16.0 MATERIAL ASSETS – SITE SERVICES

16.1 Introduction

The Material Assets – Site Services Chapter of this EIAR has been prepared by Emma Daly (BEng MSc CEng MIEI) of DBFL Consulting Engineers. Emma Daly is a Chartered Professional Engineer with over 10 years' experience in the design and construction of civil engineering projects. Projects have included works associated with the commercial, industrial, energy, residential and public infrastructure sectors.

This chapter of the EIAR comprises of an assessment of the likely impact of the proposed development on existing utility services in the vicinity of the site as well as identifying proposed mitigation measures to minimise any impacts.

The material assets considered in this chapter of the EIAR include Power, Gas and Telecommunications. Note that Surface Water Drainage, Foul Drainage and Water Supply are addressed in Chapter 11 (Water & Hydrology).

The development will principally consist of: the demolition of c. 4,847.5 sq. m of existing structures on site including Milltown Park House (880 sq. m), Milltown Park House Rear Extension (2,031 sq. m), the Finlay Wing (622 sq. m), the Archive (1,240 sq. m) and the Link Building between Tabor House and Milltown Park House Rear Extension to the front of the Chapel (74.5 sq. m); the refurbishment and reuse of Tabor House (1,575 sq. m) and the Chapel (768 sq. m) and the provision of a single storey glass entrance lobby to the front and side of the Chapel (52 sq. m); and the provision of 562 No. residential units comprising 6 No. three-bed courtyard houses and 556 No. apartment units (70 No. studios, 176 No. one-bed units, 267 No. two-bed units and 43 No. three-bed units).

The development also includes the provision of: cultural/community space within Tabor House (4 No. storeys including lower ground floor level) and the Chapel (2 No. storeys including lower ground floor level and mezzanine level) (1,698 sq. m) with associated outdoor space (248 sq. m); a café/restaurant (179 sq. m) and a creche (375 sq. m) within Block F with associated outdoor creche play area; ancillary residents' amenities and facilities (324 sq. m) within Blocks B & C; and a single storey bin store and substation adjacent to Block F (101 sq. m).

The proposed development will also include the following associated engineering infrastructure:

- Provision of surface water drainage, foul drainage and water supply infrastructure and connections.
- Construction of a surface water outfall which exits the site along its south-eastern boundary, continues along Milltown Road, through the junction of Milltown Road / Sandford Road prior to discharging to the existing public surface water drainage network in Eglinton Road. The surface water outfall extends approximately 300m from the developable site boundary to the outfall location.
- Provision of a new vehicle access off Milltown Road (principal vehicle access to the proposed development facilitating access to the basement carpark, the forecourt area adjacent to Tabor House and the courtyard houses along the western boundary). This new site access shall be a priority junction and serves pedestrians and cyclists.

- The existing entrance on Sandford Road will be retained and upgraded. It facilitates pedestrian and cycle access as well as limited vehicle access (deliveries, taxis and emergency vehicles) to the area adjacent to Block A1. The on-site cycle facilities tie-in to the existing active travel infrastructure along Sandford Road and Belmont Avenue (no access from Sandford Road to Belmont Avenue except for cyclists), which forms part of the Sandyford Clonskeagh to Charlemont Pedestrian and Cyclist Improvement Scheme. As part of the same active travel scheme, it is proposed to upgrade the pedestrian facilities adjacent to the Sandford Road entrance from a pedestrian-only crossing to a Toucan crossing.
- Provision of additional access point for pedestrians adjacent to the junction of Sandford Road / Milltown Road and pedestrian/cyclist connections through the site.

16.2 Assessment Methodology

Assessment of the likely impact of the proposed development on existing utility services in the vicinity of the site included a desktop review of the following information and has been informed by the EPA "Guidelines on the Information to be Contained in Environmental Impact Assessment Reports", 2022.

- ESB Networks Utility Plans (refer to Appendix 16.1)
- Gas Networks Ireland Service Plans (refer to Appendix 16.1)
- Eir E-Maps (refer to Appendix 16.1)
- GPR Utility Survey carried out along Sandford Road, Milltown Road and Eglinton Road (refer to Appendix 16.2).

16.3 Receiving Environment

16.3.1 Power

An ESB Networks Utility Plan is included in Appendix 16.1 showing the location of existing electrical services in the vicinity of the site.

Existing MV/LV underground cables are located adjacent to the site's northern-eastern boundary (Sandford Road), parallel to the site's south-eastern boundary (Milltown Road) and along Eglinton Road. Existing HV underground cables are also located along Milltown Road and Eglinton Road.

Existing LV overhead lines are located adjacent to the site's south-eastern boundary (Milltown Road).

16.3.2 Gas

Gas Networks Ireland Service Plans are included in Appendix 16.1 showing the location of gas distribution pipes in the vicinity of the site.

Low pressure and medium pressure Gas Networks Ireland distribution pipelines are located adjacent to the site's south-eastern boundary (Milltown Road). Low pressure distribution pipelines are located along Sandford Road (site's northeastern boundary).

The Gas Networks Ireland (GNI) Service Plans shows a low-pressure service pipe entering the site along Milltown Road. This pipe formerly served the Jesuit's lands to the south of the site. A section of this pipe has been abandoned. An alternative gas supply route has been established for the Jesuit's lands). GNI will be contacted before any demolition works are carried out within the vicinity of the low-pressure pipe servicing the existing buildings.

16.3.3 Telecommunications and Broadband

Eir e-Maps are included in Appendix 16.1 showing the location of telecommunications infrastructure in the vicinity of the site.

Telecommunications infrastructure is located along Sandford Road and Milltown Road (immediately adjacent to the site's northern-eastern boundary and south-eastern boundary).

Information obtained from National Broadband Ireland's website (www.nbi.ie/map) indicate that broadband speeds of 30mbps or greater are available in the locality of the site.

16.4 Characteristics of the Proposed Development

This section will describe the overall proposal and those characteristics of the proposal that impact upon this aspect of the environment. This will include the description of construction, commissioning and operation of the scheme.

16.4.1 Power

Power supply for the proposed development will be taken from the existing ESB Network located along the site's northern-eastern boundary (Sandford Road) and south-eastern boundary (Milltown Road).

Existing LV overhead lines (public lighting) located in the immediate vicinity of the proposed site entrance off Milltown Road may need to be undergrounded as part of the proposed development if required by the ESB.

16.4.2 Gas

Gas supply for the proposed development will be taken from the existing Gas Networks Ireland network located along the site's northern-eastern boundary (Sandford Road) and south-eastern boundary (Milltown Road).

16.4.3 Telecommunications and Broadband

Communications connections for the proposed development will be taken from the existing Eir network located along the site's northern-eastern boundary (Sandford Road) and south-eastern boundary (Milltown Road). No Eir lines traverse the site.

16.5 Identification of Potential Impacts

An analysis of the predicted impacts of the proposed development on the services and utilities during and after the construction phase, as per Annex IV of Directive 2014/52/EU, EPA

Guidance notes (2022) and Appendix C of the IGI EIS Preparation Guidelines (IGI 2013), is presented in the following section.

The impact assessment was undertaken using the following considerations:

- **Quality of an Impact**: Described as being Positive, Neutral or Negative.
- **Significance of an Impact**: The significance of each impact was considered as having either an Imperceptible/Not Significant, Slight, Moderate, Significant/Very Significant or Profound impact.
- **Duration of Impacts**: The duration of each impact was considered to be either brief, temporary, short-term, medium-term, long-term or a permanent impact. Brief construction impacts are considered to last a day or so, Temporary impacts last less than one year. Short-term impacts are seen as impacts lasting one to seven years. Medium-term impacts are impacts lasting seven to 15 years. Long-term impacts are impacts lasting 15 to 60 years and Permanent impacts are impacts lasting over 60 years.

16.5.1 Construction Phase

Potential impacts that may arise during the construction phase of the proposed development and the reconstruction of the surface water drainage outfall along Eglinton Road include:

- Damage to existing underground and over-ground infrastructure and possible contamination of the existing systems with construction related materials.
- Diversion of existing ESB lines may lead to loss of connectivity to and / or interruption of supply from the electrical grid for a short period of time.
- Interruption to public lighting due to the potential undergrounding of existing LV overhead lines (if required by ESB).
- Potential loss of connection and/or interruption to the Gas Networks Ireland for a short period of time; and
- Potential loss of connection and/or interruption to the telecommunications infrastructure while carrying out works to provide service connections.

Without the consideration of mitigation measures the construction phase of the proposed development will likely have a negative, significant and temporary impact.

16.5.2 Operational Phase

Potential impacts that may arise during the operational phase of the proposed development and the reconstruction of the surface water drainage outfall along Eglinton Road include:

- The operational phase will result in increased electricity consumption, placing additional demand on the local grid.
- New substations may be required to support the development.
- Inadequate capacity or delays in infrastructure provision could result in power outages or service interruptions.
- Electrocution during installation or maintenance of electric cables.
- The residential development will increase demand for natural gas, particularly for heating and cooking purposes.

- There is a potential safety risk associated with gas leaks or system failures if infrastructure is not properly maintained.
- Increased demand may necessitate the installation of new fibre optic cables, cabinets, or mobile network masts.
- Disruption to existing services may occur during installation or upgrade works.

Without the consideration of mitigation measures, the operational phase of the proposed development will likely have a neutral, moderate and permanent impact.

16.5.3 'Do Nothing' Scenario

There are no predicted impacts should the proposed development not proceed.

16.5.4 Unplanned Events

The following accidents & disasters involving built services during the construction phase could potentially give rise to a serious incident putting people at risk:

- Excavation works encountering live electricity lines.
- Excavation works causing damage and leaks to gas mains.
- Heaps of excavated ground left on site could landslide.

A site-specific Construction and Environmental Management Plan (CEMP) will be developed and implemented during the construction phase to mitigate the risks associated with accidents and disasters. The following accidents & disasters involving built services during the operation phase could potentially give rise to a serious incident putting end users at risk:

- Gas explosions.
- Damaged overhead / underground power lines.

16.6 Ameliorative, Remedial or Reductive Measures

16.6.1 Construction Phase

The following measures are proposed to avoid interruption to power, public lighting, gas and telecommunications infrastructure while carrying out works along Sandford Road and Milltown Road and while constructing the surface water drainage outfall (Milltown Road, the junction of Milltown Road / Sandford Road and Eglinton Road).

Table 1: Mitigation Measures for Potential Impacts at Construction Phase

Character of potential impact	Mitigation measure
Construction Phase	
Damage to existing underground and overground infrastructure and possible contamination	A site-specific Construction and Environmental Management Plan (CEMP) will be developed and implemented during the construction phase. Site inductions will include reference to the procedures and best practice as outlined in the CEMP. Please refer to Verde Construction and Environmental Management Plan submitted herewith.

of the existing systems with construction related materials.	
Damage to existing utilities.	Contractor to prepare Method Statement detailing the proposals for works in the vicinity of existing utilities (method statement to be agreed with Project Supervisor Design Process (PSDP)). Contractor to locate and record all services on site prior to commencement of excavations. A GPR utility survey has been carried out along Sandford Road, Milltown Road and Eglinton Road to confirm the location of power, gas and telecommunications infrastructure. Refer to Appendix 16.2 for GPR survey. This survey is to be supplemented with slit trench investigation as required by the contractor in advance of commencing works along Sandford Road, Milltown Road and Eglington Road. Contractor to obtain utility company network plans and arrange observation as required.
Potential loss of connection to the existing utility infrastructure while carrying out works to provide service connections.	Connections to the existing power, gas and telecommunications networks will be coordinated with the relevant utility provider and carried out by approved contractors. Contractor to comply with HSA Code of Practice for Avoiding Danger from Underground Services.
Unsafe working conditions due to untrained personnel.	All personnel using machinery/plant to have undergone training on the use of said machinery/plant. Ongoing site supervision to be undertaken to ensure all use of machinery/plant is in accordance with the training undertaken.
Unsafe conditions (for site personnel and the public) due to improper site traffic management.	Contractor to prepare and implement a Construction Traffic Management Plan that will be agreed with the Design Team and local authority, and which will ensure the safety of the public during construction (note, an outline TMP is included in the Preliminary construction Management Plan).

16.6.2 Operational Phase

On completion of the construction phase there will be no further impact on electrical, gas or telecommunications supplies. No mitigation measures are proposed in relation to the site services described in this chapter.

16.6.3 Do Nothing

No mitigation measures are proposed in relation to the power, gas and telecommunications networks if the development does not proceed.

16.7 Predicted Impact of the Proposed Development

This section describes the impacts arising once mitigation measures are fully implemented.

16.7.1 Construction Phase

Implementation of the measures specified in 16.6.1 will ensure that the potential impacts of the proposed development on utilities do not occur during the construction phase and that any residual impacts will be moderate, short term and will have a neutral effect on the proposed development.

16.7.2 Operational Phase

All utilities ducting and diversion will be carried out as per the supplier standards and instructions, therefore the residual impacts are expected to be permanent but imperceptible from the operational phase and will have a neutral impact on the development.

16.7.3 'Do Nothing' Scenario

There are no predicted impacts should the proposed development not proceed.

16.8 Monitoring

No specific monitoring is proposed in relation to electrical, gas and telecommunications infrastructure.

16.9 Reinstatement

Reinstatement of any excavations, trenches etc. relating to the provision of electrical, gas and telecommunications connections is to be carried out in accordance with the relevant utility provider's requirements.

16.10 Difficulties Encountered

There were no difficulties encountered in compiling and assessing the data for this section of the EIAR.

16.11 Interactions and Potential Cumulative Impacts of the Proposed Development

16.11.1 Population and Human Health

There is a risk to human health from a potential disruption of utility services during construction and operational phases. The appropriate measures should be put in place when connecting the proposed development to existing utility networks and during the maintenance of utilities serving the proposed development.

16.11.3 Land, Soil and Geology

Trench excavations to facilitate site service installation will result in exposure of subsoils to potential erosion. Mitigation measures are outlined in Chapter 10 Land & Soils, Section 10.6 (i.e. service trenches to be backfilled as soon as practicable to minimise potential erosion of subsoils).

The impact of the interaction is considered to be short-term, imperceptible and neutral.

16.11.4 Water

During the construction phase a site-specific CEMP will manage site water and will mitigate the risk of surface contaminants infiltrating into the underlying geology and hydrogeology during slit trenching works. Surface water drainage from the operational site has been designed in accordance with Greater Dublin Strategic Drainage Study (GDSDS) and SuDS methods will be used to manage drainage.

16.11.5 Air (Noise and Vibration)

Development of the site will result in a level of noise and vibration related effects on the surrounding environment during the construction phase. The interaction between Material Assets and Noise and Vibration is considered to be moderate and temporary in nature. A construction traffic management plan will be implemented in order to minimise the disturbance caused by traffic.

16.11.6 Climate (Air Quality)

There is a potential for excavation activity to impact on air quality in terms of dust generated. Dust generation can also occur during extended dry weather periods as a result of construction traffic. However, the implementation of suitable mitigation measures as outlined in a CEMP for the site will ensure a neutral impact.

16.12 Potential Cumulative Impacts

Other development in the vicinity of the site is likely to have similar impacts during the construction phase in relation to Material Assets – Site Services.

Should the construction phase of the developments coincide with development of the site, potential cumulative impacts are not anticipated once similar ameliorative, remedial and reductive measures are implemented.

References

- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022)
- Gas Network Ireland Map
- ESB Network Maps
- Eir Network Maps
- National Broadband Ireland website
- Dublin City Council Development Plan (2022 -2028)
- GPR Utility Survey conducted by APEX Surveys for the site.
- 190226-X-X-X-XXX-RP-DBFL-CE-0002 Infrastructure Design Report submitted by DBFL.