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INTRODUCTION

Background

- 11.1 This chapter of the EIAR addresses the likelihood of effects on material assets arising from the proposed replacement of existing aging thermal energy systems serving Medite's two production lines.
- 11.2 In summary, the proposed development seeks to replace:
- the two wood biomass fired boilers (18MW each) and the natural gas-fired Thermal Fluid Heater (TFH) (6MW) serving Production Line 1; and
 - the wood biomass fired Thermal Fluid Heater (19MW) serving Production Line 2.
- 11.3 These systems will be replaced with 2 new renewable energy plants. These renewable energy plants will have rated thermal input capacity of up to 60MW 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.
- 11.4 The entirety of the development site is located within the administrative area of Tipperary County Council, and is located approximately 1km north of the administrative boundary of Waterford County Council.
- 11.5 A full development description and as well as further detail relating to the site is presented in Chapter 2 Proposed Development.

Scope of Work / EIA Scoping

- 11.6 Under Schedule 6 of the Planning and Development Regulations 2001 (as amended), the EIAR is required to include:
- a description of the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment' in section 171A of the Act likely to be significantly affected by the proposed development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.
- 11.7 The EPA guidelines in relation to the preparation of EIAR note that material assets are *"taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes roads infrastructure."*
- 11.8 The specific headings in the guidelines in relation to material assets refer to built services, roads and traffic and waste management. Chapter 14 of this EIAR address transport and traffic aspects while Chapter 12 addresses architectural heritage, archaeological heritage and cultural heritage separately to this Chapter.
- 11.9 This material assets impact assessment comprises the consideration of existing resources pertinent to the proposed development and the application site that are not addressed elsewhere in this EIAR

and the likely development impacts on those resources. On this basis, this Chapter addresses built services and waste management.

Consultations / Consultees

- 11.10 Consultation responses obtained from the informal scoping exercise and public consultation are set out in **Chapter 1**. The responses that are of relevance to built services and infrastructure are summarised in Table 11-1 below.

Table 11-1
Consultation Responses

Prescribed Body	Comment
Commission for Regulation of Utilities	No response
ESB Networks	General Acknowledgement of Receipt
Gas Networks Ireland	Gas Network Map provided and presented in Figure 11-2
Irish Aviation Authority	Confirmation that no requirements for consultation
Irish Water	General guidance provided on the scope of the water assessment in the EIAR
Southern Region Waste Management Office	No response

- 11.11 In relation to the management of waste, the Environmental Protection Division of the Department of Environment, Climate and Communications requested that the applicant consult directly with the local authority (i.e. Tipperary County Council) regarding final plans.
- 11.12 An online pre-planning consultation meeting was held between officials of Tipperary County Council and representatives of Medite and SLR Consulting Ireland on 28th January 2022. Staff from the roads department of Tipperary County Council were also in attendance.
- 11.13 Details of the proposed development were presented at the meeting and issues of potential concern to the Planning Authority were identified and discussed. No specific concerns were raised in respect of material assets other than traffic related impacts on local roads. The comments raised by Tipperary County Council, Transport Infrastructure Ireland, the Department of Transport, Tramore Regional Design Office and local residents in relation to traffic are detailed and addressed in **Chapter 14** of this EIAR.
- 11.14 Following a review of published development plans and site mapping / surveys, it was considered that there was no requirement for any further formal external consultations to be carried out in respect of material assets for the purposes of this assessment. There was however some consultation with other specialist contributors.

Statement of Authority

- 11.15 This chapter of the EIAR was prepared by SLR. The project team consists of:
- Lynn Hassett BSc, MSc, PIEMA, MIEnvSc.
 - Aislinn O’Brien, BA Int., MSc, MCD, MRTPI, MIPI

- 11.16 Lynn is an EIA co-ordinator with a BSc in Applied Ecology (2000) and a MSc in Environmental Impact Assessment (2001). She has 15 years of experience of in EIA across the not-for-profit, public and private sectors in the UK and Ireland. She has worked on both the review of EIA on behalf of planning authorities assessing applications and in the production of them to support planning applications being lodged. She is a Practitioner member of the Institute of Environmental Management and Assessment, which she is a member of since 2001. She is also a Full Member of the Institution of Environmental Sciences, which she joined in 2023.
- 11.17 Lynn has acted as a project manager of the EIA process on a number of urban development, wind and quarry projects with responsibility for the co-ordination between project designers and the entire multi-disciplinary environmental team. As a generalist, she has also written the introductory chapters of a large number of EIARs, including the Introduction, Project Description, Alternatives, Population and Human Health, Material Assets, and Major Accidents and Disasters, co-ordinating with the wider EIA team for input.
- 11.18 The Chapter was reviewed by Aislinn O'Brien, MSc, MCD, MIPI, MRTPI. Aislinn is a chartered town planner with over 16 years professional planning experience. During this time Aislinn has project managed and coordinated numerous planning applications and EIARs.

Limitations / Difficulties Encountered

- 11.19 No limitation or difficulties were encountered in the preparation of this Chapter of the EIAR.

REGULATORY BACKGROUND

Legislation

- 11.20 There is no specific legislation relevant to this Chapter of the EIAR. However, the information provided within this Chapter is informed by
- Planning and Development Act, 2000 (as amended); and
 - Planning and Development Regulations, 2001 (as amended).

Planning Policy and Development Control

- 11.21 This Chapter of the EIAR is informed by the National Planning Framework (NPF) 2040, the Regional Spatial and Economic Strategy for the Southern Region and the Tipperary County Development Plan 2022 - 2028 (CDP), the Clonmel Town and Environs Development Plan 2013 (as varied¹) and the Draft Clonmel and Environs LAP 2024-2030. The Waterford County Development Plan 2022-2028 was consulted to ensure that there were no infrastructure objectives or zonings within its administrative area that could have any influence on the application site. Tipperary County Council is currently preparing a new Local Area Plan for Clonmel to cover 2024-2030 and public consultation

¹ Tipperary County Council has confirmed that the 2013 LAP (as varied) remains in force until the emerging Draft Clonmel LAP 2024-2030 takes effect

on the draft Plan ended in September 2023. The draft Plan has also been taken into consideration in the preparation of this Chapter of the EIAR.

Guidelines

11.22 This chapter of the EIAR has also been prepared with reference to:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Environmental Protection Agency, May 2022)
- Guidelines for Planning Authorities and An Bord Pleanála on Carrying Out Environmental Impact Assessment (Government of Ireland, August 2018);
- Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017); and
- Advice Notes on Current Practice in the Preparation on Environmental Impact Statements (Environmental Protection Agency, 2003).

RECEIVING ENVIRONMENT

Study Area

11.23 For the purposes of this Chapter on Material Assets, the study area is comprised of the application site and extends to those dwellings and buildings on the roads surrounding it, within c. 1km of the proposed development site. The study area was selected to ensure that all built service infrastructure within the application site was identified and the wider review of a 1km buffer was included to ensure that any associated structures or inter-reliance in the immediate surrounding area were considered if appropriate.

Baseline Study Methodology

11.24 The baseline study in respect of Material Assets comprised a desk-top review of online and published resources, information requested from service providers, information provided by the Applicant and information contained in the other Chapters of this EIAR. Ordnance Survey maps and aerial photography of the local area were also examined.

Sources of Information

11.25 All baseline information not contained within other chapters of this EIAR was obtained from the following resources:

- Myplan.ie (www.myplan.ie);
- GeoHive Environmental Sensitivity Mapping (<https://airomaps.geohive.ie/esm/>);
- Historic Environment Viewer (www.webgis.archaeology.ie/historicenvironment);
- OSi Maps;

- Aerial photography;
- Open Streetmaps (www.openstreetmaps.org).
- Tipperary County Development Plan 2022-2028;
- Clonmel and Environs Development Plan 2013;
- Draft Clonmel Local Area Plan 2024-2030; and
- Waterford County Development Plan 2022-2028.

Access and Roads

- 11.26 The application site boundary has an area of 29.7 Hectares which is part of the overall Medite landholding of 68.3 ha. The lands are host to a long-established industrial facility Medite Europe DAC, located in the Redmondstown townland, Clonmel, Co. Tipperary. The site is located approximately 4 km east of the centre of Clonmel town and approximately 0.9 km north of the N24, and is surrounded by an area predominantly characterised as agricultural in nature. Access to the application site is via the local road L2506 which connects to the N24, c. 1.5km east of the edge of Clonmel Town.
- 11.27 The N24 connects the towns of Waterford, Clonmel, Tipperary and Limerick and is the main approach route of all traffic entering the Medite facility. Traffic travelling to the site from the N24/L2506 junction approaches the site access/egress point from the south.
- 11.28 As the existing access junction of the N24 with the L2506 is long-established and compliant with current design standards, there is no requirement to amend or upgrade it to facilitate the proposed development.
- 11.29 The N24 and L2506 are the main routes used currently for the transport of fuel, materials and products in association with the industrial activities being undertaken at the Medite facility. The N24 is a National Primary Road. The L2506 is a single carriageway local road. National Primary Road N76 provides an onward connection between the N24 and Kilkenny to the east of the site.
- 11.30 Further afield the road network in the vicinity of the proposed development generally comprises regional and local roads. Regional roads most proximate include the R706, the R680, and the R707.

Waste Management

- 11.31 The manufacturing process generates the following wood biomass residues per annum that are also utilised as fuel in the existing biomass energy systems:
1. Log and Chip Handling stage of production, (approximately 21,000 tonnes)
 In this stage of production approximately 21,000 tonnes of bark is removed from the pulp log being used in production. Currently, approximately 2,000 tonnes of this bark is consumed in the biomass fired energy systems onsite. The bark is the wettest part of the log and due to its relatively high moisture content (approximately 60%), it's too wet for the existing biomass systems to consume in larger volumes, and so the balance is sold for use in horticulture.
 2. In the Log and Chip Handling stage of production, approximately 11,000 tonnes of wood chip fines are screened out of the woodchip.
 3. In the Refining stage of production, occasionally some fibre is rejected for quality or other reasons. This wet reject fibre amounts to approximately 2,200 tonnes.

4. In the Forming stage of production, occasionally some fibre is rejected for quality or other reasons. This dry reject fibre amounts to approximately 1,200 tonnes.
 5. In the Pressing stage of production, rejected boards are occasionally removed and shredded. This shredded MDF material amounts to approximately 1,300 tonnes.
 6. In the Finishing stage of production, the less dense edges of the MDF are sawn off and shredded. This shredded MDF material (called 'Edge Trim') amounts to approximately 2,500 tonnes.
 7. In the Finishing stage of production, sander dust is generated by the sanding of the MDF boards and saw dust by the cutting-to-size of the MDF boards. The sander/saw dust amounts to approximately 23,800 tonnes.
- 11.32 The total amount of wood biomass production residues is 52,000 tonnes. This is used to feed the existing biomass energy systems.
- 11.33 The IE licence for the facility requires annual reporting by the applicant on waste generation and management. In 2022, 44.5 tonnes of hazardous waste, 34,105 tonnes of non-hazardous waste and 1,323 tonnes of inert waste was reported².
- 11.34 Hazardous waste is comprised primarily of waste oils, process resin / dyes and contaminated packaging. Non-hazardous wastes are composed of MDF product sander dust, wastewater treatment plant sludge, scrap metal, wood ash, wastes packaging and mixed packaging/general waste. A significant portion of waste produced at Medite (>89%) is recovered on-site as an energy wood biomass fuel source in the combustion plant with the remainder being sold to the horticultural industry. 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.

Utilities and Infrastructure

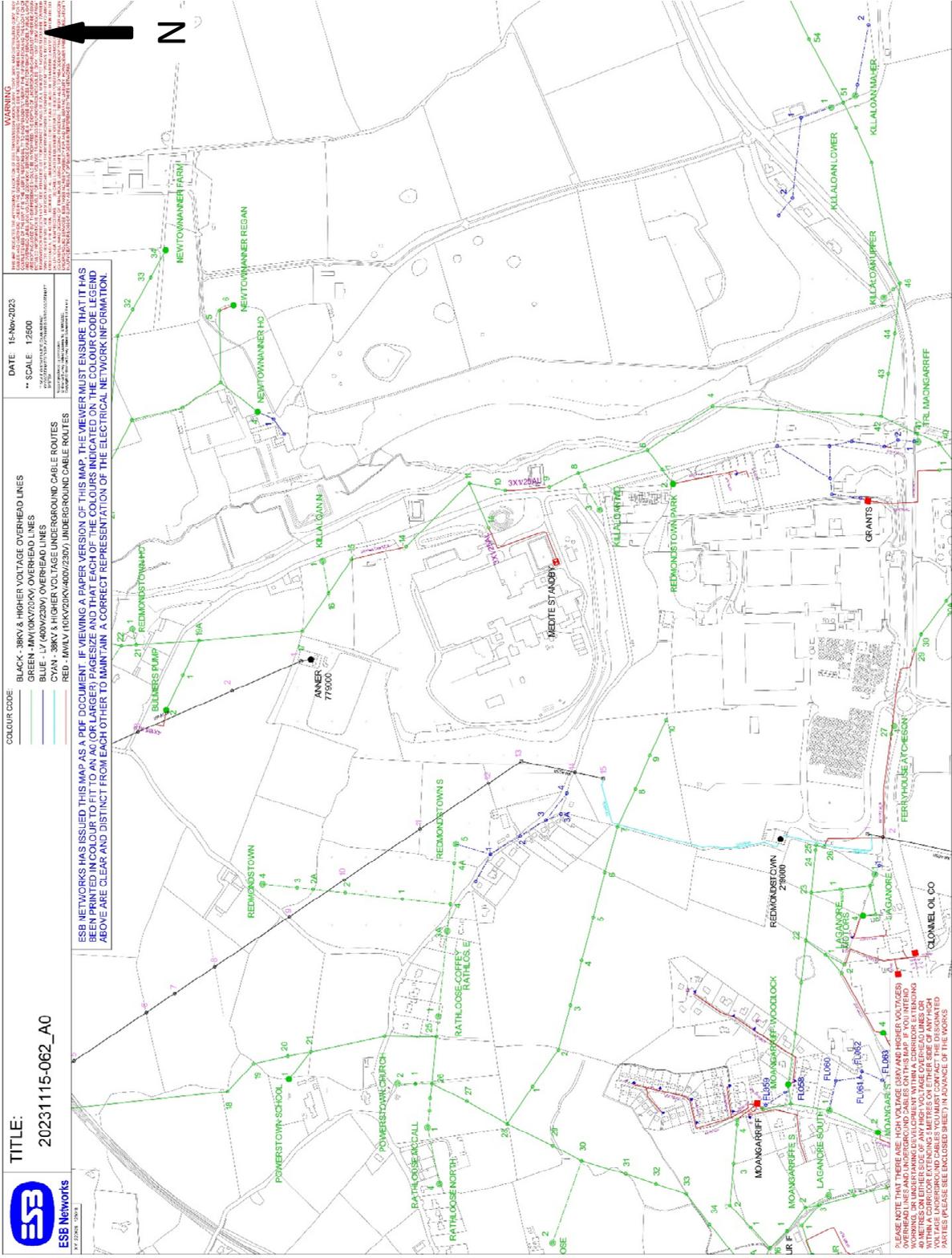
Electricity

- 11.35 A network of medium voltage (10KV/20KV) overhead lines in the local area is predominantly seen in infrastructure mapping supplied by ESB and presented in **Figure 11-1**. Electricity supply to the application site is from the overhead distribution line that runs along the majority of local road L2506. Within the site itself the ESB infrastructure is shown as an underground 10KV/20KV/400V/230V cable route within the southeastern portion. The main uses of the electricity are as follows:
- Motor control centre distribution;
 - Plant lighting and utilities;
 - Process drives.
- 11.36 There is a 110KV substation (Anner) approximately 250m north of the site, which is shown on Figure 11-1 as connecting to a 38KV or higher voltage overhead transmission line which runs further north. There is a further 38KV or higher voltage overhead transmission line approximately 75m west of the application site which runs in a northerly direction. ESB Networks require consultation in the event of works planned within 40m either side of a high voltage overhead line to agree safe working

² Annual Environmental Report, 2022, EPA Licence Number P0027-04 <https://leap.epa.ie/docs/58b72791-bee3-41f3-aa42-341551440e26.pdf>

procedures and necessary clearances between the lines and the development in advance of any excavation.

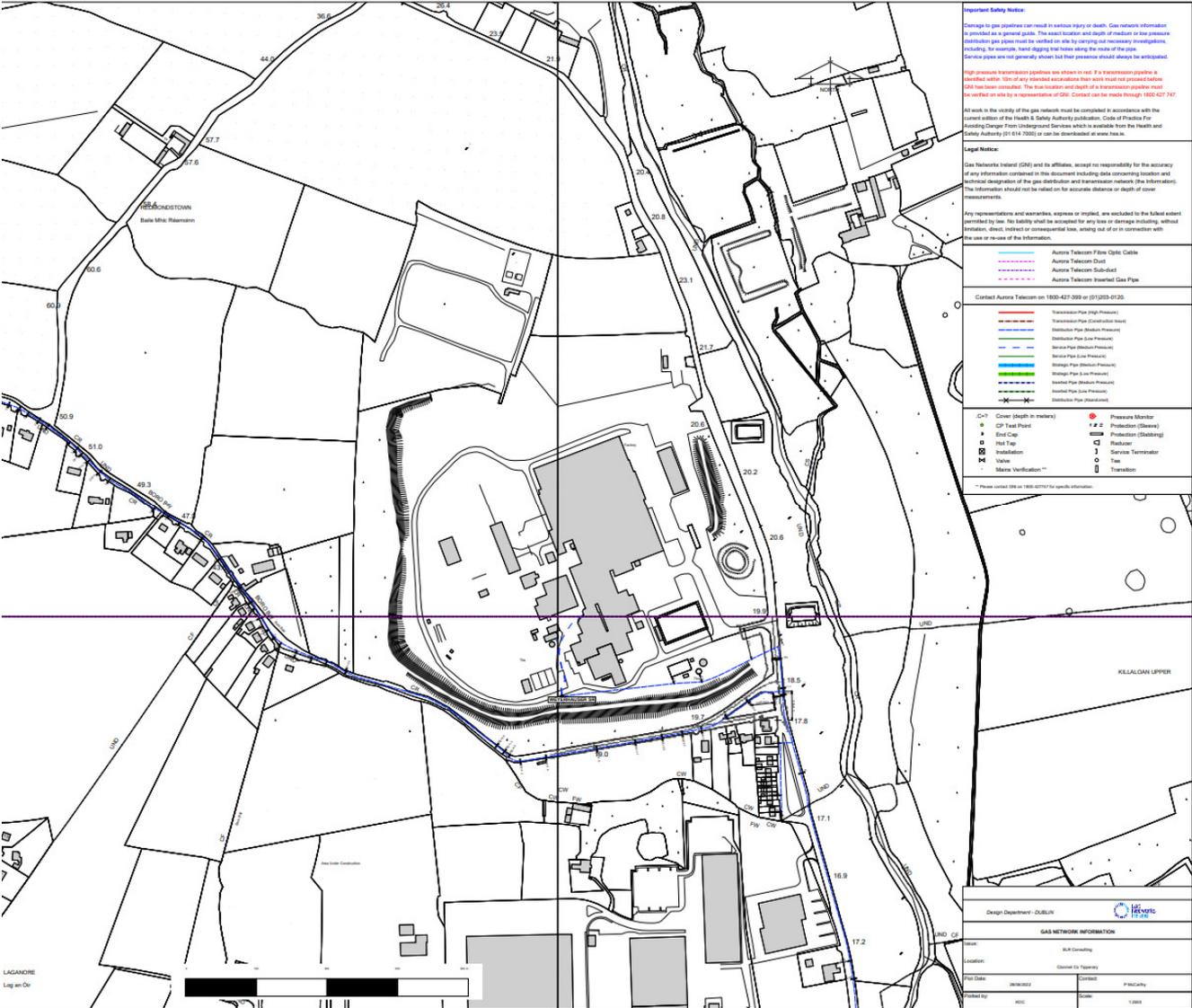
Figure 11-1
ESB Infrastructure Map



Gas

11.37 Mapping information obtained from Gas Networks Ireland indicates that there is a medium pressure distribution gas pipe present within the application site (see Figure 11-2). Mapping indicates the gas network as running along the L2506 and the unnamed public road, both to the south of the application site. The pipe enters the plant from the south and currently the gas being piped into the site is used for one of the thermal fluid heaters in the existing Production Line 1.

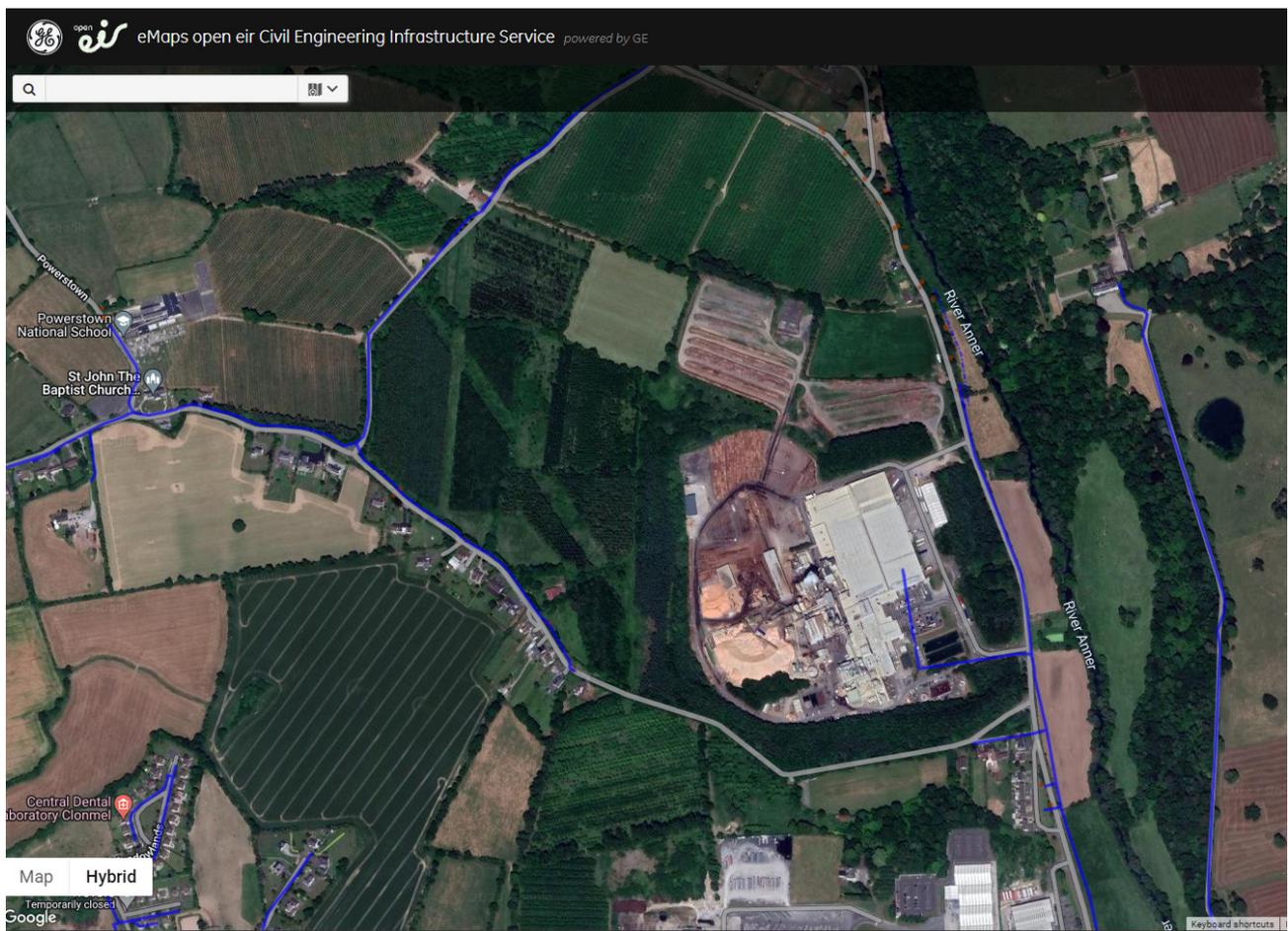
Figure 11-2
Gas Networks Ireland 'Dial before you dig' review



Telecommunications

- 11.38 Online Open Eir mapping indicates their network infrastructure running along the L2506 and other local public road network (see Figure 11-3 below). Telephone connection to the Medite plant site is indicated as entering the site via the private access/egress road off the public L2506.

Figure 11-3
Mapping of Eir Telecommunications Infrastructure



Fuel Supply

- 11.39 As well as using the production residues totalling c. 52,000 tonnes, the existing biomass energy systems consume c. 59,000 tonnes of wood biomass fuels delivered by truck to Medite, bringing total wood biomass fuel consumption to c. 111,000 tonnes.
- 11.40 The wood biomass delivered from various Coillte managed and private sector forestry operations across the island of Ireland. A breakdown of existing quantities is provided in **Chapter 2**.

Water Resources

- 11.41 The Clonmel wastewater treatment plant which serves the wider agglomeration is located approximately 1.7km southwest of the subject site, south of the N24.

- 11.42 There is an existing dedicated Wastewater Treatment Plant (WWTP) on site. Foul wastewater from the existing permitted manufacturing facility goes to the onsite WWTP. Further details are provided in Chapter 7.
- 11.43 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. Discharges from the onsite WWTP is monitored under their IE Licence P0027-04. The treated water is discharged to the Anner River at two locations, further details of which are set out in Chapter 7.
- 11.44 Water is abstracted from the River Anner for processing operations at the site. The abstraction rate is c. 1,154 m³/day. The surface water abstraction from the river, which amounts to 421,374m³ per annum is registered with the EPA (Abstraction Registration No. R00013). The current potable (mains) water usage amounts to c. 41m³ per day at the site.

Enterprise and other Assets

- 11.45 The most proximate business to the subject site is C&C Group PLC approximately 200m south of the site. An operational stud farm is located approximately 940m to the northeast of the subject site. A disused quarry is located 1.5km to the east and an established quarry, operated by Roadstone Ltd. is located 5km to the northeast.
- 11.46 A section of railway belonging to Irish Rail is located approximately 820m to the north of the subject site.

IMPACT ASSESSMENT

Evaluation Methodology

- 11.47 The assessment was carried out in accordance with the guidelines identified at the outset of the chapter and tailored accordingly based on professional judgement.
- 11.48 Industry specific guidance on Project Type 31 (including installations for the disposal of waste) within the 2003 EPA advice notes has been considered³. The focus of the assessment is, as stated earlier, on built services and waste management. It has, however, been extended to include a summary review of access and roads (as assessed in Chapter 14) and a review of enterprise and other assets that have not been addressed elsewhere in the EIAR.
- 11.49 Other Material Assets which have the potential to be impacted by the proposed development are addressed in the following EIAR chapters:
- Landuse (Chapter 4, Population and Human Health);
 - Amenities (Chapter 4, Population and Human Health, Chapter 12 Cultural Heritage and Chapter 13, Landscape);
 - Utilities and Infrastructure (Chapter 7 Hydrology and Hydrogeology);

³ Project Type 31, EPA (2003) Advice Notes on Current Practice in the Preparation of Environmental Impact Statements https://www.epa.ie/publications/monitoring--assessment/assessment/EPA_Advice_Notes-on_Current-Practice-on-prep-EIS_2003.pdf

- Transport Infrastructure (Chapter 14, Traffic and Transport);
- Cultural Heritage (Chapter 12); and
- Visual Amenity (Chapter 13).

11.50 The evaluation of effects on built services and waste comprises a qualitative assessment based on an analysis of potential effects on the environment undertaken in other sections of this EIAR. The assessment is based on professional judgement in relation to likely impacts on built services and waste and follows the terminology regarding significance of effects set out in the EPA (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports.

Construction Stage Impacts

Access and Roads

- 11.51 The proposed development will generate traffic movements over the existing public local road network, local road L2506 in particular and the N24. The construction period of the proposed development is to be phased over a 10 year period and will include 4 construction phases within. Chapter 14 of this EIAR sets out further details on road capacity and proposed access arrangements.
- 11.52 Given the assessment contained in that chapter, it is considered that there will be no significant impact on access and traffic.

Waste Management

- 11.53 Prior to commencement of the proposed development, management systems will be established and implemented at site establishment stage to control and manage all potential construction waste streams, to avoid waste generation where possible and to maximise re-use or re-cycling opportunities thereafter. Any vegetation to be cut and removed off site during the site establishment or subsequent phases will be managed by a landscape contractor and brought to an authorised waste recycling facility.
- 11.54 General office and food waste produced at the site offices will be minimised insofar as possible. Arrangements will be made for periodic collection of general / recyclable waste by authorised waste contractors and for submission of collected waste for recovery or disposal, as appropriate, at authorised waste facilities.
- 11.55 Waste oils, batteries, domestic waste and scrap metal will be stored on site in designated (bunded) storage areas and will be collected and recycled or disposed of at authorised off-site waste facilities by authorised waste contractors.
- 11.56 In light of the above, and the limited volume of building wastes generated (mainly soil/stone excavated to facilitate foundations and concrete yards) it is considered that the generation of waste by on-site activities during the construction period will have an imperceptible effect on local waste collection/ off-site waste management capacity.

Utilities and Infrastructure

Electricity, Gas, Telecommunications

- 11.57 The proposed development relates to the replacement of existing infrastructure, and it is not envisaged that any below ground excavation or introduction of new utility services will be required. It is not considered that major utilities such as overhead power lines or telephone lines or

underground services require diversion. Neither these nor the medium pressure gas distribution pipe underlying the southern part of the site below ground at approximately 1.5m (see Figure 11-2) will need to be temporarily disrupted during the construction of the proposed development and therefore an imperceptible effect is expected in this regard.

- 11.58 Due regard will be given to the presence of overhead power lines and underground cables when carrying out construction works both on the road network and within the subject site. The proposed works are not within 40m either side of the closest high voltage overhead lines to the site.
- 11.59 Standard construction safety practices for working close to the overhead power lines around the facility will be implemented for all site based operations in order to safeguard the health and safety of employees, hauliers and visitors, in line with statutory obligations under health and safety legislation. Such measures will also serve to protect overhead lines from any damage by site based plant and activities. In light of the above, the potential effects on utilities during the construction period will have an imperceptible effect on service users.

Fuel Supply

- 11.60 The fuel supply for the construction stage is intrinsically linked with the detail of the proposed development, hence it is assessed within the Operational Stage impacts below.

Water Resources

- 11.61 The proposed development will not result in any changes to water management or potable water requirement. The three areas of additional hard standing that will be required to facilitate the development of both energy plants and fuel infrastructure will be managed through the existing surface water management system in place at the facility.
- 11.62 Precautions / mitigation measures will be implemented to ensure that any potential impact of site based activities on local surface waters and groundwater underlying the application site (e.g. accidental oil or fuel spills) is minimised in order to safeguard and protect potential surface water and groundwater resources.
- 11.63 In avoiding and minimising direct impact on groundwater, there will also be no indirect impacts on recharge to local watercourses or on groundwater supply wells at local residential properties. In light of this and the detailed assessment of surface water and groundwater risks and measures to mitigate potential impacts outlined in Chapter 7 (Hydrology and Hydrogeology) of this EIA, the potential effects on water resources during the construction period are not significant.

Enterprise and other Assets

- 11.64 During the construction stage the proposed development will give rise to a potential increase in the impact of ambient noise, ambient dust and traffic on proximate rural enterprises and residential properties. As outlined in **Chapters 8, 10 and 14** of this EIA, a number of mitigation measures are proposed to control and minimise these effects and ensure that predicted changes in pollutants are well within statutory standards and WHO guidelines.
- 11.65 As previously noted, precautions / mitigation measures will also be applied to ensure that any potential impact of site based activities on surrounding surface water bodies and groundwater underlying the application site (e.g. accidental oil or fuel spills) and its associated abstraction / use will be minimised. These measures are outlined in detail in **Chapter 7** of this EIA and ensure that there will be no significant effects on receptors.

- 11.66 **Chapter 1** of this EIAR identifies the committed / reasonably foreseeable future developments within the surrounding area that may have potential for in-combination effects with the proposed development. The proposals have been considered as appropriate within the respective technical assessments and the inclusion of relevant projects within these has not highlighted significant in-combination effects.
- 11.67 Consultation has been undertaken with the Tramore Regional Design Office in relation to proposed N24 Waterford to Cahir works and the office has confirmed that there will be no conflict with the proposed development.

Operational Stage Impacts

Access and Roads

- 11.68 The existing road network has demonstrated its ability to support comparable levels of HGV traffic to and from the application site in the past and was subject to detailed review and assessment of maintenance requirements prior to grant of the existing planning permission.
- 11.69 **Chapter 14** of this EIAR sets out predicted increases in traffic levels associated with the operational stage of the proposed development and analyses the potential effects on delays to traffic, road safety, community severance, noise (in association with Chapter 10 of this EIAR), vulnerable road users, disruption due to dangerous loads and dust. The assessments within the Chapter conclude that no significant effects are anticipated.
- 11.70 Specific concerns that have been raised by the nearest residential receptors at Redmondstown Cottages have been outlined within Chapter 14 of the EIAR and solutions have been proposed to address these concerns. Chapter 14 confirms that there will be no significant effects in relation to traffic.

Waste Management

- 11.71 During the operational phase, the existing proven management systems at the Medite facility will be implemented to control and manage all potential waste streams, to avoid waste generation where possible and to maximise re-use or re-cycling opportunities thereafter. As stated earlier, the waste management arrangements at the facility are currently enforced and reported through the P0027-04 EPA licensing procedure.
- 11.72 General office and food waste produced at the site offices will be minimised insofar as possible. Arrangements will be made for periodic collection of general / recyclable waste by authorised waste contractors and for submission of collected waste for recovery or disposal, as appropriate, at authorised waste facilities.
- 11.73 Waste oils, batteries, domestic waste and scrap metal will be stored on site in designated (bunded) storage areas and will be collected and recycled or disposed of at authorised off-site waste facilities by authorised waste contractors.
- 11.74 The proposed development will comply with all waste management responsibilities prescribed by conditions attached to any future grant of planning permission and/or EPA waste licence.
- 11.75 It is considered that the generation of waste by on-site activities over the operational period of the Medite Manufacturing plant will have imperceptible effects on local waste collection / off-site waste management capacity.

Utilities and Infrastructure

Electricity, Gas, Telecommunications

- 11.76 As per the existing operation, due regard will be given to the presence of overhead power lines and underground cables when undertaking the proposed development works. Health and Safety measures will be put in place for all site based operations in order to safeguard the health and safety of employees, hauliers and visitors, in line with statutory obligations under health and safety legislation. Such measures will also serve to protect overhead lines and underground cables from any damage by site based plant and activities.
- 11.77 The proposed development of the replacement of existing aging thermal aging energy systems serving Medite's two production lines are not likely to give rise to any long term effects on services / utilities and the significance will be imperceptible.
- 11.78 Any electrical power supply required at the waste facility will continue to be stepped down from the existing overhead power lines at the existing site based transformer and supplied to site offices / plant as required. Electricity will provide the principal source of energy for office lighting and heating at the facility as well as the electricity required for MDF production. Therefore the effects will be imperceptible.

Fuel Supply

- 11.79 As set out in Chapter 2, the proposed development will replace the existing aging thermal energy systems serving both of Medite's two production lines. 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 wood biomass. This increase from the existing throughput of c. 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, which would no longer be required, and reflects the increasing variability in moisture content of biomass wood fuel which is imported to the site. The replacement of energy derived from the gas fired thermal fluid heater will result in lower annual carbon emissions.
- 11.80 Of the 186,000 tonnes of proposed fuel intake, c. 71,000 will comprise Medite residues which are sourced on site (including residues that are currently transported off site because of the inability of existing infrastructure to deal with wetter fuel) and c. 115,000 tonnes will comprise wood biomass fuel from forestry residues and sawmill residues, delivered by truck to Medite. This represents a net increase in Fuelstock of 75,000 tonnes in the biomass wood to be delivered by truck to the production facility.
- 11.81 The design of the renewable energy plant has assumed that the current fuel stream of recovered wood will not form part of the fuel basket because of concerns over security of supply. The fuel (due to its relatively low moisture content) has a higher calorific value and if utilised would mean a reduction in overall tonnage of fuel consumed to provide the required energy. For the purpose of design, it has been assumed that this fuel is displaced with a larger volume of wetter fuel in the form of forestry and sawmill residues.
- 11.82 The delivered wood biomass fuel will arrive in two distinct forms, which will be delivered to the site by HGV from within the island of Ireland:
- Forestry residues,; and
 - Sawmill residues, .

- 11.83 Details on the quantities of each are provided in **Chapter 2** of this EIAR.
- 11.84 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.
- 11.85 The sustainability criteria states that biomass fuels produced from forest biomass shall be from a country of origin that has harvesting laws, monitoring, and enforcing systems. All biomass fuels used for electricity, heating and cooling shall achieve at least an 80% GHG emissions savings, when compared with its fossil fuel alternative. The RED III has requirements for information to be collected along the supply chain to allow for independent verification of the GHG emissions and sustainability to be submitted to the Member State.
- 11.86 Furthermore, the Medite plant falls under the compliance requirements of the EU ETS and is required to hold the appropriate GHG permit. For annual compliance, the site must calculate its annual energy and emissions from combustible fuels (including reporting on emissions from biomass) and surrender adequate EU allowances (EUA) to cover these emissions.
- 11.87 9Medite have and will continue to source the biomass residues from forests that have been felled for other commercial purposes. The applicant will only use non-commercial wood biomass for bioenergy where no other use is economically viable or environmentally appropriate. Currently and on completion of the boiler replacement project, all biomass used for feedstock and the increased fuelstock will be felled under and in accordance with licences designed to minimise significant effects on the environment issued by the Department of Agriculture, Food and the Marine (DAFM) or the relevant regulatory authority in Northern Ireland and/or will be in accordance with the standards prescribed by the EPA in the IED licence. There will also be strict adherence to the EU ETS and RED III legislation for sustainability and GHG savings criteria as set out in **Chapter 9** of this EIAR.
- 11.88 A review of the sustainability of biomass supply within that region is included as Chapter 9 in this EIAR. Medite currently uses Coillte as its main supplier of biomass. Coillte is the parent company of Medite operating forests across the Republic of Ireland in accordance with licences issued by DAFM. If biomass supply was not sufficient or feasible from Coillte, Medite will attain biomass from alternative sources that also meet the EU ETS RED III guidance for sustainability criteria of biomass. 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.
- 11.89 The proposed development and associated fuel supply will support the delivery of national policy objectives for the development of renewable energy and the circular economy. It will therefore represent a beneficial effect of moderate significance on the availability of renewable energy infrastructure. This according to the EPA (2022) guideline definition is an 'effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends'.

Water Resources

- 11.90 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.

- 11.91 There will be no increase in current process water usage of 421,374m³ per annum or the potable (mains) water usage of 15,000m³ per annum at the site.
- 11.92 As per the procedures and precautions regarding the existing operation, mitigation measures will be implemented to ensure that any potential impact of site based activities on local surface waters and groundwater underlying the application site (e.g. accidental oil or fuel spills) is minimised in order to safeguard and protect potential surface water and groundwater resources.
- 11.93 In avoiding and minimising direct impact on groundwater, there will also be no indirect impacts on recharge to local watercourses or on groundwater supply wells at local residential properties. A detailed assessment of surface water and groundwater risks and measures to mitigate potential impacts are outlined in Chapter 7 (Hydrology and Hydrogeology) of this EIAR.
- 11.94 Overall, it is not considered that the operation of the proposed development will give rise to significant effects on utilities and infrastructure.

Enterprise and other Assets

- 11.95 The proposed development will not give rise to any additional emissions to those already experienced as part of the existing operation. As outlined in **Chapters 8, 10 and 14** of this EIAR, a number of mitigation measures are proposed to control and minimise impacts at the properties closest to the application site.
- 11.96 Implementation of the planned measures, including proposed solutions to address concerns raised by Redmondstown Cottage residents, will ensure that the residual impacts of the proposed development on nearby properties and commercial enterprises during the construction stage are both slight and temporary. No impact is anticipated as a cause of the operation to the section of Irish Rail north of the site.
- 11.97 As previously noted, precautions / mitigation measures will also be applied to ensure that any potential impact of site based activities on surrounding surface water bodies and groundwater underlying the application site (eg. accidental oil or fuel spills) and its associated abstraction / use will be minimised. These measures are outlined in detail in **Chapter 7** of this EIAR.
- 11.98 No unacceptable cumulative effects with other committed / reasonably foreseeable future developments within the surrounding area have been identified within any of the technical assessments of the EIAR.
- 11.99 The proposed development is considered to contribute towards adapting to climate change by making use of clean energy sources as raised within the Issues Paper for the emerging Clonmel Local Area Plan 2024-2030.

Post – Operational Stage Impacts

Access and Roads

- 11.100 The decommissioning/replacement of the plant will involve similar works and impacts as per the construction phase and thus will generate similar levels of traffic due to the transport of construction workers. No road improvement works are anticipated.

Energy, Fuel Supply and Waste Management

- 11.101 The decommissioning/replacement of the plant will involve similar waste management practices as per the construction phase.

Utilities and Infrastructure

- 11.102 The decommissioning/replacement of the plant will involve similar site management and health safety practices as the construction phase.
- 11.103 Any future works, e.g. replacement of energy infrastructure, will be subject to future planning permission and further environmental assessment as appropriate.

Enterprise and other Assets

- 11.104 The decommissioning/replacement of the plant will involve similar works and impacts as per the construction phase. With respect to disturbance as result of noise, dust and vibration, measures will be put in place to effectively manage any nuisances and disturbances.
- 11.105 On the basis of the foregoing, it is concluded that there would be no likely significant long-term effects on nearby enterprises or assets or infrastructure such as the section of Irish Rail to the north of the site.

Unplanned Events (i.e. Accidents)

- 11.106 According to the EPA guidelines, unplanned events, such as accidents, can include “spill from traffic accidents, floods or landslides affecting the site, fire, collapse or equipment failure on the site”. The 2014 EIA directive refers to “major accidents, and/or natural disasters (such as flooding, sea level rise, or earthquakes)”.
- 11.107 In this instance, the vulnerability of the proposed development to accidents, unplanned events or natural disasters is relatively limited owing to:
- the relatively straight-forward nature of the proposed works,
 - the fact that will be contained within an long established operation and site area.
 - the proven capability and performance of the plant, equipment and technologies to be used in executing the works and
 - the well-established procedures which will be employed to manage and control the works.
- 11.108 Unplanned events in relation to the proposed development could potentially relate to:
- spill from HGVs and other plant or vehicles moving within the site;
 - traffic accidents.
- 11.109 Effects arising from unplanned events will not have any impact on material assets considered herein. Effects of unplanned events on water resources and the local environment are addressed separately in Chapter 7 of this EIAR. Effects of unplanned events on traffic and transport and the local environment are addressed separately in Chapter 14 of this EIAR.

Cumulative / Synergistic Impacts (if any)

- 11.110 The assessment contained within this chapter has included all aspects of the proposed development, including specific infrastructure proposed, source of fuel and traffic implications, along with the existing Medite facility as a whole, hence all elements of the project have been cumulatively assessed.

- 11.111 **Chapter 1** of this EIAR sets out the methodology that was followed for the identification of other existing, permitted and proposed developments that, with the proposed development, may have the potential to cause additional impacts other than those predicted for these proposals alone. **Appendix 1-5** contains the details of proposals within a 10km radius of the site which have been granted planning permission in the last five years.
- 11.112 The closest major projects to the application site with potential to cause in-combination effects with the proposed development include land infill proposals to the east/northeast, proposals for broadband infrastructure upgrades to the south/southeast, a wind farm to the north and solar farms to the northeast and northwest. To the wider east there is a planned new factory at an existing pharmaceutical complex. There is also a proposal in relation to large scale equine facilities to the north of the application site, which are currently under appeal to An Bord Pleanála. There are smaller scale proposals in relation to educational and agricultural projects to the southwest and east, respectively.
- 11.113 **Chapter 14** of the EIAR considered the upcoming developments with most potential to have in-combination traffic impacts with the proposed development and concluded that traffic generated from these proposals are not expected to utilise any of the road links and junctions within the study area for the traffic assessment. As stated earlier, consultation has been undertaken with the Tramore Regional Design Office in relation to proposed N24 Waterford to Cahir works and this office has confirmed to the Applicant that there will be no conflict with the proposed development.
- 11.114 It is not considered that the other developments identified in Chapter 1 will have any additional demand for biomass fuel supply. The renewable energy projects will require to be connected to the national grid and this will be undertaken in consultation with the ESB, as outlined in relevant documentation submitted with the respective planning applications. In combination, the proposed developments are representative of the emerging transition of the wider economy to greater reliance on renewable energy generation as demanded by international, national and local policy.
- 11.115 The distance of the other proposals, the implementation of standard best practice construction measures, as well as the limited service needs of the proposed development will mitigate against any potential for cumulative impacts on material assets that could cause disruption to other users.

Transboundary Impacts (if any)

- 11.116 Given the location and site context of the application site, it is not anticipated that the impacts of the proposed development will have any significant transboundary effects on material assets.

Interaction with Other Impacts (if any)

- 11.117 It is anticipated that the effects of the Proposed Development on material assets has the potential to interact with groundwater, where any potential impact on groundwater could potentially impact surface water bodies and/or private water supply wells down hydraulic gradient of the application site. There is also potential for interactions to occur between material assets and traffic. The potential issues raised in this Chapter of the EIAR are assessed in more detail in Chapter 7 (Hydrology and Hydrogeology) and Chapter 14 (Traffic) of this EIAR. With the proposed mitigation measures there have been no significant effects identified within either of these assessments, and no potential significant effects or interactions have been identified within this assessment.

‘Do-nothing Scenario’ (esp. where deterioration will arise)

11.118 The “do nothing” scenario would see the closure of the Medite Manufacturing Plant as the infrastructure would reach the end of its design and operational life. The plant would cease to be a source of both employment for the area and MDF products to meet the diverse needs of users, specifiers and designers across Europe and beyond. This is considered to represent an adverse, moderate and long-term effect on the economy of the region and the related supply chain.

MITIGATION MEASURES

Construction Stage

11.119 The mitigation of the construction and operational stage impacts of the proposed development is proposed within the respective technical Chapters of this EIAR. It is not considered that any additional mitigation measures, over and above those proposed for environmental emissions, are required in respect of Material Assets.

Operational Stage

11.120 Similar to the construction stage the mitigation of the operational stage impacts of the proposed development are detailed in the relevant technical Chapters of this EIAR.

Post – Operational Stage

11.121 It is not considered that there are any long-term, post-operational impacts associated with the proposed development that require mitigation in respect of Material Assets, other than those identified elsewhere in other relevant Chapters of this EIAR.

RESIDUAL IMPACT ASSESSMENT

Construction Stage

11.122 As no significant effects are anticipated in relation to Material Assets and no specific mitigation measures are required in respect of material assets during the construction stage, no residual effect is anticipated.

Operational Stage

11.123 As no significant effects are anticipated in relation to Material Assets and no specific mitigation measures are required in respect of material assets during the operational stage, no residual effect is anticipated.

Post – Operational Stage

- 11.124 As no significant effects are anticipated in relation to Material Assets and no mitigation measures in respect of material assets are required during the post-operational stage, no residual effect is anticipated.

MONITORING

- 11.125 Monitoring, over and above those proposed for environmental emissions in other Chapters of the EIAR, is not required or proposed specifically in respect of material assets.