

14.0 MATERIAL ASSETS – UTILITIES

14.1 INTRODUCTION

This section outlines the utilities that would potentially be affected by the proposed development during both the construction and operational phases. Material assets are generally considered to be the physical resources in the environment, which may be either of human or natural origin. The object of the assessment of these resources is to identify the impact of the development on individual enterprises or properties and to ensure that natural resources are used in a sustainable manner in order to ensure availability for future generations.

Economic assets of human origin, i.e. utilities are considered in this section. Economic assets of natural origin are addressed in other sections of this EIAR, namely: *Section 11 Land - Soils, Geology, Hydrology and Hydrogeology*; *Section 12 – Archaeological, Architectural and Cultural Heritage*, *Section 15 Material Assets – Natural and Other Resources* and *Section 16 Material Assets - Waste Management*. The purpose of this section is to assess the impacts of the proposed development on the existing utility network, which includes the following infrastructure:

- Electricity;
- Water;
- Foul sewer;
- Storm water (surface water) drainage;
- Gas (LPG);
- Telecommunications;
- Utilities owned by other stakeholders.

14.2 METHODOLOGY

A desktop study was undertaken to assess the potential impact of the proposed development on the utilities of the area.

14.3 DESCRIPTION OF EXISTING ENVIRONMENT

Banagher Town and surrounds is served by public water supply scheme, operated by Irish Water, which comprises a groundwater and a surface water input (Shannon). Groundwater is supplied through two adjacent boreholes with an abstraction of 700m³/day. The GSI have published a source protection report for the site.

Groundwater provides about 60% of the total demand through two boreholes, drilled in 1986. The boreholes are alongside each other, each in its own separate concrete lined chamber with a

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padlocked galvanised cover. The water is chlorinated at the pump-house (Grid Ref: 202841, 214032, Drinking Water Code: 2500PUB1001), located 930 meter north-west of the site boundary, and pumped to a reservoir at Mullaghakaraun.

Water treatment consists of coagulation, rapid gravity filtration, chlorination and fluoridation. The treatment plant produces approximately 1,195 m³/day and serves a total population of 3,321 people in the Banagher supply area.

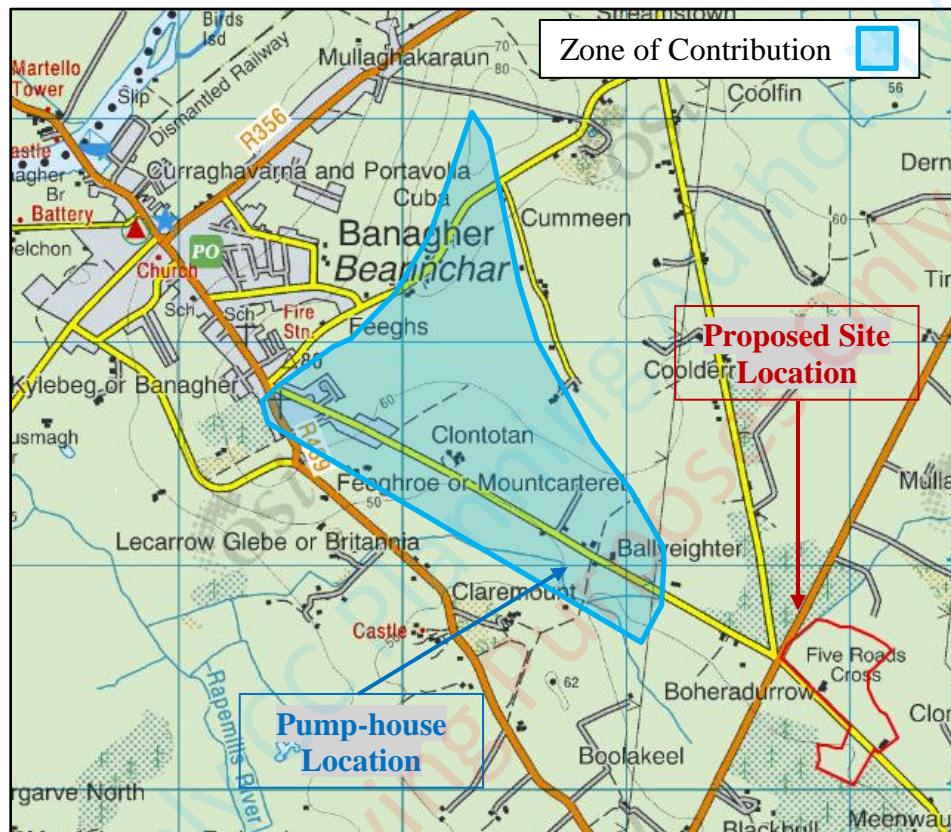


Figure 14.1: Banagher Public Water Supply Scheme

Banagher Waste Water Treatment Plant (WWTP), located 3.9km north-west of the proposed site boundary, is operated by Irish Water and holds a Waste Water Discharge Licence with the EPA (D0141-01). However, the proposed site would not be serviced by this WWTP, as Banagher Chilling Limited intends to treat effluent arising from the development onsite, at a new onsite WWTP, which forms part of the proposed development.

Banagher town has a number of broadband, phone and television channel providers, including Eir, Sky, Pure Telecom and Vodafone.

There are multiple power line systems within the vicinity of Banagher town; a 220 kV line between Shannonbridge and Limerick; a 110 kV line between Shannonbridge, Dallow and Portlaoise; and 110kV line between Shannonbridge and Thurles. A 110kV station is located at

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Dallow to the south, and Thermal Generation takes place at Shannonbridge to the north-west of the site.

Meenwaun Wind Farm is located adjacent the proposed development site, comprising of four 2.75MW wind turbines, with a 10MW maximum export capacity (MEC). The wind farm was energised in December 2017 via the 20kV on-site substation and an underground cable to the ESB's Dallow 110kV substation.

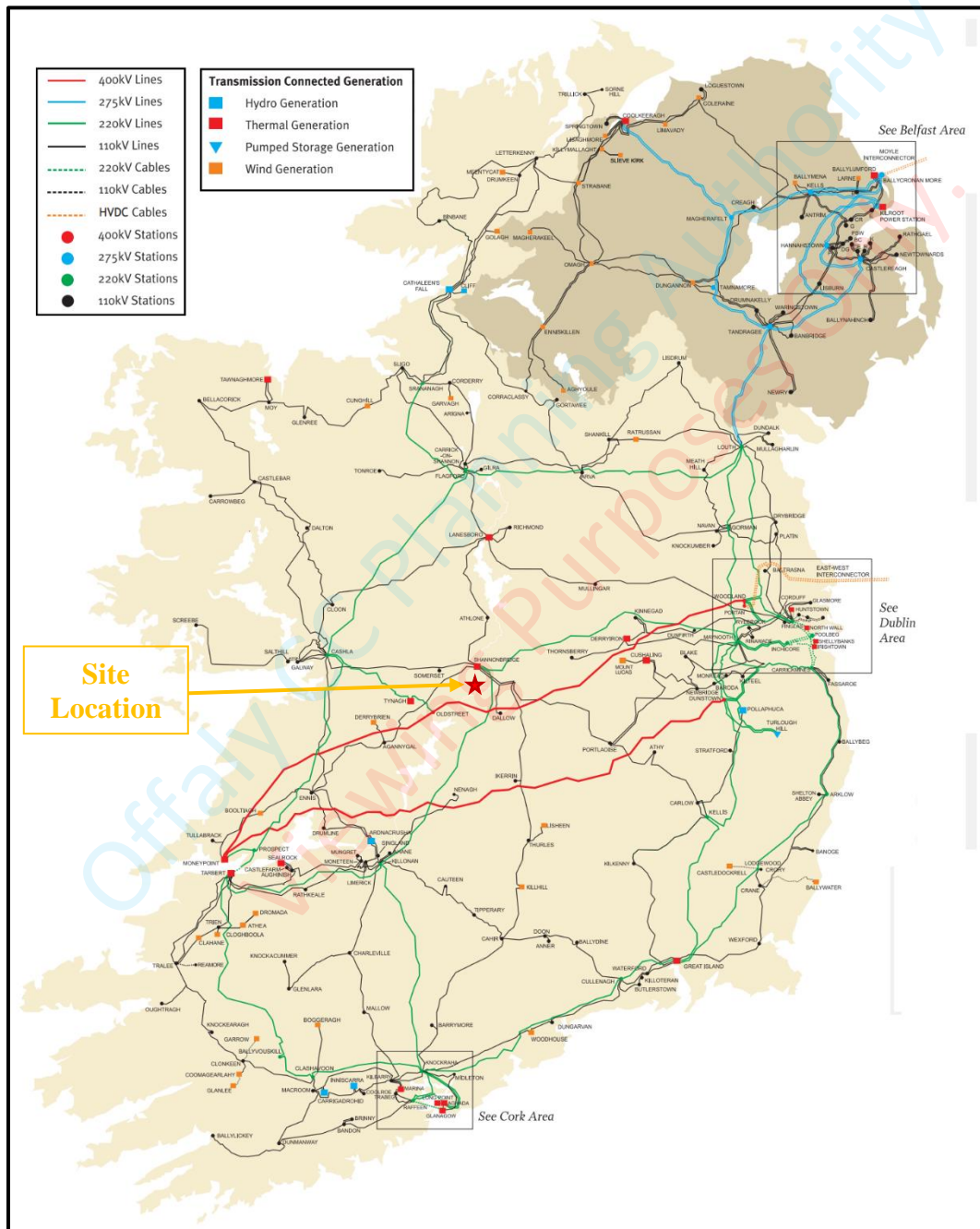


Figure 14.2: Electrical Grid Map Ireland (Source: Eirgrid)

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The Banagher area is not currently serviced by a gas network. The nearest gas lines are at Tullamore town, Nenagh town and Portlaoise town, approximately 31.5km, 38km and 45km respectively from the facility.



Figure 14.3: Gas Network Map Ireland (Source: Gas Networks Ireland)

14.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development would comprise of the proposed upgrade and extension of an existing abattoir facility within the townlands of Meenwaun and Boheradurrow, at Banagher, Co. Offaly. The proposed development would also include the construction of stormwater and effluent drainage systems, water treatment plant, electrical sub-station, truck wash, security hut, waste and by-product area and gas compound, site access roads and all ancillary development including internal road surfacing, the provision of outdoor artificial lighting, an extension to the existing lairage facility and site landscaping.

Slaughtering activities at the proposed facility would typically operate Monday to Friday. However, slaughtering may be undertaken at weekends for reasons such as casualty animals and demand. Upon completion of construction works, it is estimated the proposed development would provide employment for 110 personnel, with working hours varying from 7am to 10pm.

Two steam boilers, to be located within the plant room, are proposed as part of the development, each with a capacity of approximately 900kgs per hour.

Should conditions allow, it is proposed that the site's water requirement would be sourced via water abstraction onsite. It is estimated that water consumption at the site would be 150 – 200 m³/day. Water conservation measures have been included as part of the proposed development design. Rainwater harvesting would be implemented, with all roof water collected for use in staff sanitary facilities and site landscaping. The final WWTP design includes for the capture of treated effluent water in a holding tank (grey water tank) to be used in lairage and lorry wash-out. It is estimated that final treated effluent would be required at a rate of 5m³ per day for the lorry-wash and 5m³ per day for the lairage.

New stormwater and effluent drainage systems would be constructed. Stormwater from clean-yard areas and car parking areas would pass through a silt trap and Class 1 By-Pass Separator before being directed to a modular underground attenuation system. From here, stormwater would be pumped to a manhole prior to discharge to the Feeghroe Stream. Stormwater from the roof areas would be directed to a rainwater harvesting tank onsite, and stored for use in toilets and site landscaping. This tank would contain an overflow valve, which would be directed to the site's stormwater network.

All process drains, domestic drains and dirty yard surface water drains would be directed to the site's new WWTP, which would comprise of an inlet sump, meva screen, drum screen, balancing tank, dissolved air flotation (DAF) unit, sludge tank, anoxic tank, two aeration tanks, clarifier, sand filters and an outlet sump. From here, the treated final effluent would be directed to the proposed integrated constructed wetlands (ICWs), comprising of a five-treatment cell system, prior to discharge to the Feeghroe Stream.

Artificial outdoor lighting would be installed along the internal access network and within the main site yard. The lighting design for the development would be determined at a detailed design stage.

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The expected construction timeframe would be approximately 18 months, with hours of operation from 07:00 – 19:00 Monday to Friday, and 08:00 – 14:00 on Saturdays. A temporary site compound would be established and would house the temporary offices, equipment and materials storage and construction staff welfare facilities. The temporary site compound would also be used for the storage of fuels and oils required for the various construction plant, in addition to housing waste receptacles.

14.5 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

14.5.1 CONSTRUCTION PHASE

Power and water would be required during construction activities and for the servicing of the temporary site compound. The development site would be connected to the local electricity grid network system and mains water supply. Given the scale and transient nature of construction works, the power and water demand on the local electricity and mains water systems would not be considered significant and would not be anticipated to impact upon local power or water supply.

Telecommunications requirements during the construction phase would be provided using mobile phones / broadband. There would be no anticipated impacts to the local telecommunications system.

Foul water from staff welfare facilities generated during the construction phase would be collected on-site in designated waste holding containers / port-a-loo units and emptied on a regular basis by a licenced waste contractor.

The construction contractor would liaise with the relevant utilities provider(s) prior to works commencing, with ongoing consultation throughout the proposed development. Where new services would be required, the construction contractor would apply to the relevant utility provider and adhere to the requirements outlined in the connection permit / licence.

14.5.2 OPERATIONAL PHASE

The development would require power during the operational development for normal day-to-day operations. It is anticipated that 922 MWhrs (based upon usage by a similar sized abattoir), would be required by the site annually. However, this figure is indicative only. The estimated power requirement would not be considered significant in the overall context of the proposed development, and would not be anticipated to significantly impact upon the local power supply.

It is estimated that the annual consumption of LPG at the site would be 80m³, which would not be considered significant in the overall context of the proposed development.

Given the range of telecommunications providers in the area, the proposed development would not have a significant impact upon local telecommunications.

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The proposed development would include for the installation of artificial outdoor lighting along the internal access roadway and carpark, which would be connected to the electricity grid.

The estimated water demand for the proposed development would be between 150 – 200 m³/day. No significant impact would be anticipated upon the Banagher regional water supply. Should conditions allow, it is hoped that the site's water requirement would be sourced via water abstraction onsite. A geophysics survey has been undertaken of the site, which identified two potential locations for trial wells. Upon approval of planning permission, site investigation works and water well drilling would be undertaken to assess the viability of the trial wells. Further details are discussed in Section 11 of this EIAR.

Water conservation measures have been included as part of the proposed development design. Rainwater harvesting would be implemented, with all roof water collected for use in staff sanitary facilities and site landscaping. The development also proposes to utilise 'grey-water' from the on-site WWTP, to be used in lairage and lorry wash-out.

The estimated final treated effluent discharge for the proposed development would be a maximum of 250 m³/day. As mentioned in Section 14.3, Banagher WWTP would not receive any wastewater from the proposed development, as Banagher Chilling Limited intends to treat effluent arising from the development at the proposed onsite WWTP and ICW system. Wastewater would be treated on-site before discharge to the Feeghroe Stream.

14.5.3 CUMULATIVE IMPACT

Considering the nature of the proposed development, it is considered that the main potential cumulative impacts would be an increased demand on local utilities, including mains power, water supply and telecommunications, in addition to increased traffic volumes. However, it is considered that utilities in the area have adequate capacity to accommodate the estimated requirements of the proposed development, during both the construction and operational phases, and therefore there would be no significant cumulative impact upon local utilities.

14.5.4 "DO-NOTHING" IMPACT

Should the proposed development not take place, there would be no changes or impacts upon utilities including the national power grid, local water supply and telecommunications.

14.6 MITIGATION MEASURES

14.6.1 CONSTRUCTION PHASE

The construction works contractor would liaise with the relevant utilities provider(s) prior to works commencing, with on-going consultation throughout the proposed development. Where new services would be required, the construction contractor should apply to the relevant utility provider and adhere to the requirements outlined in the connection permit / licence.

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The construction works contractor would be obliged to put measures in place to ensure that there are no interruptions to existing services, unless this has been agreed in advance with the relevant service provider.

All works in the vicinity of utilities apparatus would be carried out in ongoing consultation with the relevant utility company or local authority and would be in compliance with any requirements or guidelines they may have.

Where new services or diversions to existing services are proposed, the construction works contractor would apply to the relevant utility company for a connection permit where appropriate, and would adhere to their requirements.

14.6.2 OPERATIONAL PHASE

The proposed development would be serviced by existing utilities, with the capacity to accommodate the proposed development. Therefore, no mitigation measures are necessary. In the event that pipelines for water supply were undersized to deliver estimated volumes, they would be replaced with pipelines of greater diameter.

14.7 RESIDUAL IMPACTS

Given the nature of the proposed development and following the implementation of mitigation measures as outlined in Sections 14.6.1 and 14.6.2, it is considered that residual impacts would be imperceptible.

14.8 DIFFICULTIES ENCOUNTERED IN COMPILING INFORMATION

No difficulties were encountered during the assessment of potential impacts of the proposed development on utilities.

14.9 REFERENCES

Energy Co-Operatives Ireland, available at: <http://www.energyco-ops.ie/>. [Accessed November 2018].

Environmental Protection Agency (2017) Draft. *Guidelines on the information to be contained in Environmental Impact Assessment Reports*.

Gas Networks Ireland, available at: <https://www.gasnetworks.ie/home/>. [Accessed November 2018].

Water Framework Directive, Groundwater Monitoring Programme, Banagher BH (August, 2011)