

15 MATERIAL ASSETS (UTILITIES)

15.1 INTRODUCTION

This chapter of the EIAR provides an assessment of the Gas, ESB and Telecommunications services required to serve the proposed residential development across Sites 3, 4, and 5, located within the Clonburris area.

There will be no impact to the existing ESB, Gas, and Telecommunications networks during the construction and operational phases across Sites 3, 4, and 5. Any diversions or new connections will be planned and coordinated by Utility Providers, ensuring minimal disruption.

Note that Surface Water Drainage, Foul Drainage, and Water Supply issues for the combined sites are addressed in Chapter 10 (Water-Hydrology).

15.2 ASSESSMENT METHODOLOGY

Assessment of the likely impacts of the proposed developments (Site 3,4 and 5) on existing utility services in the vicinity of the site included a desktop review of the following information:

- Gas Networks Ireland Service Plans
- ESB Network Utility Plans
- EIR E-Map
- Virgin Media E-Map

15.3 RECEIVING ENVIRONMENT

15.3.1 Gas

SITE 3

The gas infrastructure within the vicinity of the residential development at Clonburris is indicated within the Gas Networks Ireland map in Figure 15.2.

There is an existing underground gas transmission pipe running North/South inside the eastern boundary of Site 3. After consultation with Gas Network Ireland (GNI), it was confirmed that the underground gas pipe is 900mm diameter rated for pressures up to 70bar and is to be retained as installed.

There are existing wayleaves on either side of the existing gas pipework.

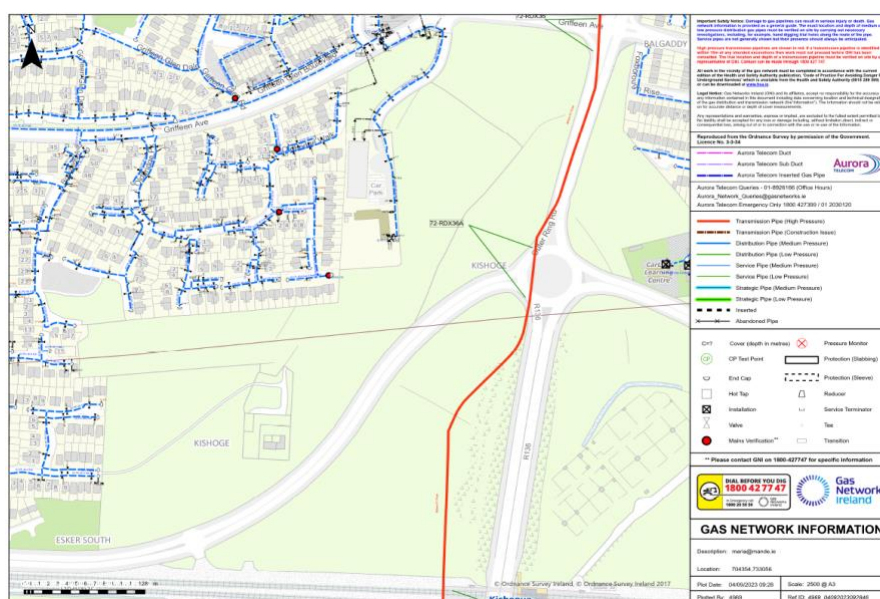


Figure 15.2: Map of Existing Gas Network Within Site 3, Kishoge, Clonburris

After consultation Gas Network Ireland Engineers confirmed that the pipeline classification allows for

suburban residential development density in proximity to the gas main in Site 3. All proposed development works will be carried out in close consultation with Gas Network Ireland and safety publications.

SITE 4

The gas infrastructure within the vicinity of the residential development at Clonburris is indicated within the Gas Networks Ireland map in Figure 15.3.

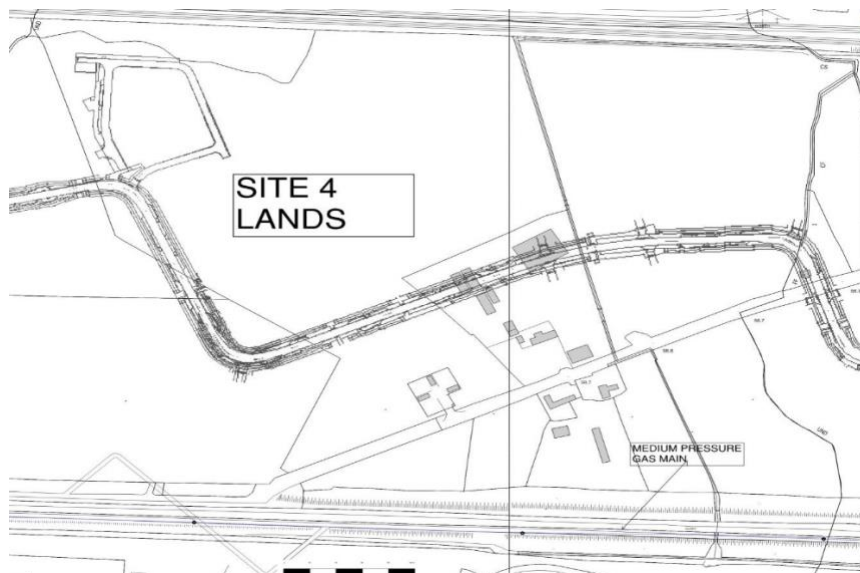


Figure 15.3: Map of Existing Gas Network Within Site 4, Kishoge, Clonburris

There will be required modifications and isolations of existing pipelines on the site to facilitate the construction of the proposed project.

SITE 5

The gas infrastructure within the vicinity of the residential development at Clonburris is indicated within the Gas Networks Ireland map in Figure 15.4.

Refer to figure 15.2 below, there is no gas pipe within the site. There is an existing medium pressure distribution pipeline (90mm PE/4bar) running between the site A and B. It has been determined that existing pipe does not engage with the site.



Figure 15.4: Map of Existing Gas Network Within Site 5, Kishoge, Clonburris

15.3.2 ESB

SITE 3

There are existing overhead ESB 220kV national transmission lines routed through Site 3, Kishoge which is one of the transmission feeder lines for Dublin.

After consultation, ESB have confirmed their intent to divert and retire the existing 220kV overhead transmission lines crossing site 3, thereby allowing the removal of the 220kV transmission lines from Site. The existing overhead 220kV cable network and above ground pylons structures shall be removed by ESB from Site 3.

There is an existing 38kV substation named “Balgaddy Substation” located in the centre of Site 3, just north of the Adamstown Avenue, see Figure 15.5 below.

After consultation and meetings with the ESB and stakeholders, Balgaddy 38kV substation is retained in its current location on the site.

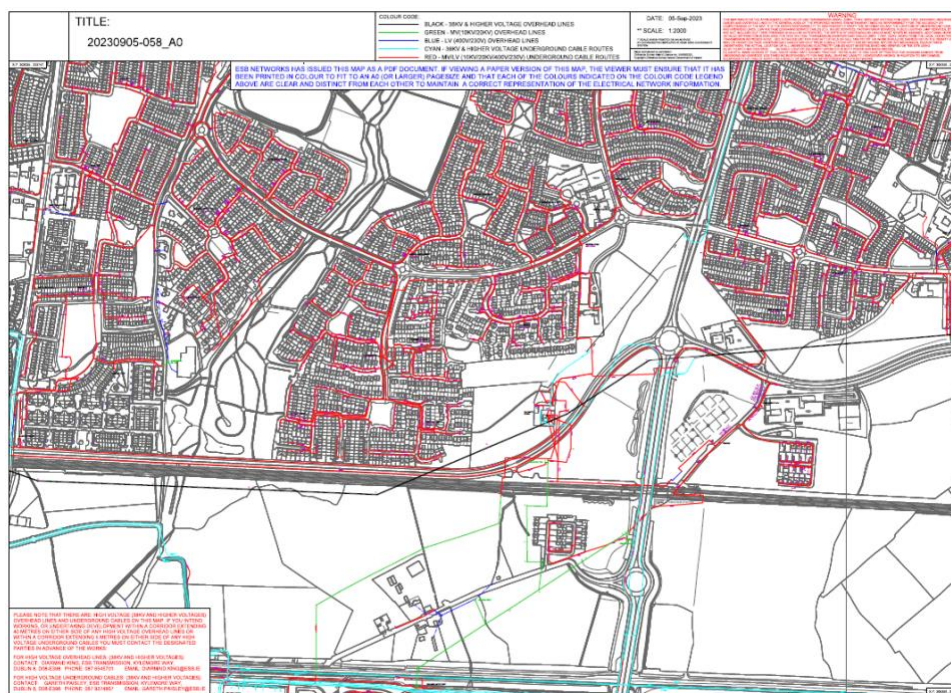


Figure 15.5: Map of Existing ESB Network Within Kishoge Site 3, Clonburris

There are proposed Dart+ Railway works planned at the southwest corner of Site 3 which will require additional ESB underground cabling in the area including a new cable crossing under the existing Iarnród Éireann Dart train lines.

There is existing overground and underground ESB 38kV cabling emanating from Balgaddy substation. After consultation, ESB have pre-agreed to the diversion and rerouting of 38kV ESB cabling around the proposed residential development. Refer to Figure 15.6 below

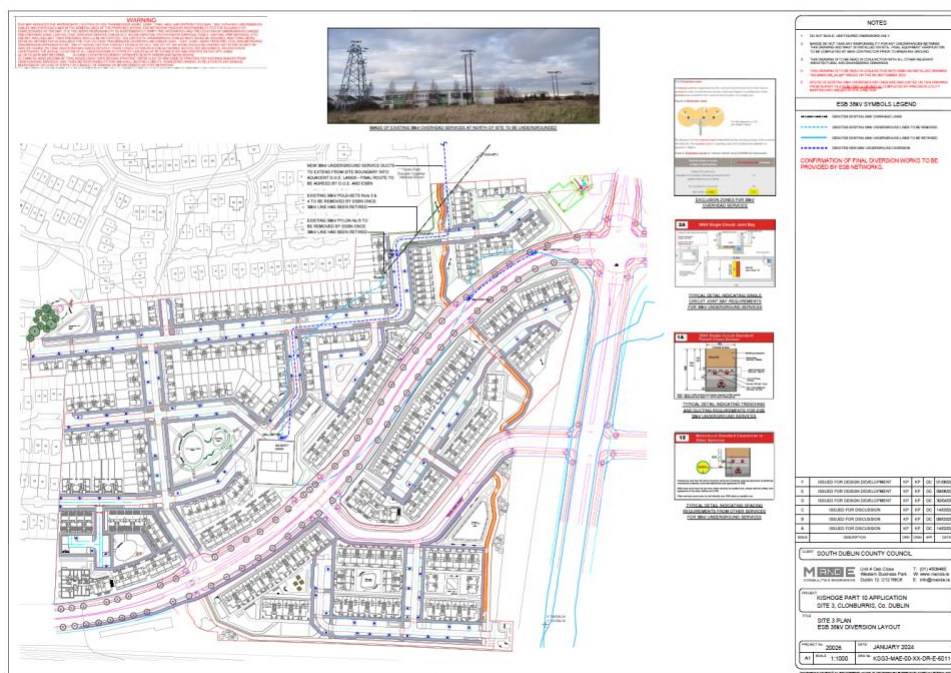


Figure 15.6: Map of Proposed 38kV Diversion Within Kishoge Site 3, Clonburris

After consultation, ESB have pre-agreed to underground and reroute the existing 38KV overhead cable on the northern boundary of Site 3 and the rerouting of the existing 38KV cable from Site 3 onto Adamstown Avenue.

All proposed development works will be carried out in close consultation with ESB Network and safety publications.

There is existing 10kV overground and underground ESB cabling emanating from Balgaddy substation.

After consultation, ESB have pre-agreed to divert and reroute existing network cabling in Site 3 to allow for the proposed residential development. Refer to Figure 15.7 below

All proposed development works will be carried out in close consultation with ESB Network and safety publications.



Figure 15.5: Map of Proposed ESB 10kV Diversions Within Site 3, Kishoge, Clonburris

There is an existing circa 30 metre high ESBT/SIRO mast located adjacent to the Balgaddy 38kV substation in site 3. Refer to Figure 15.8 below.

After consultation, ESB Telecoms have agreed to relocate the existing SIRO mast to a new location, south of Adamstown Avenue in the southwestern corner of Site 3.



Figure 15.8: Map of Existing SIRO Mast Within Site 3, Kishoge, Clonburris

SITE 4

In the Figure 15.9 below, ESB infrastructure map indicates existing ESB services are present on the site.

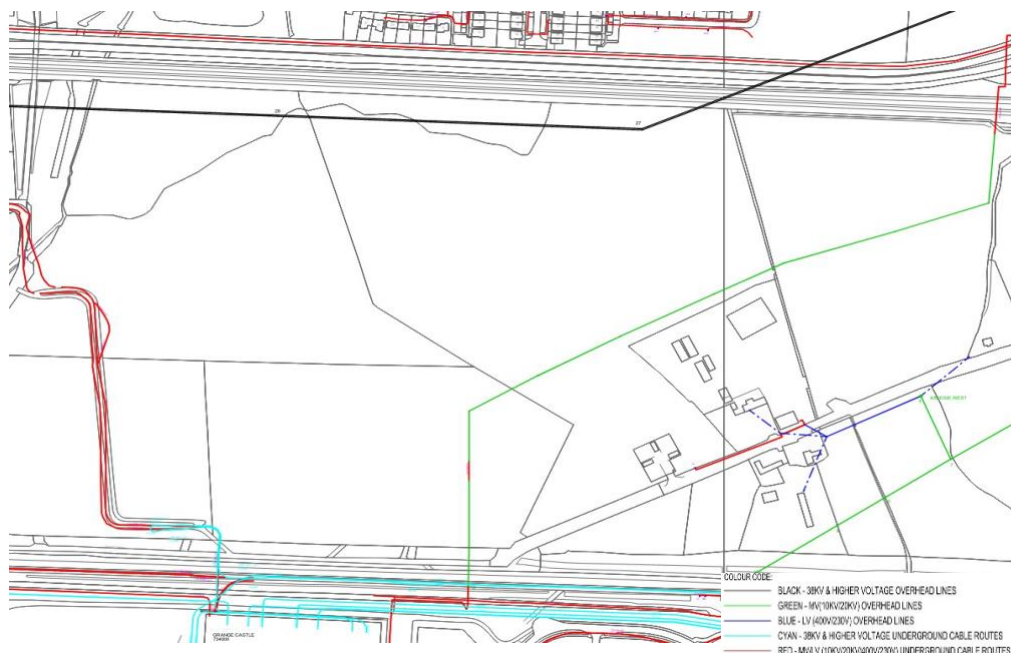


Figure 15.9: Map of Existing ESB Network Within Kishoge Site 4, Clonburris

Initial contact has been made with the ESB and there are currently no issues with the provision of the required power to the proposed development. It is envisaged that Site 4 infrastructure will be accommodated within the Distributor Road Network, from which spurs will be provided for the looping of the Medium Voltage infrastructure within Site 4.

SITE 5

The below ESB infrastructure map indicates existing ESB services are present on the site.

Refer to Figure 15.10 below, there are 2 No. existing substations located at Lynch Lane that will facilitate the power supply to the houses, duplexes, and triplexes within Site A, as confirmed by ESB.

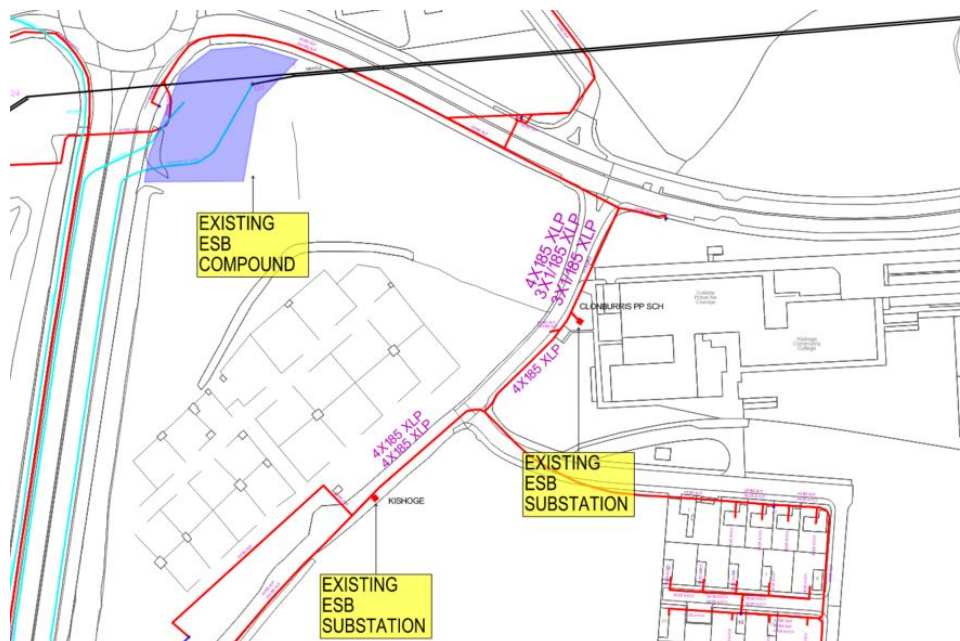


Figure 15.10: Map of Existing ESB Network Within Kishoge Site 5, Clonburris

As shown in Figure 15.10 above, there is also an ESB compound located at north-west side on the Site A.

Site meeting has been held with ESB to discuss the ESB compound related matters. All below points have been discussed and agreed with ESB.

- There will be 2 No. access locations to the ESB compound as shown in Figure 15.11.
- As illustrated in below Figure 15.11, it's agreed with ESB that the compound boundary line will follow the perimeter of the stone area as this consists of earthing of the compound.
- ESB confirmed that they have no issue with landscaping finished outside the boundary.



Figure 15.11: Existing ESB Compound

Refer to Figure 15.12 below, there are overhead lines within the site. A 30m exclusion zone has been incorporated into the design as per the ESB requirements.

Additionally, there is an underground MV/LV duct running within the site. Initial discussions have been held with ESB, they advised that any diversion works will need to be confirmed at the post-planning stage.

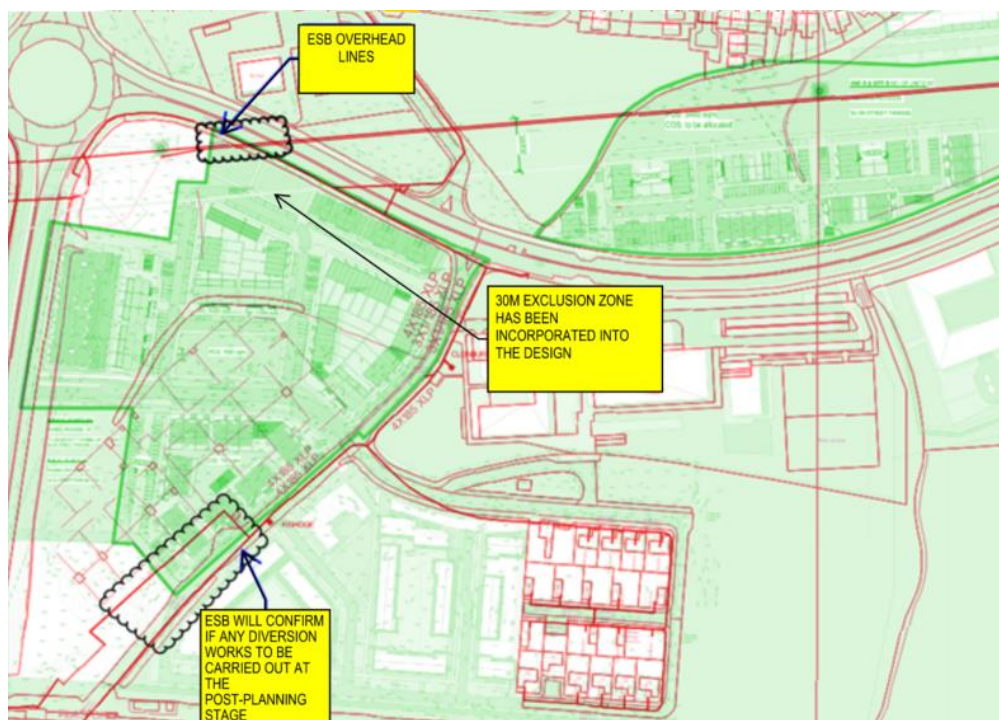


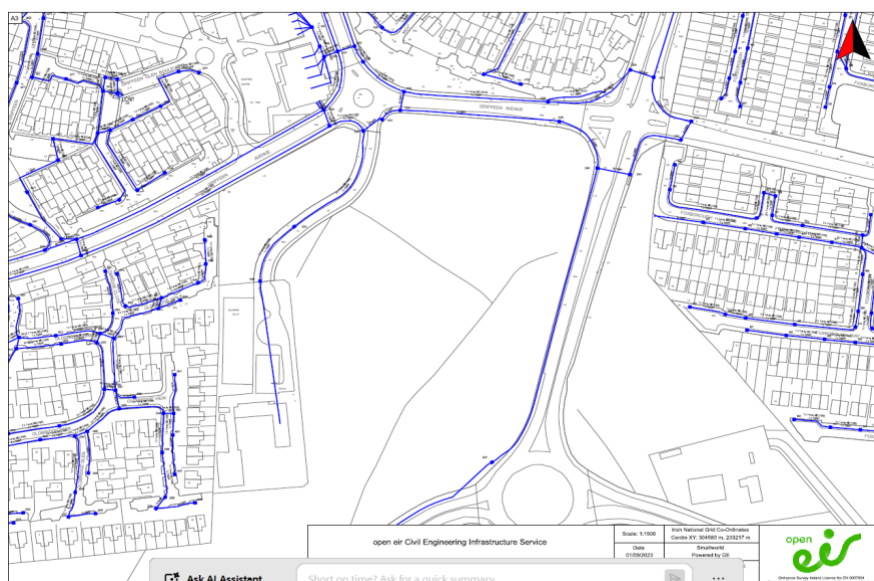
Figure 15.12: Proposed ESB Infrastructure Works

15.3.3 Telecommunications

SITE 3

There is no existing Virgin Media network located on Site 3.

The existing EIR infrastructure within the vicinity of the residential development at Site 3 is indicated on the Eir network map in Figure 15.13. There is an existing network duct routed along Adamstown Avenue.



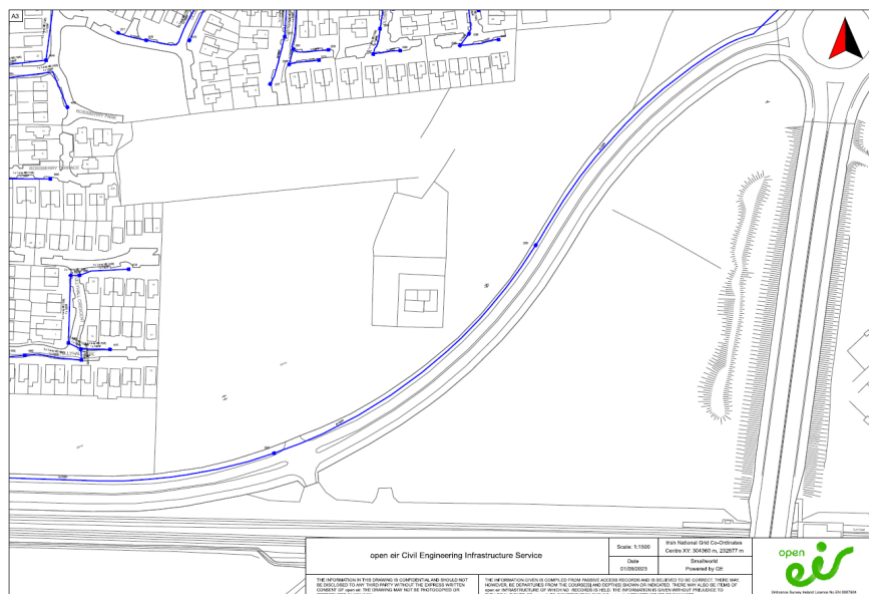


Figure 15.13: Maps of Existing Eir Network Adjacent to Site 3, Kishoge, Clonburris

SITE 4

EIR and Virgin Media infrastructure in the surrounding area is located at the roundabout to provide sufficient service to the proposed new development, subject to final agreement with OpenEir.

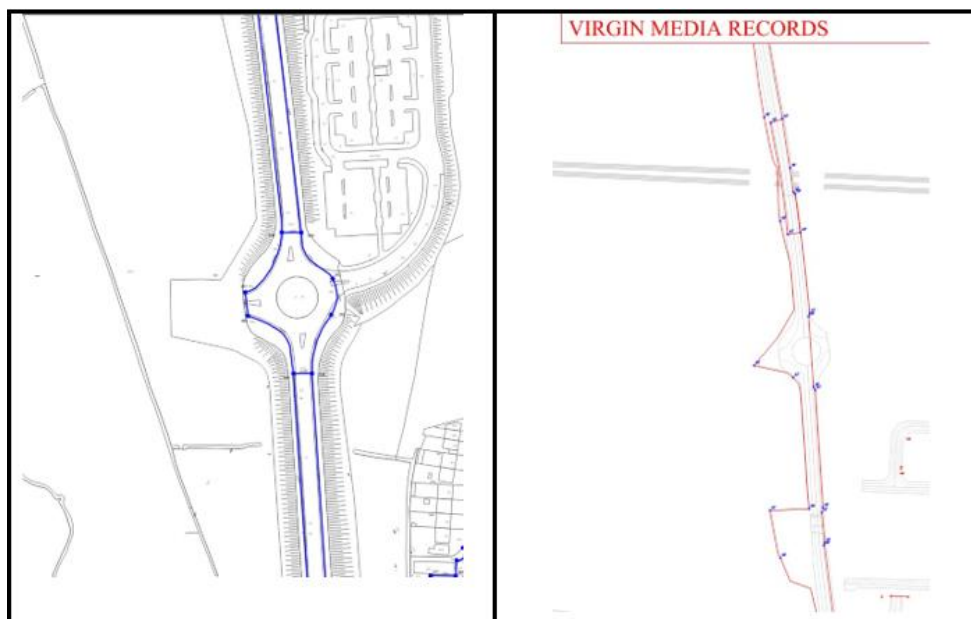


Figure 15.14: Maps of Existing Eir Network Adjacent to Site 4, Kishoge, Clonburris

Also, preliminary investigations indicate that Aurora Telecom have services to the south of the site, which could provide services to the development subject to agreement with the provider.

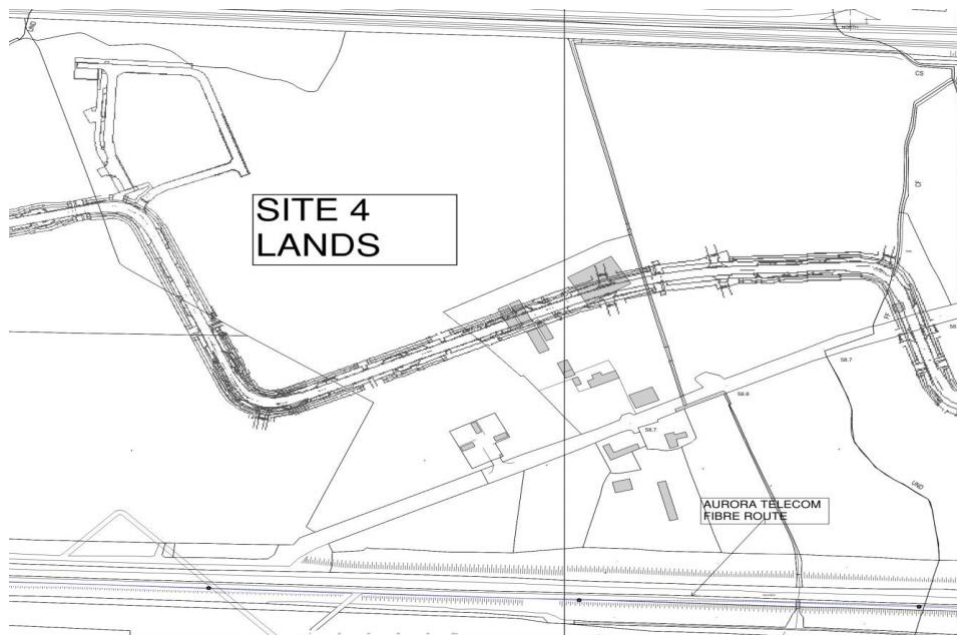


Figure 15.15: Maps of Existing Aurora Telecom Adjacent to Site 5, Kishoge, Clonburris

SITE 5

The existing Virgin Media and EIR Network infrastructure within the vicinity of the residential development at Site 5 is indicated on the utility maps in Figure 15.16 and Figure 15.17

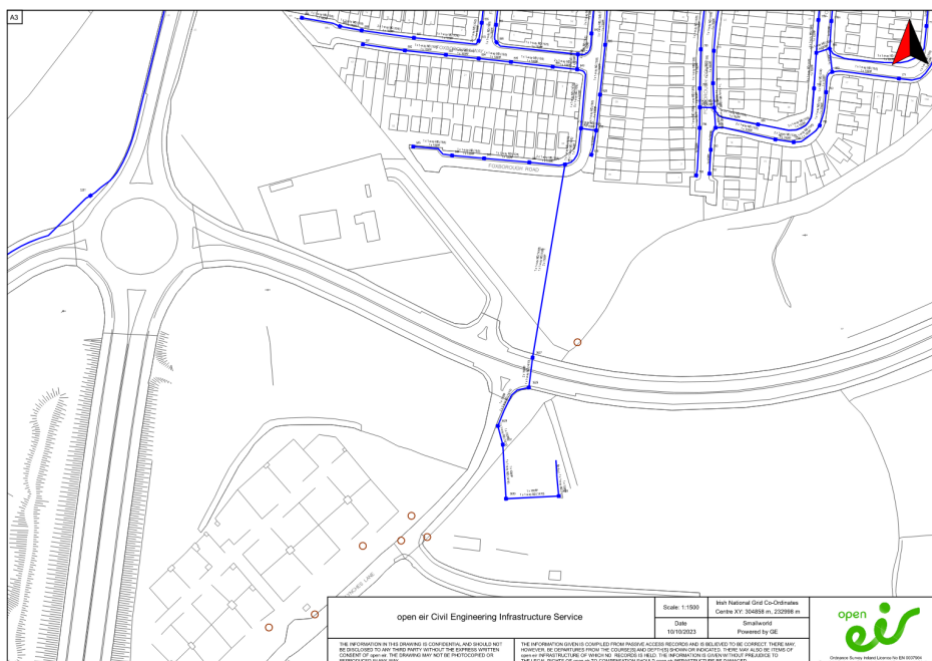


Figure 15.16: Map of Existing Eir Network Adjacent to Site 4, Kishoge, Clonburris



Figure 15.17: Map of Existing Eir Network Adjacent to Site 4, Kishoge, Clonburris

15.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

15.4.1 GAS

15.4.1.1 Connection to the new site:

SITE 3

No gas services are proposed for the site. Space heating and hot water will be generated by electrically powered heat pumps.

SITE 4

No gas services are proposed for the site. Space heating and hot water will be generated by electrically powered heat pumps.

SITE 5

No gas services are proposed for the site. Space heating and hot water will be generated by electrically powered heat pumps.

15.4.2 ESB

15.4.2.1 Connection to the new site:

SITE 3

Provisions for 7 No. ESB substations has been included in the design of site 3 to serve the new residential development.

There are two apartment blocks proposed for site 3. 1No. single MV substation and client LV switch room is provided for in each of the apartment blocks.

The substation will be incorporated within the apartment block and is designed in accordance with ESB standards with 24/7 vehicular access provided.

There are 4 other locations identified for additional external free-standing type ESB substations within the site to supply power across the proposed site 3 development.

ESB mini pillars will be located throughout site 3 to distribute power to the proposed development,

terminating within an ESB meter box at each dwelling or creche.

The proposed substation locations and indicative Mini pillar locations are outlined on Figure 15.18 below.



Figure 15.18: Proposed ESB Networks Substation and indicative mini pillar Locations

SITE 4

Subject to agreement with the ESB and ESB Networks, it is envisaged that the development will require up to 8 MV Substations, located either within Apartment Blocks or in dedicated ESB Substations constructed to the required ESB Networks Standards for MV Substations. From here, new ducts shall be installed below ground and routed to the mini-pillars and meter rooms for the provision of power to the development.



Figure 15.19: Proposed ESB Networks Substation and indicative mini pillar Locations

SITE 5

To serve the new development, it is proposed to install 1No. single MV substation and client LV switch room within the basement/under croft car park for the apartment. This substation will be incorporated within the apartment block and is to be designed in accordance with ESB standards with 24/7 vehicular access provided.

The apartment block shall have an electrical cupboard inside its main entrance to house the ESB meters for each apartment.

This substation shall also provide supply power for the houses/duplexes/triplexes within the Site A.

1No. additional single substation shall be located within the site to supply power for units in site B.

ESB mini pillars will be located throughout the site to distribute power to the houses, terminating within an ESB meter box at each dwelling.

All proposed design has been pre-agreed with ESB Networks. Proposed substation locations have been indicated in Figure 15.20.

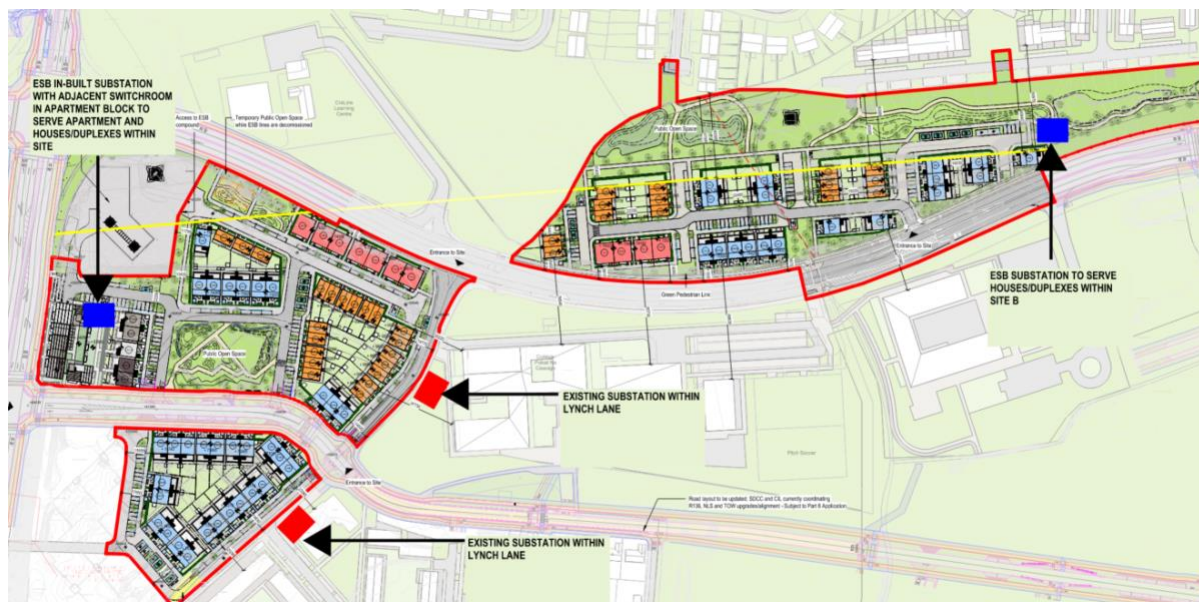


Figure 15.20: Proposed ESB Substation Locations

15.4.3 Telecommunications

15.4.3.1 Connection to the new site:

SITE 3

A new tie-in connection will be established with EIR along the existing main telecommunications in the vicinity of the Site 3 in Adamstown Avenue. The EIR network will then be extended into the residential development.

It is proposed to install a new telecommunication network (EIR and Virgin Media) to the site which each dwelling can avail of for TV and fibre broadband. The telecommunication services ducts shall be terminated within each house and within the comms room in the Apartment block for onward distribution to the individual apartments.

Refer to Figures 15.21 and 15.22 overleaf for details of the proposed EIR and Virgin Media Network for Site 3.



Figure 15.21: Proposed EIR Network Map for Site 3, Kishoge Clonburris**Figure 15.22:** Proposed Virgin Media Network Map for Site 3, Kishoge Clonburris**SITE 4**

A new tie-in connection will be established with EIR along the existing main telecommunications to east of the Site 4 in. The EIR network will then be extended into the residential development.

It is proposed to install a new telecommunication network (EIR and Virgin Media) to the site which each dwelling can avail of for TV and fibre broadband. The telecommunication services ducts shall be terminated within each house and within the comms room in the Apartment block for onward distribution to the individual apartments.

SITE 5

A connection will be established through chambers located along the existing main telecommunications within the vicinity of the Site 5. (Lynch Lane)

It is proposed to install a new telecommunication networks(EIR, Virgin Media) to the site which each dwelling can avail of for TV and fibre broadband. The telecommunication services ducts shall be terminated within each house and within the comms room in the Apartment block for onward distribution to the apartments.

Refer to Figures 15.23 and 15.24 overleaf for details of the proposed EIR and Virgin Media Network for Site 3.

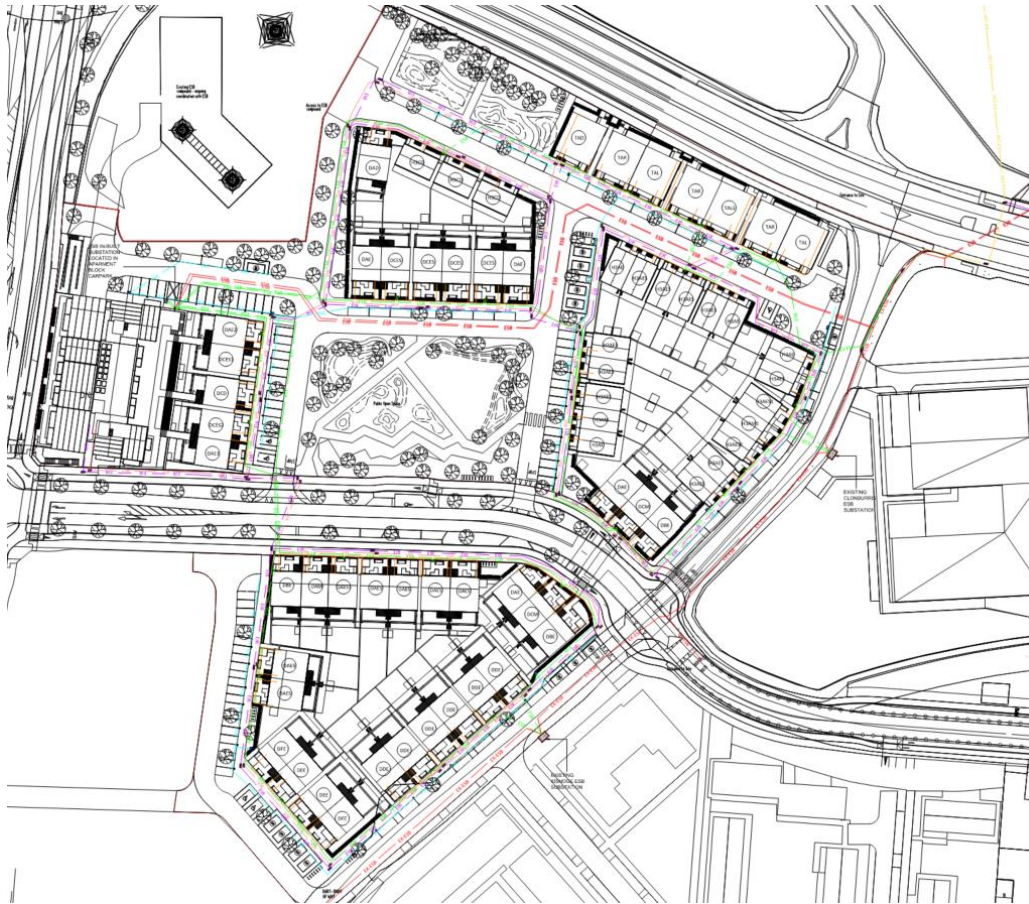


Figure 15.23: Proposed Virgin Media and EIR Network Map for Site 5, A



Figure 15.24: Proposed Virgin Media and EIR Network Map for Site 5, B

15.5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

15.5.1 Construction Stage

SITE 3

There will be no impact or interruption to the existing ESB, Gas and Telecommunication networks during the construction and operational phases. Any diversions or new connections will be planned and accommodated by the respective Utility Providers with minimal disruption.

SITE 4

There will be no impact or interruption to the existing ESB, Gas and Telecommunication networks during the construction and operational phases. Any diversions or new connections will be planned and accommodated by the respective Utility Providers with minimal disruption.

SITE 5

There will be no impact or interruption to the existing ESB, Gas and Telecommunication networks during the construction and operational phases. Any diversions or new connections will be planned and accommodated by the respective Utility Providers with minimal disruption.

15.5.2 Operational Stage**SITE 3**

On completion of the construction phase, there will be no further impact on electrical, gas or telecommunications supplies.

SITE 4

On completion of the construction phase, there will be no further impact on electrical, gas or telecommunications supplies.

SITE 5

On completion of the construction phase, there will be no further impact on electrical, gas or telecommunications supplies.

15.5.3 Do-Nothing Impact**SITE 3**

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

SITE 4

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

SITE 5

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

15.6 MITIGATION MEASURES (AMELIORATIVE, REMEDIAL OR REDUCTIVE MEASURES)**15.6.1 Construction Stage****SITE 3**

Connections to the existing gas and telecommunications networks will be coordinated with the relevant utility provider and carried out by approved contractors.

A GPR utility survey (and slit trench investigation as required) will be carried out in advance of commencing road works to confirm the location of the power and telecommunication infrastructure.

SITE 4

Connections to the existing gas and telecommunications networks will be coordinated with the relevant utility provider and carried out by approved contractors.

A GPR utility survey (and slit trench investigation as required) will be carried out in advance of commencing road works to confirm the location of the power and telecommunication infrastructure.

SITE 5

Connections to the existing gas and telecommunications networks will be coordinated with the relevant utility provider and carried out by approved contractors.

A GPR utility survey (and slit trench investigation as required) will be carried out in advance of commencing road works to confirm the location of the power and telecommunication infrastructure.

15.6.2 Operational Stage

SITE 3

On completion of the construction phase no further mitigation measures are proposed in relation to the electrical, gas and telecommunications infrastructure.

SITE 4

On completion of the construction phase no further mitigation measures are proposed in relation to the electrical, gas and telecommunications infrastructure.

SITE 5

On completion of the construction phase no further mitigation measures are proposed in relation to the electrical, gas and telecommunications infrastructure.

15.6.3 Do-Nothing Impact

SITE 3

No mitigation measures are proposed in relation the site services described in this chapter if the development does not proceed.

SITE 4

No mitigation measures are proposed in relation the site services described in this chapter if the development does not proceed.

SITE 5

No mitigation measures are proposed in relation the site services described in this chapter if the development does not proceed.

15.7 RESIDUAL IMPACT OF THE PROPOSED DEVELOPMENT

15.7.1 Construction Stage

SITE 3

Implementation of measures outlined in Section 15.6.1 will ensure that the potential impacts of the proposed development on site services do not occur during the construction phase and that any residual impacts will be short term.

SITE 4

Implementation of measures outlined in Section 15.6.1 will ensure that the potential impacts of the proposed development on site services do not occur during the construction phase and that any residual impacts will

be short term.

SITE 5

Implementation of measures outlined in Section 15.6.1 will ensure that the potential impacts of the proposed development on site services do not occur during the construction phase and that any residual impacts will be short term.

15.7.2 Operational Stage

SITE 3

Demand from the proposed development during the operational phase is not predicted to impact on the existing power, gas and telecoms network.

SITE 4

Demand from the proposed development during the operational phase is not predicted to impact on the existing power, gas and telecoms network.

SITE 5

Demand from the proposed development during the operational phase is not predicted to impact on the existing power, gas and telecoms network.

15.7.3 Worst Case Impact

SITE 3

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

SITE 4

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

SITE 5

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

15.8 MONITORING

SITE 3

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

SITE 4

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

SITE 5

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

15.9 REINSTATEMENT

SITE 3

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

SITE 4

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

SITE 5

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

15.10 INTERACTIONS AND POTENTIAL IMPACTS

15.10.1 Interactions Soils and Geology

SITE 3

Trench excavations to facilitate site service installation will result in exposure of subsoils to potential erosion and subsequent sediment generation. Mitigation measures are outlined in Chapter 9 Land & Soils (i.e. service trenches to be backfilled as soon as practicable to minimise potential erosion of subsoils).

SITE 4

Trench excavations to facilitate site service installation will result in exposure of subsoils to potential erosion and subsequent sediment generation. Mitigation measures are outlined in Chapter 9 Land & Soils (i.e. service trenches to be backfilled as soon as practicable to minimise potential erosion of subsoils).

SITE 5

Trench excavations to facilitate site service installation will result in exposure of subsoils to potential erosion and subsequent sediment generation. Mitigation measures are outlined in Chapter 9 Land & Soils (i.e. service trenches to be backfilled as soon as practicable to minimise potential erosion of subsoils).

15.10.2 Potential Impacts

SITE 3

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 noted above coincide with development of the site, potential cumulative impacts are not anticipated once similar ameliorative, remedial and reductive measures are implemented.

SITE 4

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 noted above coincide with development of the site, potential cumulative impacts are not anticipated once similar ameliorative, remedial and reductive measures are implemented.

SITE 5

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 noted above coincide with development of the site, potential cumulative impacts are not anticipated once similar ameliorative, remedial and reductive measures are implemented.