

16 MATERIAL ASSETS (UTILITIES)

16.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) describes the material assets (utilities) that could potentially be impacted by the proposed implementation of St. Mochta's LRD and Molloy Lands residential developments within the Kellystown Local Area Plan (LAP) in Clonsilla, Dublin 15.

Material assets are resources that are valued and intrinsic to the site of the Proposed Development and surrounding environs. Material assets may be of either natural or human origin, though is usually taken to refer to built services and infrastructure, and the value may arise for economic or cultural reasons.

This Chapter considers and assesses the effects of the Proposed Development on the material assets, including major utilities within and around the site during the construction and operational phases such as built services (i.e. gas, electricity, telecommunications, etc.). Although Water and Traffic are also considered material assets, these are assessed under separate chapters of this EIAR (Chapter 8: Water and Chapter 14: Material Assets (Transportation), respectively).

A full description of the development can be found in Chapter 3: Description of Proposed Development of this EIAR.

This chapter was completed by Stephen Dent-Neville and Mark Duignan of Waterman Moylan Consulting Engineers. Stephen is a Chartered Engineer with 12 years' experience and Mark is a Chartered Engineer with 20 years' experience. Further information on the professional qualifications and affiliations of the authors of this chapter can be found in the introduction chapter of this EIAR.

16.2 Assessment Methodology

16.2.1 Desktop Study

This chapter has been prepared in accordance with the requirements of the following statutory documents which were consulted in the course of the study: -

- Environmental Protection Agency (EPA), Guidelines on the Information to be contained in Environmental Impact Assessment Reports (May 2022).
- EPA, Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) (September 2003). Note that an updated advice note, on foot of the May 2022 guidelines, is anticipated soon but has not yet been published.
- EPA, Advice notes for preparing Environmental Impact Statements (September 2015).
- Circular Letter PI 1/2017: Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive).

The study was also informed by numerous site visits, topographical surveying of the application site, the sourcing of utility information/records from the relevant service providers, an analysis of the resources consumed, and an estimation of waste generated by the Proposed Development at both the construction and operational phases.

16.2.2 Rating of Impacts

Material assets are generally considered to be location sensitive. The likely significance of all impacts is determined in consideration of the magnitude of the impact and the baseline rating upon which the impact has an effect (i.e., the sensitivity or value of the material asset). Having assessed the magnitude of impact with respect to the sensitivity / value of the asset, the overall significance of the impact is then classified as imperceptible, slight, moderate, significant, or profound. The criteria for

the assessment of impact significance are as per that set out in the relevant EPA Guidelines and in accordance with the EIA Directive.

16.3 Receiving Environment

16.3.1 Proposed Development – Plot 1 (Luttrellstown Gate Phase 2)

Site Location and Context

The subject site is located in the Kellystown LAP, north-west of the Scoil Choilm Community National School, Luttrellstown Community School and north of the new Kellystown Link Road under construction as part of the adjacent residential development (ABP-312318-21), west of Porterstown Road, and north of Luttrellstown Road.

The site is currently greenfield. Topographic survey data indicates that the site generally falls from north to south, with a high point of approximately 63.41m OD Malin at the north of the site and a low point of approximately 60.66m OD Malin at the south of the site.

The subject site seeks to construct a new housing development on lands zoned in the Kellystown LAP for residential development. The site location is indicated on the figure below.



Figure 16.1: Site Location (Source: Google Maps)

The subject site is at the eastern part of the Kellystown Local Area Plan (LAP) and is zoned for residential development. In the Fingal County Development Plan 2023-2029, the subject site is zoned for residential development. An excerpt of the Kellystown LAP showing the subject site is illustrated in the figure below.

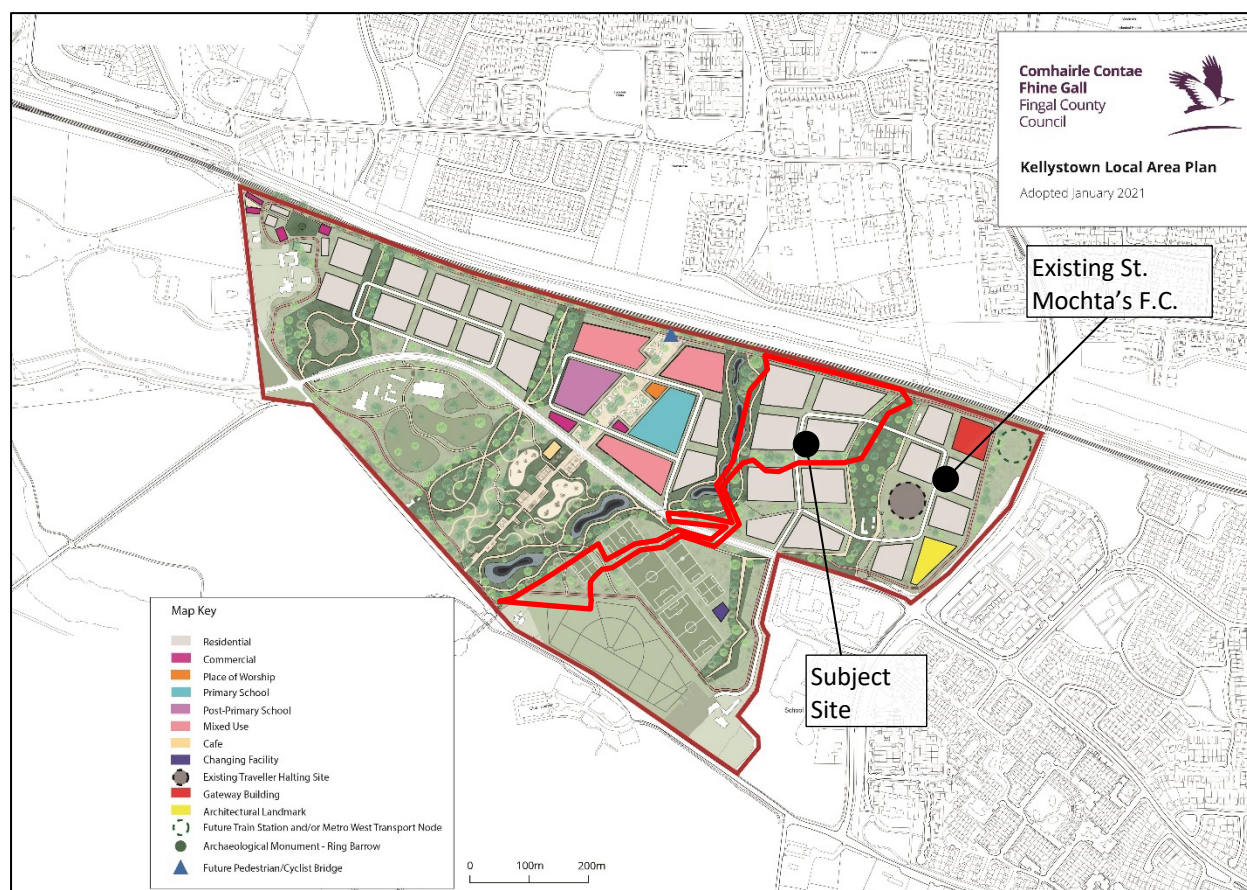


Figure 16.2: Site Location (Source: Google Maps)

The proposed development comprises 99no. residential units in a mix of houses and duplex units consisting of 71no. 2 storey houses (66no. 3-bedroom and 5no. 4-bedroom), 16no. 3 storey houses (16no. 4-bedroom), 4no. 1-bedroom duplex units and 8no. 2-bedroom duplex units and all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including public open space; public lighting; surface car parking spaces; bicycle parking spaces/stores for mid-terrace units; bin stores. The proposed development includes a minor amendment to development permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3, with minor adjustment proposed to the permitted surface water attenuation pond. Vehicular access to the proposed development is provided by the road network permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3. The schedule of accommodation is outlined below:

Description	3-Bed Houses	4-Bed Houses	1-Bed Duplex	2-Bed Duplex	Total No. of Residential Units
Proposed Development	66	21	4	8	99

Table 16. 1: Schedule of accommodation (Luttresllstown Gate Phase 2)

Ownership and Access

The lands subject to the application are within the ownership of the applicant, Castlethorn Developments Luttresllstown Limited. Vehicular access to the proposed development is proposed off the western extension of Kellystown Link Road via the internal road of the under construction Kellystown Development -Phase 1- (Plg. Apl. Reg. Ref. No. SHDW/004/21).

The Kellystown Link Road is currently a single carriageway that extends for approximately 280 metres from the signalised crossroads with Diswellstown Road & Porterstown Link Road. As outlined in the Kellystown Local Area Plan, the Kellystown Link Road will be extended westwards to the junction of the Clonsilla Road (R121) and Lutrellstown Road.

This 280m section of Kellystown Link Road currently provides access to the northern entrance of Scoil Choilm Community National School and links to the road serving the new burial ground site, further west. The main junction located at Kellystown Link Road has been designed to provide access for residents of the entire Kellystown development, which includes the Phase 1 development, the subject site and the future potential development on St. Mochta's F.C. lands, located to the east of the subject site. The junction was designed as part of the traffic and transport assessment carried out by Waterman Moylan Consulting Engineers as part of the Kellystown Development -Phase 1- (Plg. Apl. Reg. Ref. No. SHDW/004/21). Proposed vehicular access points are illustrated in the Figure below: -



Figure 16.3: Proposed development – Vehicular Access

The proposed development has been designed with a well-interconnected footpath network providing permeability through the site, to the adjacent Kellystown Development -Phase 1- and to the surrounding area. There is a cycle path around the subject site connecting the internal residential units with the main shared pedestrian/cyclist path on Porterstown Road. In addition, the development includes sufficient cycling parking spaces, as outlined in local guidelines

The main pedestrian and cycle paths are shown in the figure below.



Figure 16.4: Proposed development – Pedestrian and Cycle Infrastructure

16.3.1.1 Electricity, Gas and Telecommunications

There are electricity, gas, and telecommunications utilities available to the site.

Based on the information received from ESB Networks (ESBN), there are below ground ESB cables that service adjacent properties. There are no supply issues envisaged.

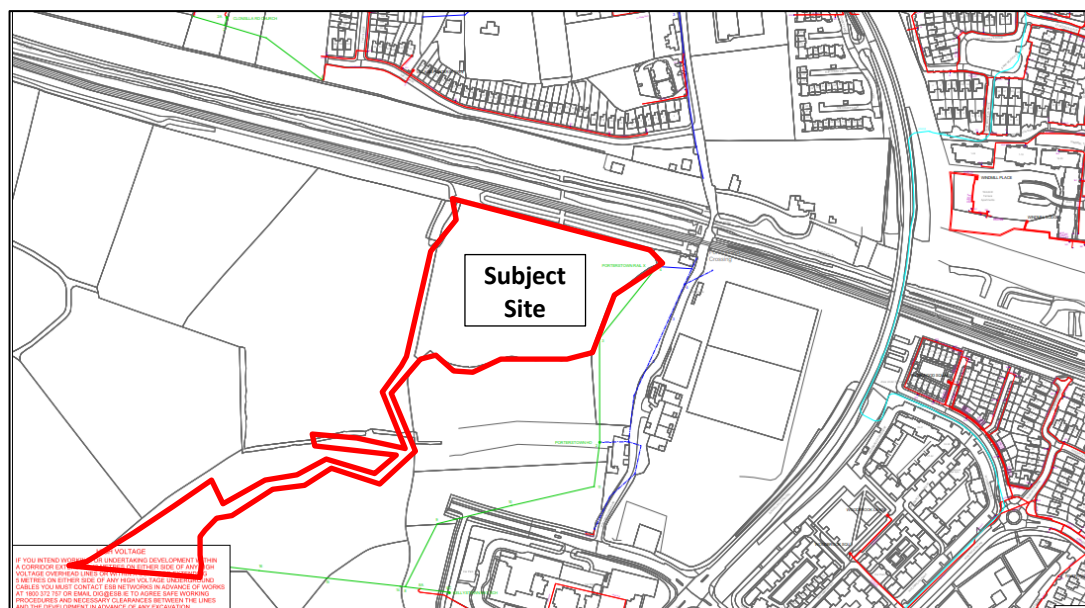


Figure 16.5: Existing ESB Network

There is an existing Gas network in the vicinity of the site, with a gas main at the junction of Diswellstown Road and Porterstown Link Road as shown in the Figure below: -



Figure 16.6: Existing Gas Networks Ireland Network

Eir currently has an existing network to the east of the site along Diswellstown Road and Porterstown Road as shown in the Figure below:

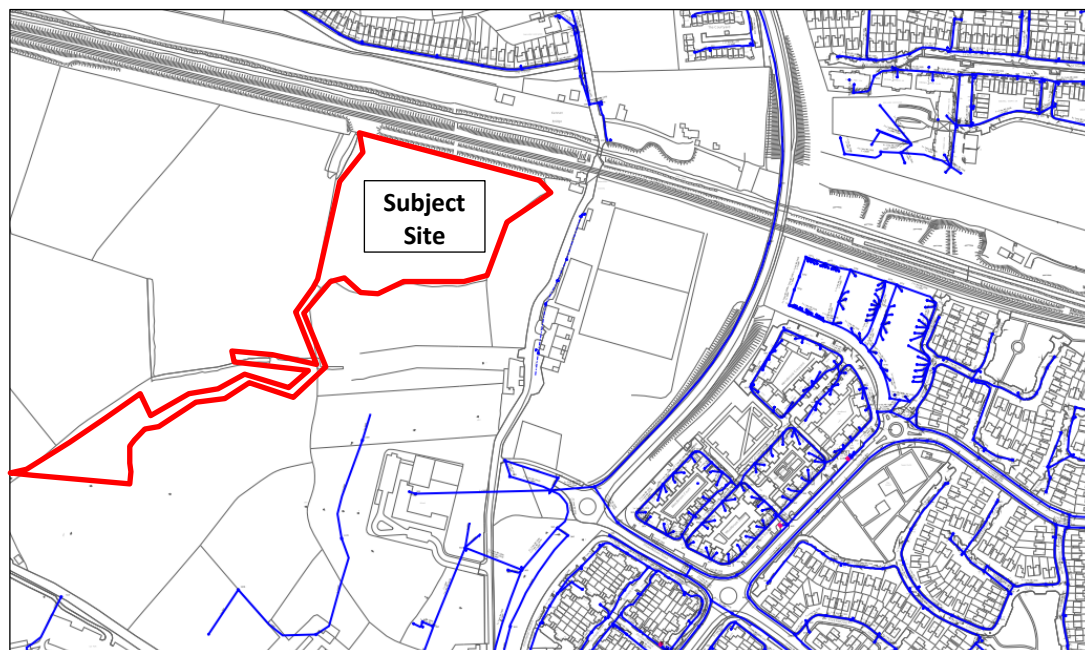


Figure 16.7: Existing Eir Telecommunications Network

16.3.2 Proposed Development - Plot 2 (St. Mochta's LRD).

Site Location and Context

The subject site is located in the Kellystown LAP, north of the Scoil Choilm Community National School, Luttrellstown Community School and the new Kellystown Link Road under construction as part of the adjacent residential development (ABP-312318-21), west of Diswellstown Road, and north of Luttrellstown Road.

The site is currently greenfield. Topographic survey data indicates that the site generally falls from north to south, with a high point of approximately 63.02m OD Malin at the north-west corner of the site and a low point of approximately 60.84m OD Malin at the south-west of the site. The total site area for this subject site is 4.39 Ha.

The subject site seeks to construct a new housing development on the existing St. Mochta's football club lands, which is zoned in the Kellystown LAP for residential development. The site location is indicated on the Figure below.

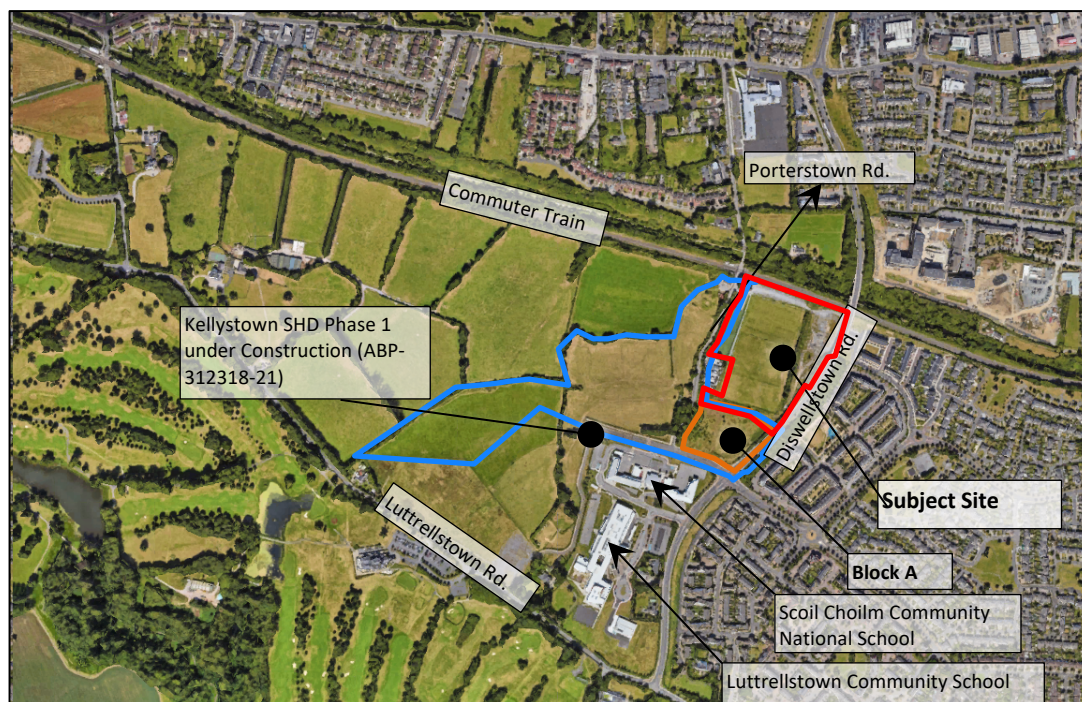


Figure 16.8: Site Location (Source: Google Maps)

The subject site is at the eastern part of the Kellystown Local Area Plan (LAP) and is zoned for residential development, as outlined in the Figure below:

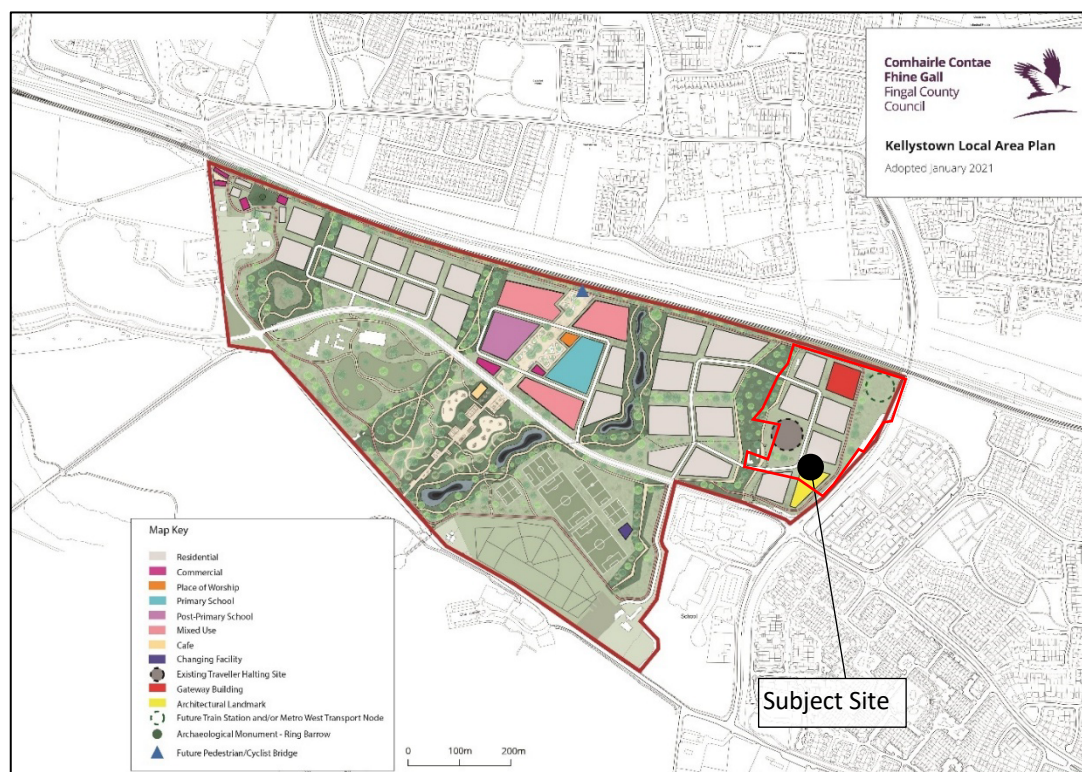


Figure 16.9: Kellystown LAP

The proposed development comprises 302no. residential units in a mix of houses, duplex and apartment units consisting of 62no. 2 storey, 3-bedroom houses and 35no. 3 storey, 4-bedroom houses; 205no. Duplex / Apartment Units (98no. 1-bed, 88no. 2-bed and 19no. 3-bed) across 4no.

blocks comprising: Block D ranging in height from 5-7 storeys accommodating 57no. apartment units; Block E ranging in height from 5-7 storeys accommodating 77no. apartment units; Block F ranging in height from 4-5 storeys accommodating 39no. apartment and duplex units; Duplex Blocks G1, G2, G3 & G4 3 storeys in height accommodating 32no. apartment units; and all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including public open space; public lighting; surface car parking spaces; bicycle parking spaces/stores for mid-terrace units; bin stores. Vehicular access to the proposed development is provided by the road network permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3. The schedule of accommodation is outlined below:

Proposed Development	
Description	Total No. of Residential Units
3-Bed Houses	62
4-Bed Houses	35
2-Bed Duplex	7
3-Bed Duplex	19
1-Bed Apartments	98
2-Bed Apartments	81
Total No.	302

Table 16. 2: Schedule of accommodation (St. Mochta's LRD)

Ownership and Access

The lands subject to the application are within the ownership of the applicant, Castlethorn Developments Luttrellstown Limited. Vehicular access to the proposed development is proposed off the western extension of Kellystown Link Road via the internal road of the under construction Kellystown Development -Phase 1- (Plg. Apl. Reg. Ref. No. SHDW/004/21).

The Kellystown Link Road is currently a single carriageway that extends for approximately 280 metres from the signalised crossroads with Diswellstown Road & Porterstown Link Road. As outlined in the Kellystown Local Area Plan, the Kellystown Link Road will be extended westwards to the junction of the Clonsilla Road (R121) and Luttrellstown Road.

This 280m section of Kellystown Link Road currently provides access to the northern entrance of Scoil Choilm Community National School and links to the road serving the new burial ground site, further west. The main junction located at Kellystown Link Road has been designed to provide access for residents of the entire Kellystown development, which includes the Phase 1 development, the subject site and the future potential development on Molloy Lands, located to the west of the subject site. The junction was designed as part of the traffic and transport assessment carried out by Waterman Moylan Consulting Engineers as part of the Kellystown Development -Phase 1- (Plg. Apl. Reg. Ref. No. SHDW/004/21). Proposed vehicular access points are illustrated in the Figure below: -

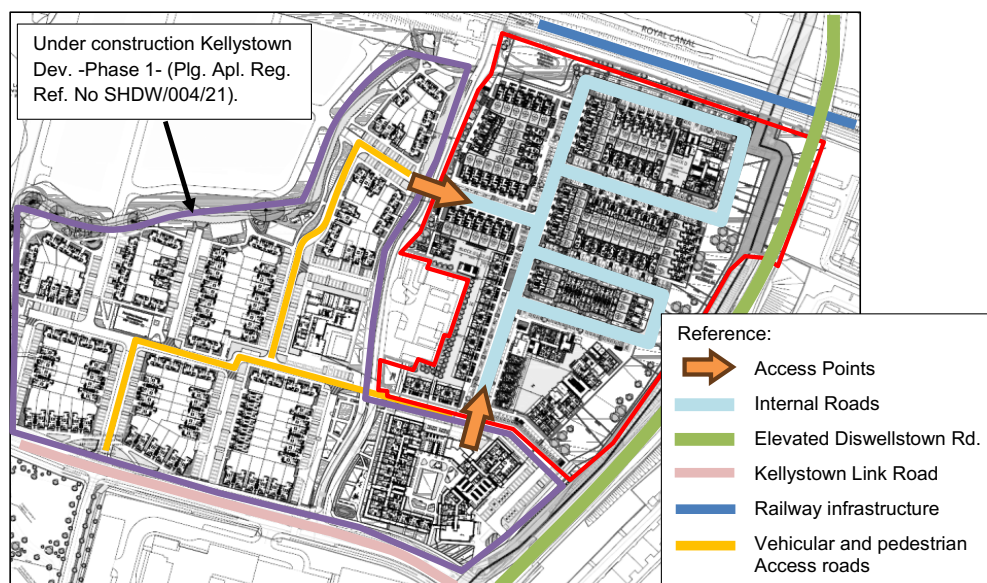


Figure 16.10: Proposed development – Vehicular Access

The proposed development has been designed with a well-interconnected footpath network providing permeability through the site, to the adjacent Kellystown Development -Phase 1- and to the surrounding area. There is a cycle path around the subject site connecting the internal residential units with the main shared pedestrian/cyclist path on Porterstown Road. In addition, the development includes sufficient cycling parking spaces, as outlined in local guidelines.

The main pedestrian and cycle path is shown in the figure below.

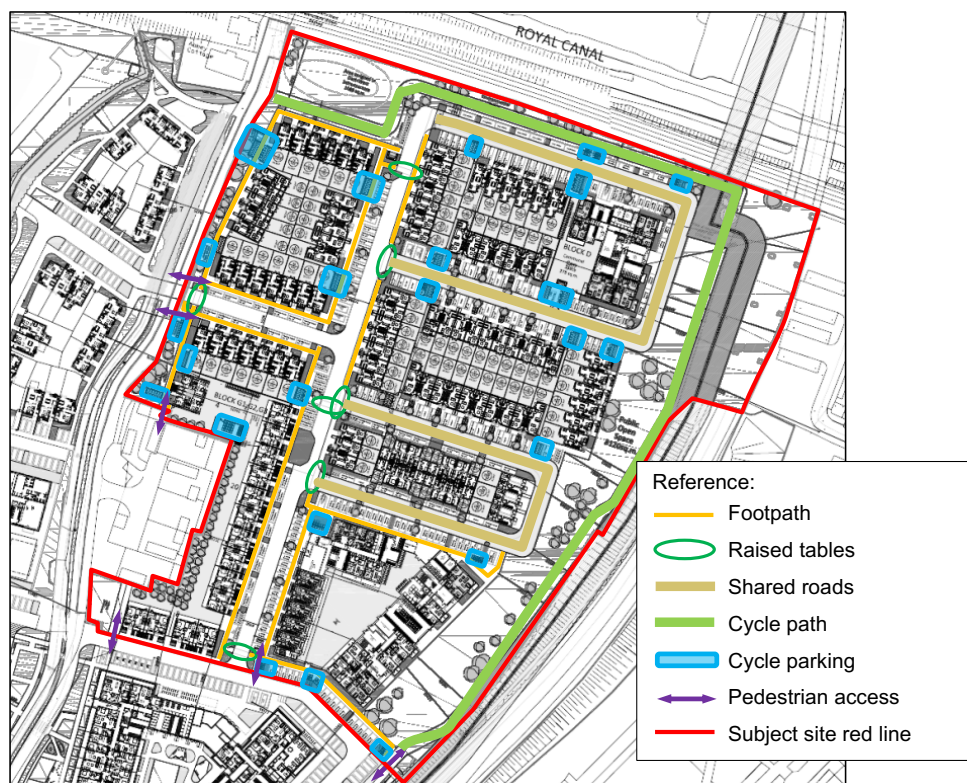


Figure 16.11: Proposed development – Pedestrian and Cycle Infrastructure

16.3.3 Electricity, Gas and Telecommunications

There are electricity, gas, and telecommunications utilities available to the site.

Based on the information received from ESB Networks (ESBN), there are below ground ESB cables that service adjacent properties. There are no supply issues envisaged.

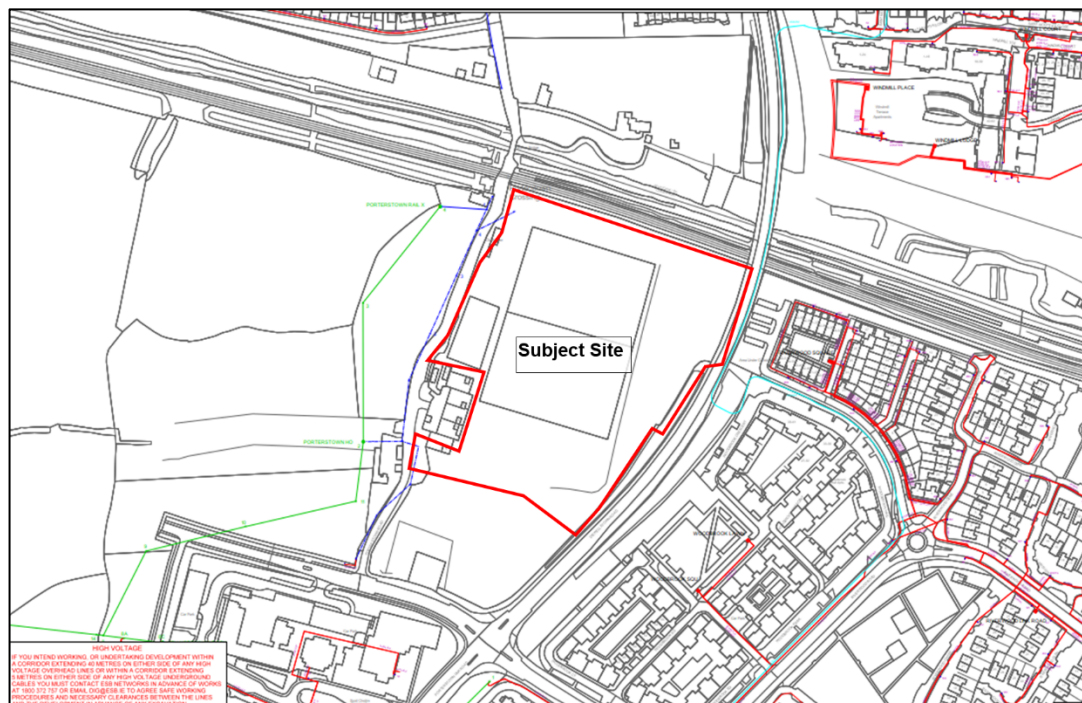


Figure 16.12: Existing ESB Network

There is an existing Gas network in the vicinity of the site, with a gas main at the junction of Diswellstown Road and Porterstown Link Road. Additionally, there is a high pressure transmission pipe running through the western end of the subject site as shown in the Figure below: -

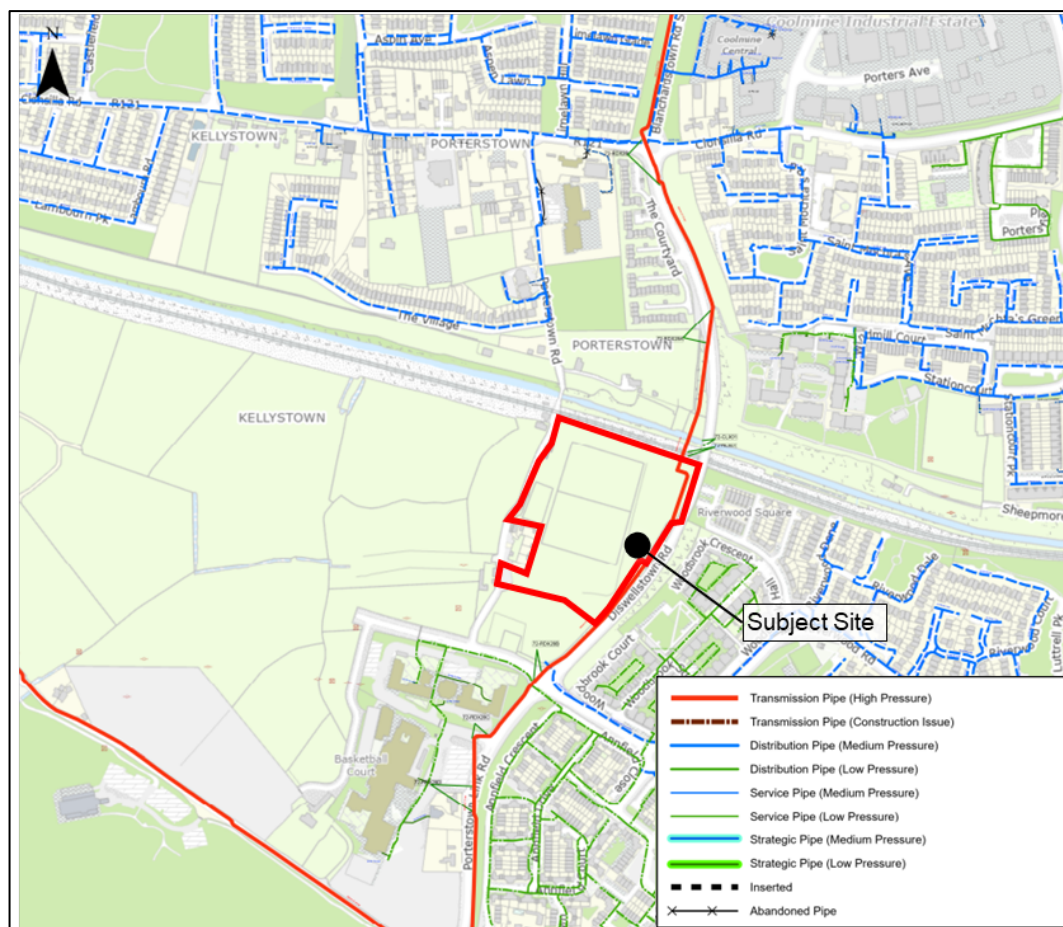


Figure 16.13: Existing Gas Networks Ireland Network

Eir currently has an existing network to the east of the site along Diswellstown Road and to the west of the subject site along Porterstown Road as shown in the Figure below:

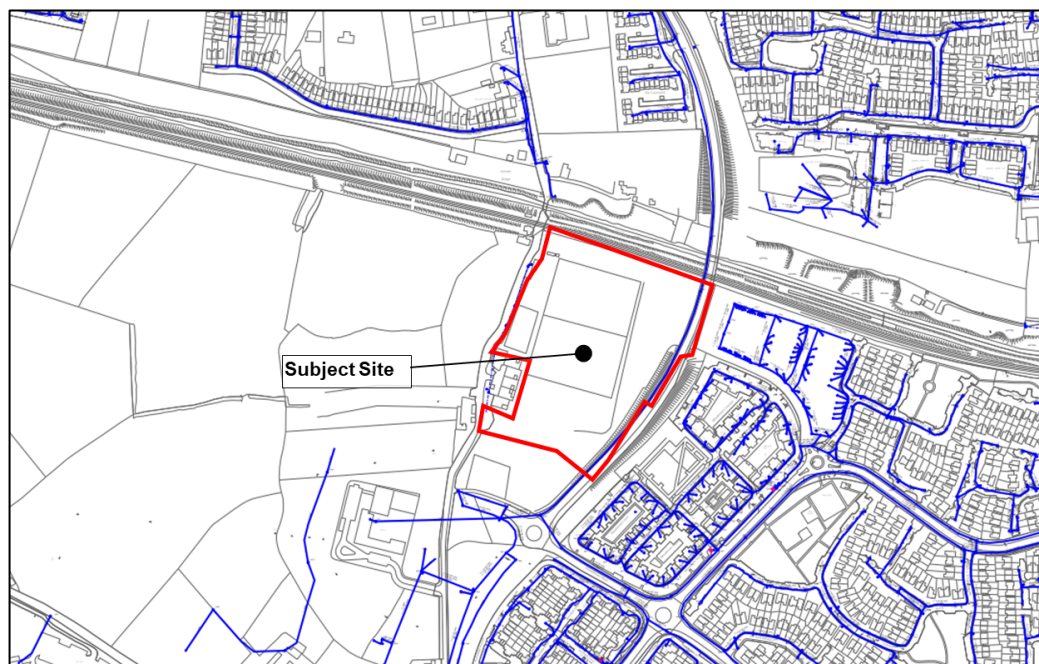


Figure 16.14: Existing Eir Telecommunications Network

16.4 Characteristics of the Proposed Development

16.4.1 Proposed Development– Plot 1 (Luttrellstown Gate Phase 2)

The Proposed development comprises of 99 no. residential units. Blocks H and J comprise of 12no. duplex-type units while the remaining units are 87no. houses as set out in the schedule of accommodation below.

Description	Block H	Block J	Houses
1 Bed Duplex	2	2	
% of total	33.3%	33.3%	
2 Bed Duplex	4	4	
% of total	66.7%	66.7%	
3 Bed Houses			66
% of total			75.9%
4 Bed Houses			21
% of total			24.1%
Total	6	6	87
Total no. of residential units = 99			

Table 16. 3: Schedule of Accommodation

The Proposed Development includes all associated site works, boundary treatments, drainage, and service connections.

16.4.2 Proposed Development- Plot 2 (St. Mochta's LRD).

The Proposed development comprises of 302 no. residential units. Blocks D, E, F, G1, G2 and G3 comprise of 205no. units while the remaining units are 97no. houses as set out in the schedule of accommodation below.

Description	Block D	Block E	Block F	Blocks G1, G2, G3	Houses
1 Bed Apt	22	40	20	16	-
% of total	62.9%	51.9%	51.3%	50%	-
2 Bed Apt	35	37	9	-	-
% of total	37.1%	48.1%	23.1%	-	-
2 Bed Duplex	-	-	5	2	-
% of total			71.4%	28.6%	-

3 Bed Duplex	-	-	5	14	-
% of total			26.3%	73.7%	-
3 Bed House					82
% of total					84.5%
4 Bed House					15
% of total					15.5%
Total	57	77	39	32	97
Total No. of Residential units = 302					

Table 16. 4: Schedule of Accommodation

The Proposed Development includes all associated site works, boundary treatments, drainage, and service connections.

16.4.3 Cumulative Development

The application sites for Luttrellstown Gate Phase 2 (Plot 1) and St Mochta's LRD (Large Scale Residential Development) (Plot 2) form part of a larger landholding in the townlands of Kellystown, Porterstown and Diswellstown, Clonsilla, Dublin 15, which has been subject to a number of recent planning permissions, summarised below.

The consented Kellystown SHD scheme ABP-312318-21 was granted (with 27no. conditions) on 2 March 2023, under section 9(4) of the Planning and Development (Housing) and Residential Tenancies Act 2016 for a Strategic Housing Development. The consented scheme includes 346no. dwellings (123no. houses and 3no. apartment buildings accommodating 223no. apartment units)1, 1no. childcare facility (c. 528 sq m) and 1no. retail unit (c. 236 sq m), in buildings ranging from 2 to 8-storeys, and associated site works and 2.1ha public park amenity. The overall gross site area of the entire consented scheme amounts to c. 9.73 ha, at land zoned 'RS' residential, in Eastern Development Area 1 and land zoned 'OS' open space to the south of permitted Kellystown Link Road. The site is otherwise generally bounded by the existing Kellystown Link Road and schools to the south; the Old Porterstown Road and existing St Mochta's FC grounds to the east; Dr Troy Bridge/L3036 Porterstown Link Road also to the east; the Dublin Maynooth rail line and Grand Canal to the north and undeveloped (Luttrellstown Gate) lands to the west.

Amendments to the consented SHD scheme ABP-312318-21 was granted on 21 August 2024 under Reg. Ref. LRD0034-S3 for development comprising of the reconfiguration of Block A, located in the eastern corner of the site, to accommodate 193no. dwellings in total (an increase of 28no. dwellings) in buildings ranging between 2 and 8 storeys in height, with the following residential unit mix: 82no. 1-bed apartment units, 108no. 2-bed apartment units, and 3no. 2-bed duplex units. Associated reconfiguration of internal floor plans to accommodate an increase from 31no. to 34no. apartment units per floor. Reduced floor area of the internal residential amenity area (from c.405.7 sq m to c.120.9 sqm). Reduced floor area of the retail unit (from c.236 sq m to c.200.6 sq m). And all associated and ancillary site development, infrastructural, hard and soft landscaping and boundary treatment works.

A live planning application, currently at Further Information Stage under FW25A/0033E seeks the relocation of St. Mochta's Football Club grounds, to 'OS' zoned lands to the south of Kellystown Link Road and north of the Cemetery lands and Luttrellstown Road, within the new emergent residential

neighbourhood of Kellystown, Dublin 15. This is in accordance with Key Objective DA 1.1 for the Eastern Development Area of the Kellystown Local Area Plan.

In November 2020, Fingal County Council published proposals for the development of a link road through the Kellystown lands for public consultation, under the Part 8 development process. Note that the consented Kellystown SHD scheme ABP-312318-21 includes the extension of the 'Kellystown Link Road' west from its existing section serving the school campus and cemetery lands. A single new vehicular access point to residential development in the Kellystown Eastern Development Area extends north from the 'Kellystown Link Road', under SHD ABP-312318-21. Upgrade works to the existing segment of the 'Kellystown Link Road' and its junctions with Porterstown Road and Diswellstown Road/Overbridge are also included in the Kellystown SHD permission.

In the wider surrounding area, the following developments are subject of live planning permissions:

- ABP Reg. Ref. 320886-24 (FCC Reg. Ref. LRD0021/S3E) (north of the Dublin-Maynooth Railway Line) issued with a Grant of Permission on 21 January 2025 for the construction of 170 residential units, a café, and a childcare facility, and all associated development works including the demolition of structures, site clearance, and ground levelling.
- ABP Reg. Ref. 315707-23 (FCC Reg. Ref. FW22A/0152) (north of the Dublin-Maynooth Railway Line) issued with a Grant of Permission on 19 December 2023 comprises the construction of a mixed use retail and residential development comprising 1no. food store (2,500sqm GFA), 3 no. retail units (611.8sqm GFA) and 67 no. residential units.2

16.5 Potential Impact of the Proposed Development

The Construction phase will likely have a temporary impact on the existing settlement in the vicinity of the subject lands. There may also be some slight and temporary impacts to the existing population which may arise during the construction phase. Refer to Chapter 4: Population and Human Health, Chapter 9: Climate (Air Quality and Climate Change) and Chapter 11: Air (Noise and Vibration) for further information.

16.5.1 Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

16.5.1.1 Construction Stage

Site Location and Context

The Construction phase will likely have a temporary impact on the existing settlement in the vicinity of the subject lands. There may also be some slight and temporary impacts to the existing population which may arise during the construction phase. Refer to Chapter 4: Population and Human Health, Chapter 9: Climate (Air Quality and Climate Change) and Chapter 11: Air (Noise and Vibration) for further information.

Ownership and Access

During the construction phase, access will be affected by hoarding and security fencing required onto the public road network. A detailed traffic management plan will be prepared and implemented by the Main Contractor and agreed with the Local Authorities prior to commencing works. As a result, there will be a temporary disturbance to traffic in the surrounding area during construction.

The number of construction vehicle movements anticipated is low compared to the number of trips expected to be generated by the Proposed Development during the operational phase. It should be noted that the majority of such vehicle movements would be undertaken outside of the traditional peak hours, and it is not considered that this level of traffic will result in any operational problems.

Construction traffic will arrive from Kellystown Link Road, approaching from the N3 and M50 via Diswellstown Road. Flag men shall operate to ensure safe access and egress of HGV's. It is likely that construction will have a negligible impact on pedestrian and cycle infrastructure. It is proposed that

a Construction Management Plan (CMP) be prepared by the appointed Main Contractor in order to minimise the potential impact of the construction phase of the Proposed Development on the safety and amenity of other users of the public road.

Electricity, Gas and Telecommunications

Electricity will be required during the construction phase. In conjunction with the ESB, the provision of a temporary builders' power supply will be provided. There is potential for temporary impacts to the local electricity supply network, by way of disruption in supply to the local area during electricity connection works for the Proposed Development. However, this is a potential impact which is likely to be neutral, slight, and temporary.

The supply of gas will not be operational during the construction phase of the Proposed Development. There is potential for temporary impacts to the local gas supply network, by way of disruption in gas supply to the local area. However, this is a potential impact which is likely to be neutral.

Telecommunications will not be operational during the construction phase of the Proposed Development. There is potential for temporary impacts to local supply, by way of disruption during connections works. However, this is a potential impact which is likely to be neutral, slight, and temporary.

16.5.1.2 Operational Stage

Electricity, Gas and Telecommunications

There will be an increase in the demand and usage of electricity in the area once the proposed development is operational. The impact is deemed to be neutral, imperceptible, and long-term effect.

No gas connection is being sought for the site. Therefore, the impact is deemed to be neutral, imperceptible, and no long-term effect.

There will be an increase in the demand for broadband bandwidth in the area once the proposed development is operational. Therefore the impact is deemed to be neutral, imperceptible, and long-term effect.

16.5.2 Proposed Development Plot 2 – (St. Mochta's LRD)

16.5.2.1 Construction Stage

Site Location and Context

The Construction phase will likely have a temporary impact on the existing settlement in the vicinity of the subject lands. There may also be some slight and temporary impacts to the existing population which may arise during the construction phase. Refer to Chapter 4: Population and Human Health, Chapter 9: Climate (Air Quality and Climate Change) and Chapter 11: Air (Noise and Vibration) for further information.

Ownership and Access

During the construction phase, access will be affected by hoarding and security fencing required onto the public road network. A detailed traffic management plan will be prepared and implemented by the Main Contractor and agreed with the Local Authorities prior to commencing works. As a result, there will be a temporary disturbance to traffic in the surrounding area during construction.

The number of construction vehicle movements anticipated is low compared to the number of trips expected to be generated by the Proposed Development during the operational phase. It should be

noted that the majority of such vehicle movements would be undertaken outside of the traditional peak hours, and it is not considered that this level of traffic will result in any operational problems.

Construction traffic will arrive from Kellystown Link Road, approaching from the N3 and M50 via Diswellstown Road. Flag men shall operate to ensure safe access and egress of HGV's. It is likely that construction will have a negligible impact on pedestrian and cycle infrastructure. It is proposed that a Construction Management Plan (CMP) be prepared by the appointed Main Contractor in order to minimise the potential impact of the construction phase of the Proposed Development on the safety and amenity of other users of the public road.

Electricity, Gas and Telecommunications

Electricity will be required during the construction phase. In conjunction with the ESB, the provision of a temporary builders' power supply will be provided. There is potential for temporary impacts to the local electricity supply network, by way of disruption in supply to the local area during electricity connection works for the Proposed Development. However, this is a potential impact which is likely to be neutral, slight, and temporary.

The supply of gas will not be operational during the construction phase of the Proposed Development. There is potential for temporary impacts to the local gas supply network, by way of disruption in gas supply to the local area. However, this is a potential impact which is likely to be neutral.

Telecommunications will not be operational during the construction phase of the Proposed Development. There is potential for temporary impacts to local supply, by way of disruption during connections works. However, this is a potential impact which is likely to be neutral, slight, and temporary.

16.5.2.2 Operational Stage

Drainage

Stagnation of the water and siltation within the hydrobrake manhole may occur. Silt would be collected at a sump and removed periodically.

The impact of the proposed development on the proposed foul drainage systems will be to increase the quantity and rate of discharge of wastewater from the site to the proposed foul sewer system.

There may be the possibility of leakage from foul sewers and drains within the development and along the route of the outfall sewers. Any foul water leakage would result in contamination of ground waters in the area.

There may be the possibility of surface water ingress into the foul water drainage system due to poor workmanship which would increase the load on the existing sewers and pumping station.

Watermain

The proposed development will result in an increase in water demand on the water distribution network. This increase in demand can be catered for in the existing network. Boosting may be required for units above the ground floor.

Electricity, Gas and Telecommunications

There will be an increase in the demand and usage of electricity in the area once the proposed development is operational. The impact is deemed to be neutral, imperceptible, and long-term effect.

No gas connection is being sought for the site. Therefore, the impact is deemed to be neutral, imperceptible, and no long-term effect.

There will be an increase in the demand for broadband bandwidth in the area once the proposed development is operational. Therefore the impact is deemed to be neutral, imperceptible, and long-term effect.

16.5.2.3 Do-Nothing Impact

In the Do-Nothing scenario, there is no impact to the existing electricity, gas, and telecommunications networks.

16.5.3 Cumulative Development

The potential impacts described in Sections 16.5.1.1 to 16.5.2.3 above also apply to the Cumulative Development.

16.6 Mitigation Measures (Ameliorative, Remedial or Reductive Measures)

16.6.1 Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

16.6.1.1 Construction Stage

All possible precautions shall be taken to avoid unplanned disruptions to any services or utilities during the construction phase of the Proposed Development. It should be noted that a number of mitigation measures proposed in other EIAR chapters are also of relevance to Material Assets and should be referred to when reading this EIAR.

The construction phase mitigation measures include avoidance, reduction and remedy measures as set out within the Development Management Guidelines document. The design and construction of the necessary service infrastructure will be in accordance with relevant codes of practice and guidelines. This is likely to mitigate any potential impacts during the operational phase of the Proposed Development. However, routine maintenance of the site services will be required from time to time. As such, any mitigation measures will be advised by the relevant service provider.

A detailed Construction, Demolition and Waste Management Plan will be developed by the Main Contractor post planning stage.

16.6.1.2 Operational Stage

Operational waste will be managed by a designated management company on site and the appointed licenced waste contractor which will ensure the sustainable management of domestic and commercial waste arising from the development in accordance with legislative requirements and best practice standards.

16.6.2 Proposed Development- Plot 2 (St. Mochta's LRD)

The mitigation measures are as per Section 16.6.1 above.

16.6.3 Cumulative

The mitigation measures are as per Sections 16.6.1 & 16.6.2 above.

16.7 Residual Impact of the Proposed Development

16.7.1 Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

16.7.1.1 Construction Stage

There are no environmental impacts envisaged as part of the proposed works provided all mitigation measures are fully implemented. This should include any mitigation measures proposed in respect of flora and fauna which is dealt with separately in this report. Caution will be exercised with construction surface water runoff towards the existing stream. Appropriate slit trenching and silt fences would be in place to filter runoff. There will be minor traffic disruption when excavation works are being carried out. Damage could be caused to existing services during excavation.

There will be a minor water demand for site offices. There will be minor traffic disruption when excavation works are being carried out. Damage could be caused to existing services during excavation.

The implementation of the mitigation measures set out in this chapter and other chapters of this EIAR ensure that significant residual impacts are unlikely during the construction phase. Therefore, impacts are likely to be temporary and neutral.

16.7.1.2 Operational Stage

There is no gas supplied to the site and therefore no impact in demand on the gas distribution network.

The proposed development will result in an increase in demand on the ESB network.

The proposed development will result in an increase in demand on the telecommunications network.

16.7.1.3 Worst Case Impact

The worst-case impact, were the proposed mitigation measures not implemented, would be potential disruption to local natural and human material assets.

16.7.2 Proposed Development- Plot 2 (St. Mochta's LRD)

The residual impacts are as per Section 16.7.1 above.

16.7.3 Cumulative

16.7.3.1 Construction phase

There are no environmental impacts envisaged as part of the proposed works provided all mitigation measures are fully implemented. This should include any mitigation measures proposed in respect of flora and fauna which is dealt with separately in this report.

There will be minor traffic disruption when excavation works are being carried out. Damage could be caused to existing services during excavation.

16.7.3.2 Operational Phase

During the operational stage, there would be a significant load on the local Water, ESB and Foul network. However, it is anticipated that ongoing upgrades to local existing infrastructure, as well as the implementation of new infrastructure should alleviate any adverse impacts on the existing networks.

16.8 Monitoring

16.8.1 Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

Prior to the operational phase of the Proposed Development, all services / utility connections will be tested by a suitably qualified professional under the supervision of the service provider.

Any monitoring of the built services required during the operational phase of the Proposed Development will be as advised by the relevant service provider.

16.8.2 Proposed Development - Plot 2 (St. Mochta's LRD)

Monitoring measures are as per Section 16.8.1 above.

16.8.3 Cumulative

The cumulative monitoring measures are as per Sections 16.8.1 and 16.8.2 above.

16.9 Reinstatement

16.9.1 Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

Any existing roads, footpaths and park spaces that are opened to facilitate electricity, gas and telecommunications connections will be reinstated. No further reinstatement will be required regarding services / utility. Residual impacts on services and utilities are considered to be **imperceptible**.

16.9.2 Proposed Development - Plot 2 (St. Mochta's LRD)

Reinstatement measures are as per Section 16.9.1 above.

16.9.3 Cumulative

The cumulative reinstatement measures are as per Sections 16.9.1 and 16.9.2 above.

16.10 Difficulties Encountered

There were no difficulties encountered when undertaking this assessment.