considers the likely significant effects (including cumulative projects) of the Proposed Development on the local road network and its safety.

It sets out the assessment methodology, the existing traffic and transport conditions in the study area, the proposed best practice methods and predicted effects prior to, and following, the application of mitigation measures, where applicable, to reduce potentially adverse effects on the road infrastructure, road users and local communities.

Consideration has also been given to the proposed access/ egress route to/ from the Site and the assessment process comprised baseline survey and characterisation of the existing traffic network through desk study, site visit and traffic surveys.

- prediction of HGV delivery and staff generated trips.
- identification of mitigation measures, to address any identified effects and concerns from local community; and
- an evaluation of the impact of the proposed development on the road network and safety.

SLR consulted with Transport Infrastructure Ireland (TII) during the EIA scoping exercise and account has been taken of the scoping response received. A full summary of the consultee comments along with SLR comments/ actions is provided in the EIAR.

The assessment of the potential impacts to the baseline traffic is based on traffic flow data collected by subconsultants, Tracsis Traffic Data Ltd (Tracsis). There were no issues reported by Tracsis during the survey period.

The development trip generation has been based on existing 2019 traffic figures, as provided by the applicant, and a first principles approach based on the proposed increase in fuel import tonnages from the replacement thermal energy systems which serve the two production lines.

The 10 km study area defined for this assessment includes the site access junction, the local road marked as L2506, and the N24 Redmondstown junction. This has been defined based on the sections of road network likely to see the greatest impact associated with traffic generated by the proposed development. Traffic surveys by ATC and turning counts were undertaken in the study area in 2022.

The baseline conditions and associated traffic impact for the study area in terms of the following are presented:

- analysis of commissioned traffic count data.
- analysis of available personal injury collision data.
- assessment of traffic impacts from proposals; and
- assessment of traffic impacts from proposals and identified cumulative development.

To inform the above assessment, data of existing trips to and from the Site was collected regularly at the site and this, along with tonnage capacity throughputs for production, have been used to determine the existing and proposed trip generation.

Based on the same load sizes as used within existing operations for deliveries, and across the same working days and hours, the proposed development, once fully completed, will generate up to 25 HGV trips per day/ 50 two-way movements. This equates to up to two trips per hour/ four two-way movements. All are rounded up to account for a worst-case scenario. Overall, the completed proposed development will generate up to 10 additional trips per day/ 20 two-way movements and up to an additional one trip per hour/ two two-way movements.

There will be no additional light vehicular trips associated with staff as no additional staff members will be employed from the proposed development once operational.

The delivery vehicle trips in HGVs will continue to utilise the same routes as existing, with all vehicles utilising the L2506 south of the site and an approximate 60% travelling west along the N24 and approximately 40% travelling east along the N24.

The percentage increase of HGVs is seen to be higher, with up to 12.5% within a peak hour and 6.6% across a working day. This is due to the relatively low baseline level of HGV movements. Despite the peaks receiving an increase higher than the TTA 10% threshold, this remains within the IEMA Guidelines threshold of 30% and so is not considered to be significant or require additional assessment. Mitigation measures are identified in Chapter 14 of the EIAR in order to reduce the effects from the additional hourly HGV movements, with particular

attention to Redmondstown cottages, such as sensitive timing of deliveries, driver education and covering of loads/wheel washing.

The level of peak hour and daily traffic impacts both fall below the thresholds stated in both the IEMA Guidelines and TTA and as such they are not considered to be significant or to require additional assessment.

A Construction Traffic Management plan (TMP) will be prepared for the construction phase and is anticipated to be a condition of any permission granted.

Major Accidents and Natural Disasters

This Chapter considers the vulnerability of the proposed development to major accidents and natural disasters. It also sets out the assessment methodology adopted and proposed mitigation measures, where applicable, to reduce impacts.

The highest-risk scenario regarding the occurrence of major accidents or disasters in the construction, operation, and decommissioning phases of the Proposed Development is identified as the risk of an 'Industrial Accident - Fire/Gas Explosion'. However, the scope of this assessment has been based on the understanding that the Proposed Development will be designed, built and operated in line with current best practice. Further, in accordance with Chapter 19 of the Safety, Health and Welfare at Work Acts 2005 to 2014, the Proposed Development shall be subject to a fire safety risk assessment which will assist in the identification of any major risks of fire on site. Therefore, the risk of fire/explosion occurring at the Proposed Development resulting in a major accident and/or disaster was assessed as a 'low-risk scenario' during the construction, operation and decommissioning phases.

The design and construction of the Proposed Development adhere to the best practices outlined in this EIAR, incorporating mitigation measures to address the risk of major accidents or disasters. The application for the Proposed Development includes a comprehensive CEMP, which outlines the environmental controls to be implemented on-site. The CEMP specifies the Emergency Response Procedure to be followed in case of emergencies, encompassing contamination, health and safety, and environmental protection. It provides detailed information on all mitigation and monitoring measures to be implemented throughout the various phases of construction, operation, and decommissioning. The CEMP will undergo regular reviews through environmental audits and site inspections to ensure the effectiveness and implementation of all mitigation measures and commitments outlined in the application.

Operational monitoring measures relating to each of the environmental issues have also been identified within each of the respective chapters and will provide early warning systems to identify any corrective actions required to reduce risks in the unlikely event that risks would be raised.

It is subsequently assessed that the project carries no significant risk of causing major accidents or disasters, nor is it vulnerable to potential disasters or accidents, including both natural and man-made incidents.

Considering the temporary nature of the construction phase, the scale of the proposed project, and the implementation of environmental protection measures from the outset, the risk of disasters (such as severe weather events) or accidents (such as fuel spills or traffic incidents) is deemed to be low. In the event of severe weather conditions, such as flooding during construction, work will be halted. The project design incorporates Mitigation by Avoidance.

Interaction of the Foregoing

The interactions of the various potential impacts and mitigation measures have been covered, where applicable, under the relevant chapters within the EIAR and within Chapter 16 of the EIAR.

FIGURES

Figure NTS-1

Site Location Map (1:50,000)

Figure NTS-2

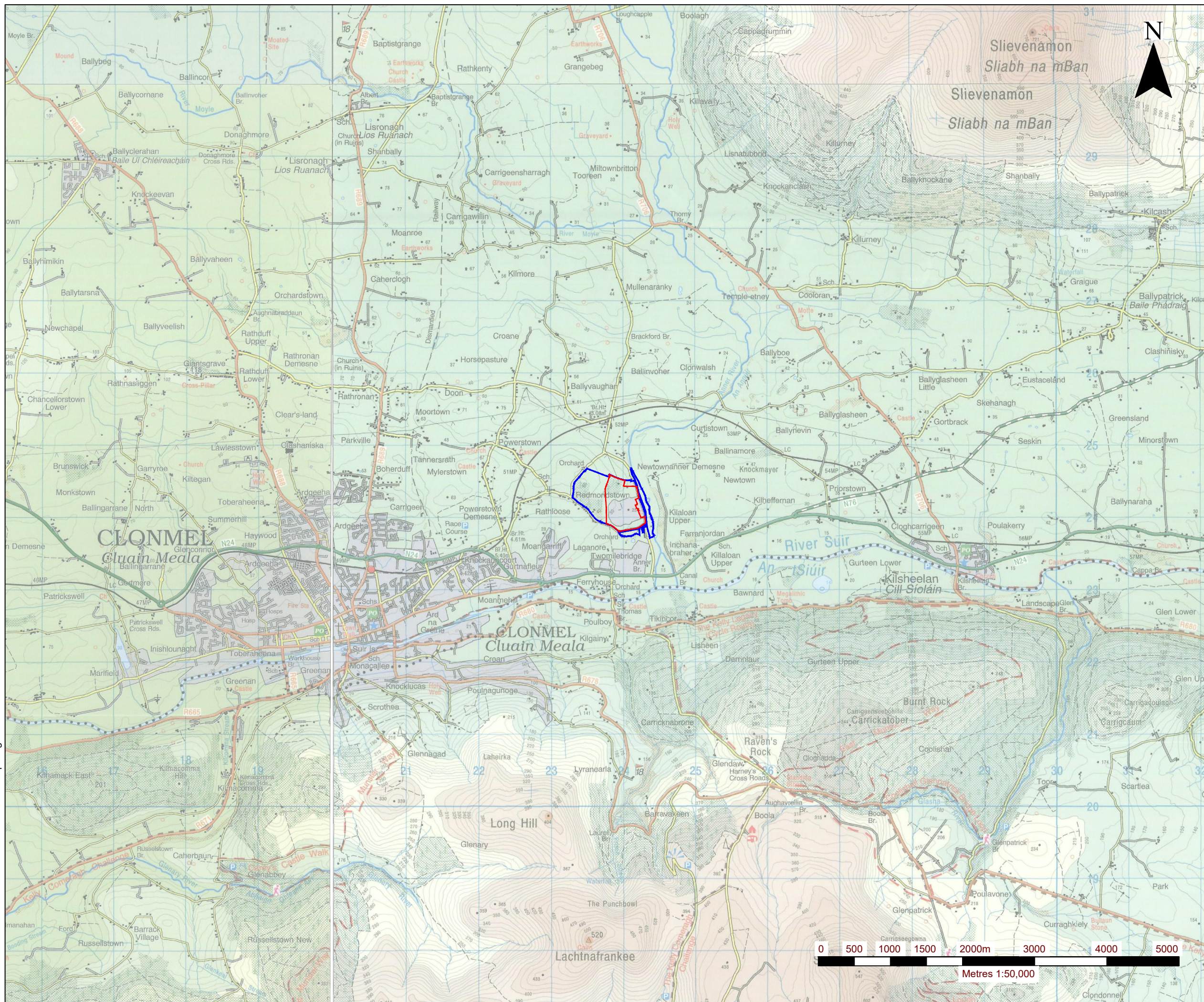
Site Location Map (1:10,000)

Figure NTS-3

Existing Site Layout

Figure NTS-4

Proposed Site Layout



NOTES

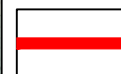
Extract from Ordnance Survey Discovery Map
Series Sheets no. 66, 67, 74 & 75

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LEGEND



MEDITE LANDOWNERSHIP
BOUNDARY



PLANNING APPLICATION AREA
(C. 29.7 HA)

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MEDITE EUROPE DAC
PLANNING APPLICATION

PROPOSED ENERGY PROJECT
AT THE MEDITE FACILITY,
REDMONDSTOWN, CLONMEL, CO. TIPPERARY

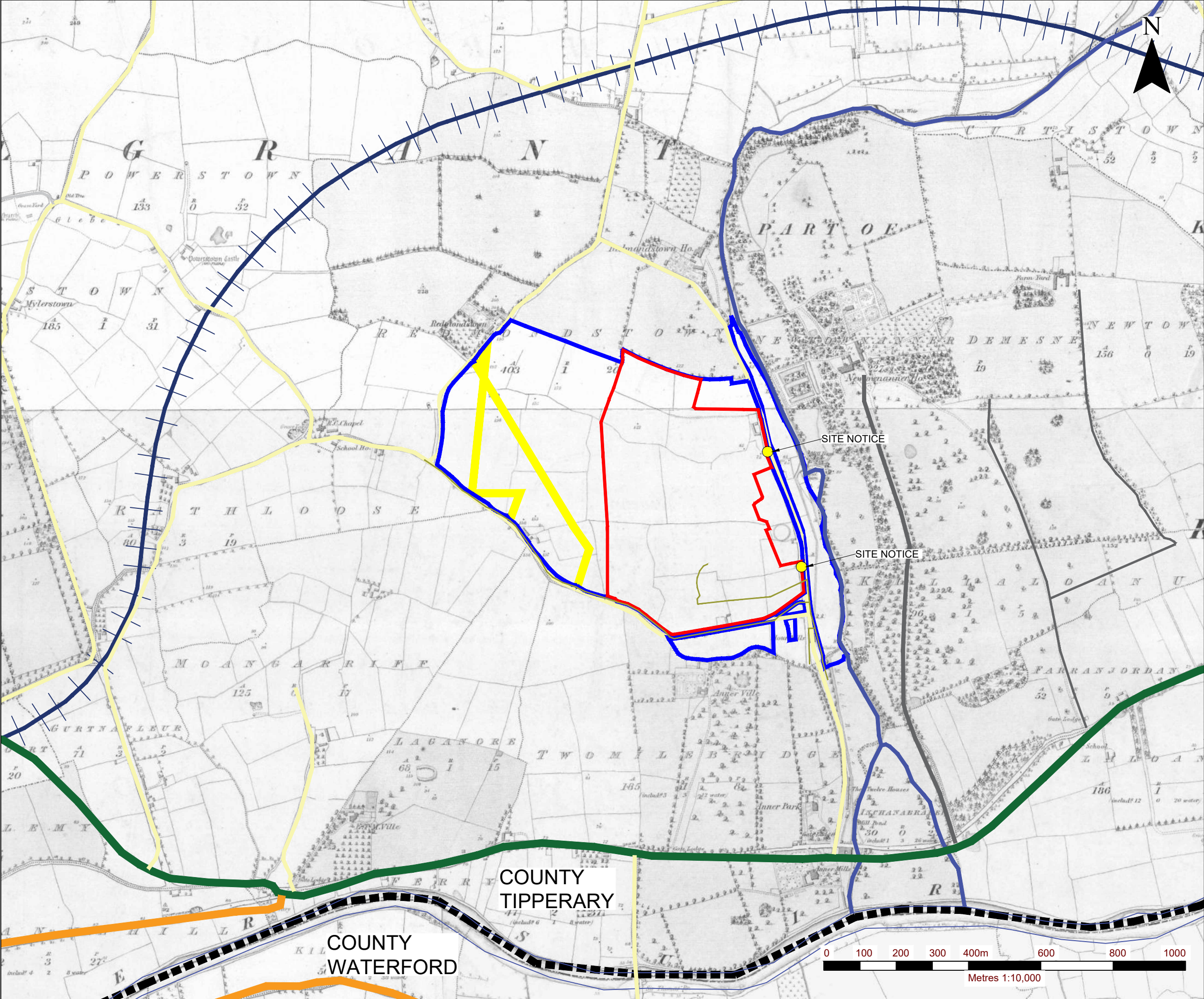
SITE LOCATION MAP

ABP-311991-21.PL01

Scale
1:50,000 @ A3

Date
DECEMBER 2023

ABP-311991-21.FIGURE NTS-2.0.Site Location Plan.dwg



NOTES

Extract from Ordnance Survey 6 INCH Map Series TY077, TY078, TY083, TY084, WD001 & WD002

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LEGEND

- MEDITE LANDOWNERSHIP BOUNDARY
- PLANNING APPLICATION AREA (C. 29.7 HA)
- COUNTY BOUNDARY
- N25 NATIONAL ROAD
- REGIONAL ROAD
- LOCAL ROADS
- ACCESS ROADS
- RAILWAY LINE
- WAYLEAVES
- GAS LINE

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MEDITE EUROPE DAC
NON-TECHNICAL SUMMARY

PROPOSED ENERGY PROJECT
AT THE MEDITE FACILITY,
REDMONDSTOWN, CLONMEL, CO. TIPPERARY

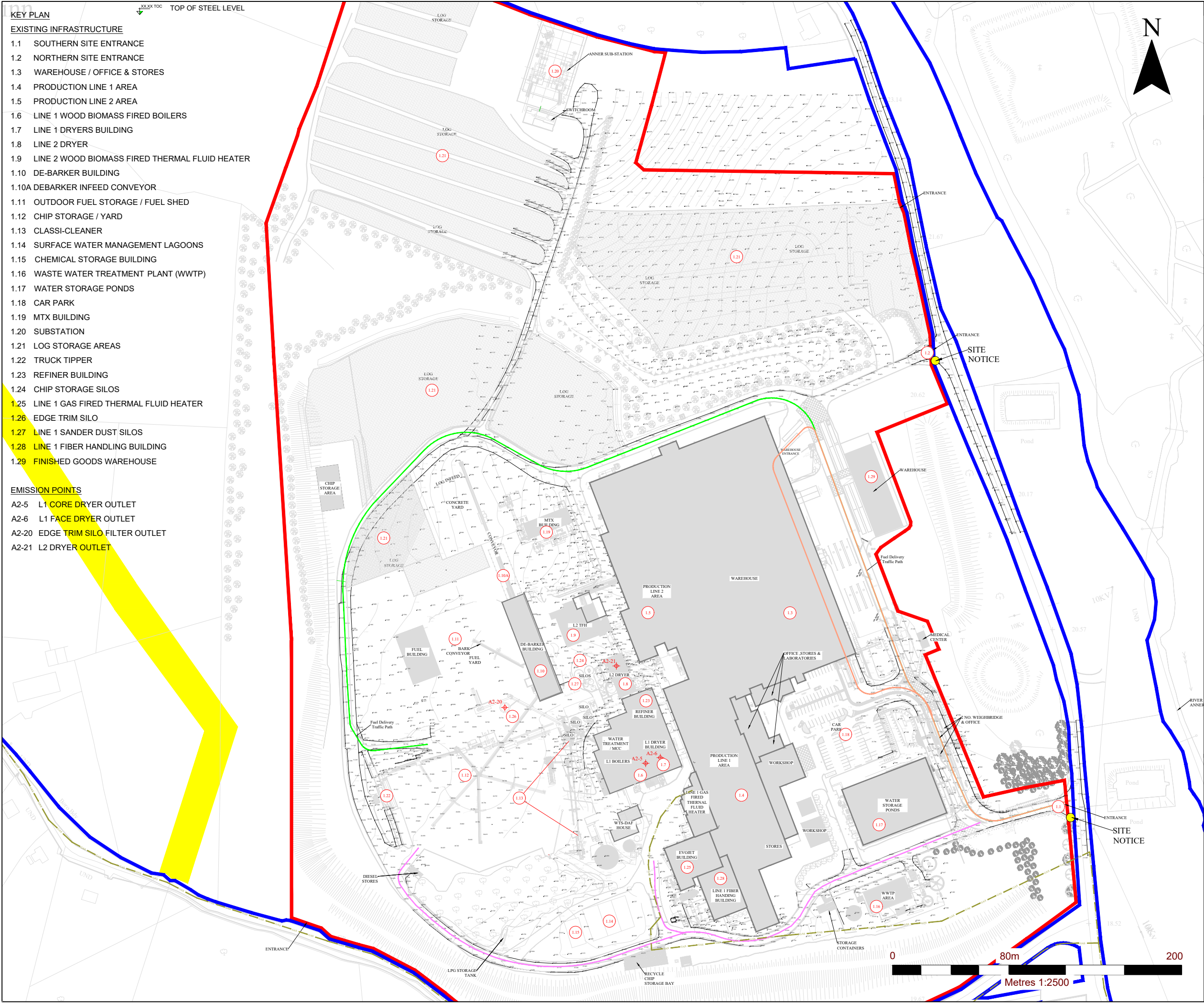
SITE LOCATION PLAN /
SITE NOTICE LOCATIONS

ABP-311991-21.FIGURE NTS-2

Scale
1:10,000 @ A3

Date
DECEMBER 2023

ABP-311991-21.FIGURE NTS-3-NTS-4.dwg



NOTES

Extract from Ordnance Survey 2500 SCALE Map Series

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Site Survey Layout provided by Medite

LEGEND

- MEDITE LANDOWNERSHIP BOUNDARY
- PLANNING APPLICATION AREA (C. 29.7 HA)
- WAYLEAVES
- EXISTING BUILDINGS AND PLANT
- HGV DELIVERY TRAFFIC ROUTE
- HGV FINISHED PRODUCT TRAFFIC ROUTE
- CONSTRUCTION TRAFFIC ROUTE
- OPERATIONAL ACCESS FOR MAINTENANCE TRAFFIC
- WOODLAND AREA
- EMISSION POINT

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**MEDITE EUROPE DAC
NON-TECHNICAL SUMMARY**

**PROPOSED ENERGY PROJECT
AT THE MEDITE FACILITY,
REDMONDSTOWN, CLONMEL, CO. TIPPERARY**

EXISTING SITE LAYOUT

ABP-311991-21.FIGURE NTS-3

Scale: 1:2,500 @ A3
Date: DECEMBER 2023

ABP-311991-21.FIGURE NTS-3-NTS-4.dwg

