

19 MATERIAL ASSETS – UTILITIES AND TELECOMMUNICATIONS

19.1 Introduction

This section describes the likely significant effects of the proposed development on material assets. Material assets are defined as:

“Resources that are valued and that are intrinsic to specific places”

The current draft EPA Guidelines¹ state that material assets: “Can now be taken to mean built services and infrastructure.”, the purpose of this assessment is therefore to consider the likely significant effects of the proposed development on existing services and infrastructure, including:

- Land Use and Properties;
- Existing Infrastructure;
- Electricity;
- Telecommunications;
- Gas;
- Water Supply Infrastructure; and
- Foul and Surface Water Drainage.

Material assets of natural origin are addressed separately in other chapters of this EIAR, such as Chapter 7, Air Quality, Chapter 8, Climate, Chapter 10, Biodiversity, Chapter 11, Archaeology and Cultural Heritage, Chapter 12, Architectural Heritage, Chapter 14, Water, Chapter 15, Lands and Soils, Chapter 16, Hydrogeology, with Transportation assets considered in Chapter 6.

Chapter 3 provides a full description of the proposed development and Chapter 4 describes the construction strategy for the proposed development. The following aspects are particularly relevant to the material assets assessment:

Design:

- Proximity of the proposed development to existing material assets;

Construction:

- Land-use requirements and removal/replacement of infrastructure;
- Intrusive construction activities occurring in proximity to existing material assets;
- Diversions required to undertake construction activities in the vicinity of existing material assets; and

Operation:

- Operational demand requirements of the proposed development.

This assessment was undertaken by Clodagh O’Donovan of Arup. Clodagh holds a Bachelor of Engineering and MEng Sc and is the Planning Service Team Lead for Arup Ireland. Clodagh has significant experience in the management and delivery of complex multidisciplinary projects, with particular experience in the EIA, AA and statutory consent process.

Please refer to Chapter 1 for further details on her relevant qualifications and experience.

¹ EPA (2017) Guidelines on Information to be contained in Environmental Impact Assessment Reports (draft)

19.2 Assessment Methodology

19.2.1 General

This chapter has been prepared having regard to the overarching EIA guidance as described in Chapter 1, Introduction. The significance of effects has been determined based on the severity of potential disturbance to existing material assets.

19.2.2 Guidance and Legislation

The significance criteria used to categorise significant effects on material assets is set out in Table 19.1 and has been developed based on the description of significant effects as outlined in the guidance¹.

Significance Level	Criteria
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound Effects	An effect which obliterates sensitive characteristics

Table 19.1 Significance criteria for likely significant effects on material assets

For the purpose of this assessment, likely significant effects on material assets are considered to be those effects that are categorised as significant, very significant or profound.

19.2.3 Study Area

The study area for this assessment is the site of the proposed development in its entirety, as described in Chapter 3, Description of Proposed Development.

19.2.4 Consultation

Consultation with utility providers has been undertaken where applicable to determine the location and details of existing utilities including ESB Networks (ESBN), Gas Networks Ireland and Irish Water.

Consultation was also undertaken with Dublin City Council Drainage Division from May 2019, as part of the EIAR for the permitted development (ABP ref 306569-20) and for this new application.

19.2.5 Categorisation of the Baseline Environment

In order to inform the baseline material assets assessment, a desk study of existing service and utility information was carried out, including:

- Eir - maps downloaded from website 10th December 2018;
- ESB Networks – maps received 11th December 2018;
- Gas Networks – maps received 11th December 2018;

- Water supply- maps received 28th October 2018; and
- Drainage- maps received 28th October 2018

The information provided in 2018 has been checked and remains valid.

19.2.6 Impact Assessment Methodology

A desk study has been carried out to identify the existing material assets associated within the site and to determine the likely significant effects of the construction and operation of the proposed development on those material assets.

Having regard to Chapter 3, Description of Proposed Development and Chapter 4, Construction, the likely significant effects of the proposed development on existing material assets have been assessed in the context of the significance criteria set out in Table 19.1.

19.3 Baseline Environment

19.3.1 Land-use and Property

The existing land use is described in detail in Chapter 1, Introduction. The site is located at 42A Parkgate Street, at the junction of Parkgate Street and Sean Heuston Bridge, along the river Liffey. The site borders the north bank of the river Liffey, situated directly opposite Heuston Station. The site is located in Dublin 8, under the authority of Dublin City Council.

While the proposed development is contained within the eastern apex of the site (as delineated by dashed green line), the red line boundary is extended to match the planning unit for the consented development (ref ABP-306569-20). This is in recognition of the fact that the proposed development is intrinsically linked with the consented development subject of that application.

The existing land-use of the proposed development site is classified by the European Community CORINE (Co-Ordinated Information on the Environment) Land Cover Mapping² as 'artificial surfaces' of 'continuous urban fabric'.

The land under the site is zoned under the Dublin City Development Plan 2016-2022³ as 'Zone Z5: To consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity'. The site along the river is zoned separately as 'Z9: To preserve, provide and improve recreational amenity and open space and green networks'.

The lands, subject of the proposed development, included in the red line boundary are within the ownership of the developer, Ruirside Developments Ltd. All areas outside the site ownership boundary but within the red line boundary are in the ownership or control of Dublin City Council (DCC).

19.3.2 Existing Infrastructure

A Dublin Bikes station (station 92) is located within the red line boundary of the proposed development site, within the land owned by DCC, as is the westbound bus stop for the 25, 26, 66/a/b, 67, and 69 bus routes.

Waste recycling bins are also located within the red line boundary of the proposed development site, within the land owned by DCC.

Refer to Figure 19.1 for the location of the above existing infrastructure on site.

² Environmental Protection Agency (2021) *EPA Maps*. Available at: <https://gis.epa.ie/EPAMaps/> (Accessed 09/04/21).

³ Dublin City Council - *Dublin City Development Plan 2016-2022*. Dublin, Ireland.

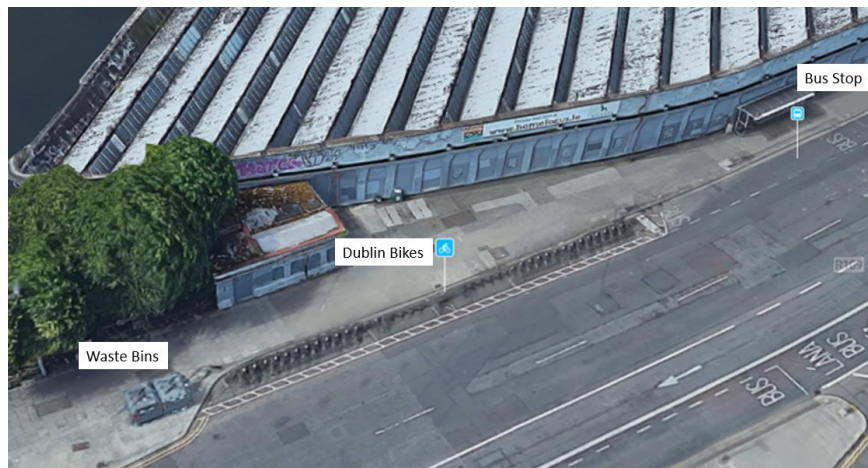


Figure 19.1 Existing Infrastructure

19.3.3 Electricity

ESB maintains underground power lines within and around the proposed development site. ESB's infrastructure of relevance to the proposed development includes the following:

- Four (10KV/20KV/400V/230V) underground cables running along the north of the site boundary, under Parkgate Street;
- A number of these (10KV/20KV/400V/230V) underground cables which run along Parkgate Street also run under the eastern end of the proposed development site which are within the ownership of Dublin City Council, to the east of the site.
- A (10KV/20KV/400V/230V) underground ESB cable running along the west side of the site boundary, which ends at the river-edge of the site; and
- An existing ESB substation located on Parkgate Street, on the lands to the east of the proposed development site which are within the ownership of Dublin City Council. The ESB substation is not included in the red line boundary of the proposed development.

Refer to ESB Drawing Title 20181214-039_A3 in Appendix 19.1 which illustrates the existing ESB infrastructure on site.

19.3.4 Telecommunications

The telecommunication cables of relevance to the proposed development all run under Parkgate Street. The relevant telecommunication cables include:

- Aurora Telecom Fibre Optic Cable;
- Aurora Telecom Duct; and
- Eir Cable.

Figure 19.2 illustrates the telecommunications sites in proximity to the proposed development site. According to the Telecommunications site analysis undertaken by Independent Site Management (ISM) (refer to Appendix 19.2), the closest multiple telecommunication operator site is the Guinness Flaking Plant (112 James Street, Dublin 8), which is currently managed by ISM. Mobile base station sites have been installed on the site for Three Ireland, Vodafone Ireland and Eir.

Figure 19.3 illustrates the transmission links in proximity to the proposed development site.

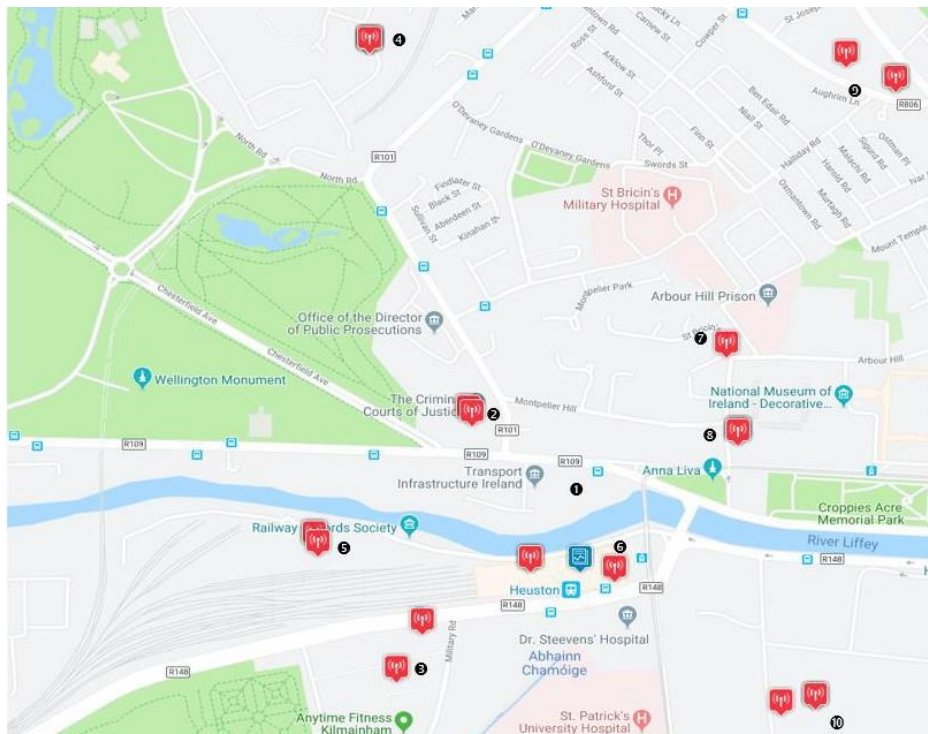


Figure 19.2 Telecommunications sites in proximity to the proposed development site

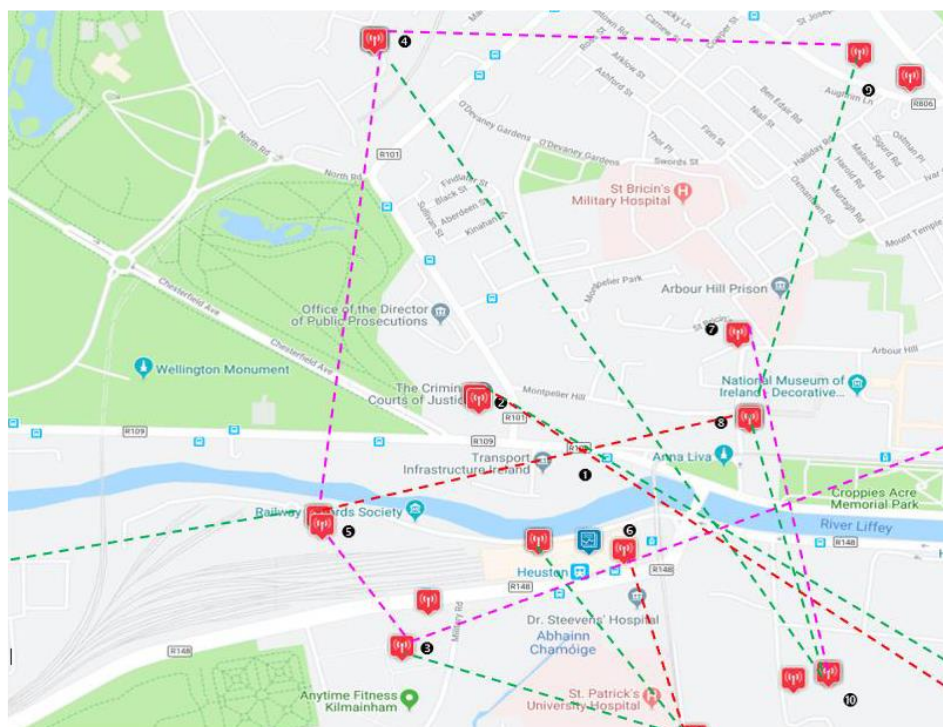


Figure 19.3 Transmission links in proximity to the proposed development

19.3.5 Gas

The gas mains of relevance to the proposed development are located at the following locations within and around the site:

- Distribution pipe (Medium Pressure) running under Parkgate Street, and under Sean Heuston bridge;

- Distribution pipe (Medium Pressure) that splits off from the main distribution pipe (Medium Pressure) running under Parkgate Street, and connects with an installation located between Parkgate House and the Dublin Bikes (Station No. 92);
- Distribution pipe (Abandoned) running under Parkgate Street; and
- Inserted pipe (Low Pressure) running underneath Parkgate Street.

A Gas Network Information drawing is included in Appendix 19.1 which illustrates the existing gas infrastructure on site.

19.3.6 Water Supply

Records provided by Irish Water indicate that the overall development site (including the consented development – ABP-306569-20) is serviced by a connection to an existing 150mm public water main on Parkgate Street. All operations on site have now ceased and the site is vacated, such that there is no current water demand. Drawing C001 in Appendix 19.1 illustrates the existing water supply and drainage infrastructure on site.

19.3.7 Sewer Network and Drainage Infrastructure

Drainage records provided by Irish Water indicate that there are existing 300mm and 450mm diameter combined sewers on Parkgate Street discharging into city centre sewers and subsequently to the wastewater treatment plant in Ringsend.

The capacity of the existing 450mm diameter combined sewer on Parkgate Street is approximately 107 l/s, with limited spare capacity during rainfall events. Drawing C001 in Appendix 19.1 illustrates the existing water supply and drainage infrastructure on site.

19.4 Likely Significant Effects

19.4.1 Do-Nothing Scenario

It is not practicable to complete the consented scheme (ABP-306569-20, Blocks B & C) without a further grant of permission for development that resolves the eastern elevation of Block B2, at the site of proposed Block A.

As such, in the scenario where the proposed development does not proceed as planned, the existing land and material assets in the study area will remain as currently identified in the desk study, site visits and site-specific investigations, and as described in Section 19.3.

19.4.2 Assessment of Effects During Construction

19.4.2.1 Land-Use and Property

The site of the proposed development is owned by the developer, Ruirside Developments Limited. No acquisition of land will be required during the construction phase of the proposed development. The site was formerly in use by Hickeys fabric company and is currently unused. The Applicant is seeking permission only for the proposed tower and associated interface works, which sits within the context of the otherwise consented residential-led mixed use redevelopment of this site (ABP Ref. 306569-20 refers).

The overall planning (red line) boundary also includes the portion of landscaped area east of the existing ESB substation on Parkgate Street, and an area of footpath and pavement along Parkgate Street. All areas outside the site ownership boundary but within the red line boundary are owned by Dublin City Council.

A letter of consent from Dublin City Council Parks Department was obtained for the consented works (ABP Ref. 306569-20 refers), which agreed to the proposed works (now consented) on land that is in the

ownership or control of DCC. An additional letter of consent was also obtained from DCC for the consented works along Parkgate Street. DCC consents to the submission of the planning application for the proposed development.

19.4.2.2 Existing Infrastructure

The consented development includes the removal and relocation of the existing Dublin Bikes stand and waste bins on Parkgate Street, as illustrated in Figure 19.1 in Section 19.3.2. The effect of same was assessed in the EIAR for the consented development.

19.4.2.3 Electricity

Electricity will be required for the construction activities for temporary lighting, equipment use etc. It is anticipated that a temporary connection to existing spurs at the site boundary will facilitate electricity supply to the site during construction, subject to the appropriate agreements. The power demands during the construction phase on the existing electricity network are considered to be a slight, negative and short-term effect.

As outlined in Section 19.3.3, a (10KV/20KV/400V/230V) underground ESB cables run in a north-south direction along the west side of the site boundary, to the river-walk. This electricity supply will be disconnected, and the services terminated from entering the site. Disconnections will be phased corresponding to the proposed progress of demolition and construction works on site.

Where the excavation strategy or temporary works require any temporary diversion of local services or utilities on the site perimeter, this would be undertaken with prior agreement of the relevant service provider.

A potential slight-negative, temporary effect is identified where utility diversions are required.

19.4.2.4 Telecommunications

There is no existing telecommunications infrastructure within the site of the proposed development- all existing telecommunication cables run along Parkgate Street. As such, there will be no likely significant effects on telecommunications infrastructure during the construction phase of the proposed development.

Where the excavation strategy or temporary works require any temporary diversion of local services or utilities on the site perimeter, this would be undertaken with prior agreement of the relevant service provider. A potential slight-negative, temporary effect is identified where utility diversions are required.

ISM has identified 2 No. telecommunications channels that will potentially be affected by the height and scale of the proposed development. Both are microwave link dishes installed by both Three and Vodafone on the Criminal Court of Justice building to serve their indoor mobile solutions. The effect of the proposed development on the aforementioned microwave link dishes will likely occur during the construction period, but continue during operation, in the absence of mitigation. A minor-adverse effect is identified.

19.4.2.5 Gas

As described in Section 19.3.4, a number of gas distribution pipes are located within the red line boundary of the proposed development, under Parkgate Street. There is no existing gas infrastructure within the existing Hickey site, all existing gas pipelines run along Parkgate Street.

As such, there will be no likely significant effects on gas infrastructure during the construction phase of the proposed development.

Where the excavation strategy or temporary works require any temporary diversion of local services or utilities on the site perimeter, this would be undertaken with prior agreement of the relevant service provider.

A potential slight-negative, temporary effect is identified where utility diversions are required.

19.4.2.6 Water Supply

As outlined in Section 19.3.6, the site is currently serviced by a connection to an existing 150mm public main on Parkgate Street which will continue to service the contractors' compound throughout the construction phase of the proposed development.

The water demands during the construction phase on the existing water supply network are considered to be an imperceptible and short-term effect.

Where the excavation strategy or temporary works require any temporary diversion of local services or utilities on the site perimeter, this would be undertaken with prior agreement of the relevant service provider.

A potential slight-negative, temporary effect is identified where utility diversions are required.

19.4.2.7 Sewer Network and Drainage Infrastructure

During the construction phase of the proposed development, Sustainable urban Drainage Systems (SuDs) will be incorporated into the site, with surface water run-off from the development site discharging through a minimum of a two-stage treatment train process prior to discharge to the River Liffey.

Effluent and sanitary waste will be generated from facilities provided for the construction staff on site. This wastewater will be discharged to the existing combined sewer on Parkgate Street or as otherwise agreed with Dublin City Council. This would be considered a short-term effect and the significance of this effect is imperceptible.

The existing sprinkler system within the Hickey's warehouse will be emptied, as part of the demolition works associated with the consented development (ABP ref 306569-20) with the water contained therein discharged to sewer in agreement with Irish Water.

Given the predicted number of construction workers for both the consented development, ABP ref 306569-20 and the proposed development, which if granted will be constructed on parallel (600-700 maximum, although not all on site at the same time), the predicted quantity of construction generated foul water is not expected to be significant. As such, no likely significant effects on the existing sewerage infrastructure are identified.

19.4.2.8 Indirect Effects

No known potential indirect effects on material assets are identified during the construction phase of the proposed development.

19.4.2.9 Cumulative

Appendix 21.1 lists all those development applications within 1km of the proposed development which have been either approved, or applied for, at the time of writing this EIAR. For the purposes of this cumulative assessment, a review of those developments has been undertaken in order to ascertain if the proposed development would give rise to any potential cumulative effects on material assets during construction.

No significant cumulative effects were identified for the consented development. Likewise, no potential cumulative effects are identified with regards the construction phase of the proposed development, in combination with the consented development and other relevant developments in the vicinity.

19.4.3 Assessment of Effects During Operation

19.4.3.1 Land-Use and Property

As described in Section 19.4.2.1, no land acquisition will be required in respect of the proposed development. No likely significant effect on land ownership is therefore identified.

As previously discussed, the consented development (ABP ref: 306569-20) which is within the same planning (red line) boundary, includes the portion of landscaped area east of the existing ESB substation on Parkgate Street, and an area of footpath and pavement along Parkgate Street. All areas outside the site ownership boundary but within the red line boundary are within the ownership or control of Dublin City Council. Letters of consent from Dublin City Council have been obtained regarding the proposed works.

No change in land-use will occur; the site of the proposed development will continue to be classified as 'continuous urban fabric' (CORINE, 2018). No likely significant effect on the land-use, in terms of its CORINE classification, is therefore identified.

19.4.3.2 Existing Infrastructure

As outlined in Section 19.4.2.2, the consented development (ABP ref: 306569-20) will require the permanent removal and relocation of the existing Dublin Bikes stand and waste bins on Parkgate Street, as illustrated in Figure 19.1 in Section 19.3.2.

Every effort will be made to ensure that the relocation of these pieces of infrastructure will be to a location that is in as close proximity to their existing locations as possible and will be agreed with DCC at a later date.

A likely slight-negative, permanent effect was identified in the EIAR for the consented development in this regard.

19.4.3.3 Electricity

There will be no effect on existing underground ESB cables during the operation of the proposed development.

The proposed development will increase demand on the electricity network in Dublin city centre due to the number of people who will be living and working at the developed site. However, energy efficient initiatives have been incorporated into the design of the proposed development in so far as possible, which will somewhat offset this demand, such as building orientation which aims to maximise the daylight and the added benefits of passive solar gain for individual units.

All dwellings within the proposed development will be constructed to meet the current Part L Building Regulation with regard to energy efficiency.

The likely effect of the proposed development on the existing electricity network is considered to be permanent, but not significant.

19.4.3.4 Telecommunications

ISM has identified 2 No. telecommunications channels that will potentially be affected by the height and scale of the proposed development. Both are microwave link dishes installed by Three and Vodafone on the Criminal Court of Justice to serve their indoor mobile solutions. The effect of the proposed development on the aforementioned microwave link dishes will likely occur during the construction

period and continue through to the operational period. A minor, adverse but permanent effect is identified, in the absence of mitigation.

19.4.3.5 Gas

It is expected that the existing gas network in the vicinity will have the capacity to accommodate the increased demand in same as a result of the proposed development. The likely effect of the proposed development on the existing gas network is therefore considered to be permanent, but imperceptible.

There will be no effect on existing underground gas pipelines during the operation of the proposed development.

19.4.3.6 Water Supply

The proposed watermain system will be designed to supply water for both the consented (ABP ref: 306569-20) and the proposed development with sluice valves and hydrants located in compliance with Part B of the Building Regulations and the local Fire Officers requirements.

The development consists of the following, which will result in some additional demands on the existing water supply:

- 198 apartment units, with ancillary internal and external residents amenity areas and facilities;
- residents communal open space including roof gardens on the 9th and 28th floor levels; and
- provision of other residential amenity and management spaces including reception, foyer and parcel area, resident's lounge and bookable rooms.

Irish Water has assessed the Pre-connection Enquiry Application relating to the proposed development and has confirmed adequate capacity in the existing public network to service the site.

The likely effect of the proposed development on the existing water supply infrastructure is therefore predicted to be permanent, but not significant.

19.4.3.7 Sewer Network and Drainage Infrastructure

The proposed development will drain to a new wastewater drainage network (as part of the consented development – ABP reference 306569-20) designed in accordance with the *Irish Water Code of Practice for Wastewater Infrastructure Error! Bookmark not defined.* and *Part H of the Building RegulationsError! Bookmark not defined.*

The consented development (ABP reference 306569-20) includes all required improvement works for surface water on Parkgate Street to accommodate the proposed development. This includes providing additional capacity in the existing 450 mm combined sewer on Parkgate Street (for foul wastewater flows) by diverting an area of approximately 0.16ha of the Parkgate St. road catchment draining to the 450mm trunk sewer (equivalent to a peak discharge of 22.4l/s) into a new separate surface water drainage network. This new surface water drainage network will discharge to the River Liffey via the existing 910mm surface water outfall pipe.

The proposed development will result in an additional effluent volume discharging to the public sewer. To address this, a section of the existing sewer network on Parkgate Street shall be upgraded as part of the consented scheme. This will create capacity for the wastewater discharge from the consented and proposed development in the combined sewer.

As with the consented development (ABP reference 306569-20), it is noted that the capacity of the Ringsend Water Treatment Plant, where effluent from the proposed development will be treated, is currently constrained. It is understood that several projects are currently being progressed by Irish

Water to deliver the infrastructure and capacity necessary for predicted population growth within the Dublin Region. In particular, the following key projects are applicable:

- (i) Ringsend WWTP upgrade – An application for the upgrade was lodged with An Bord Pleanála in June 2018 and planning permission was granted in April 2019. Upgrade works are scheduled to increase the treatment capacity from 1.64 million p.e. to 2.4million p.e. This upgrade is currently programmed to be complete in 2025.
- (ii) Greater Dublin Drainage Project – planning permission was granted by An Bord Pleanála in November 2019, but was subsequently judicially reviewed with the court finding in November 2020 that the permission was unlawful and ruling that the permission has to be quashed. A further court hearing is awaited to identify next steps.
- (iii) 9C sewer duplication – construction is well underway on this scheme and it is due to be completed by September 2022.
- (iv) The Liffey Siphons refurbishment project – construction of this project was due to complete in late 2020.

The proposed development is therefore predicted to have an overall neutral effect within the study area in relation to wastewater.

19.4.3.8 Indirect Effects

No known potential indirect effects on material assets are identified during the construction phase of the proposed development.

19.4.3.9 Cumulative

Appendix 21.1 lists all those development applications within 1km of the proposed development which have been either approved, or applied for, at the time of writing this EIAR. This includes the consented development within the same site (ABP Ref. 306569-20).

For the purposes of this cumulative assessment, a review of those developments has been undertaken in order to ascertain if the proposed development would give rise to any potential cumulative effects on material assets.

A potential minor, negative cumulative effect on material assets is identified during the operational phase of the proposed development, when considered alongside the consented development (ABP Ref. 306569-20) and other planned new large-scale residential or commercial developments in the wider Dublin area, resulting in a potential effect on utilities such as water supply, gas etc.

19.5 Mitigation Measures and Monitoring

19.5.1 Mitigation

19.5.1.1 Mitigation During Construction

The Contractor will be obliged to put measures in place to ensure that there are no interruptions to existing services and that all services and utilities are maintained, unless this has been agreed in advance with the relevant service provider and local authority.

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

Where new services are required, the Contractor will apply to the relevant utility company for a connection permit where appropriate and will adhere to their requirements.

As outlined in Section 19.5.1, the proposed development is likely to give rise to a minor adverse effect on transmission links, once developed.

During the construction phase of the proposed development, Vodafone and Three will re-align the identified microwave links to new hop sites. To mitigate this effect, the proposed development includes provision for a new hop site, as illustrated in Figure 19.4 below.

This has been assessed for visual impact, in Chapter 13, Landscape and Visual.

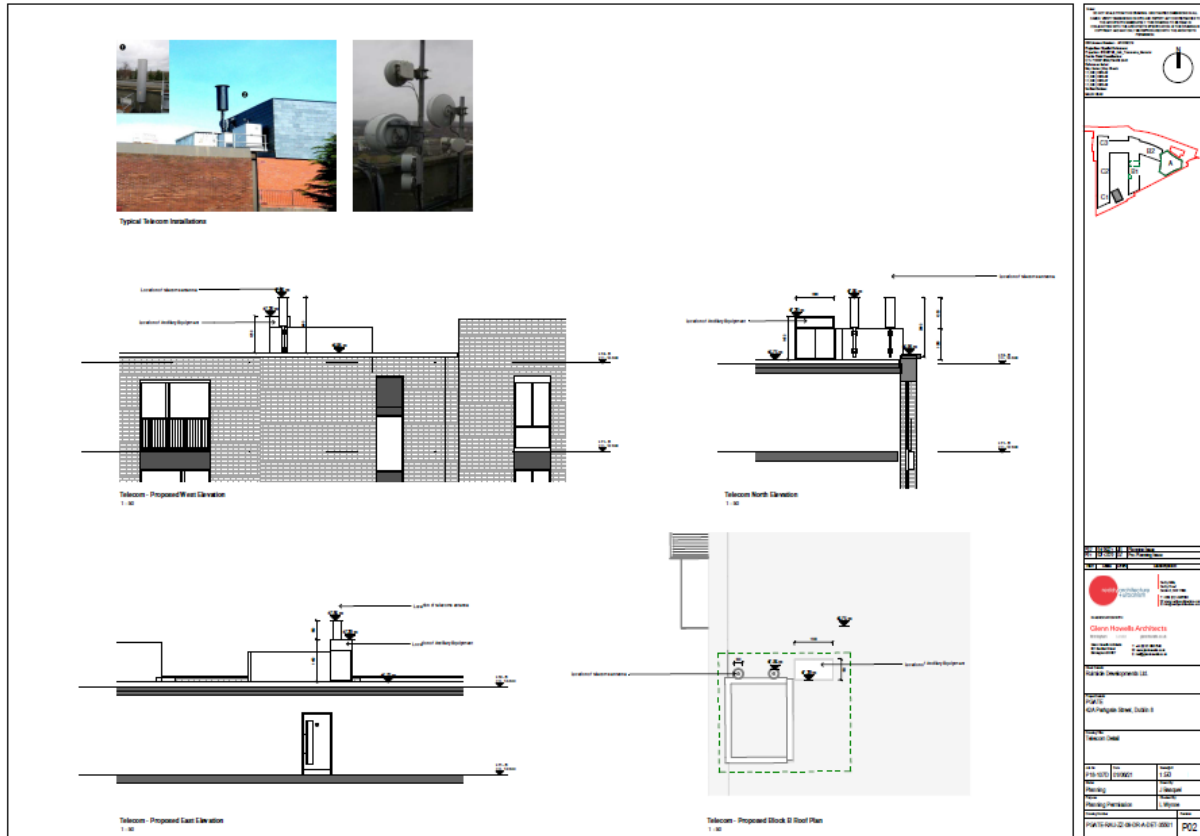


Figure 19.4: Proposed Mitigation for Telecommunications

19.5.1.2 Mitigation During Operation

Due to the measures already incorporated in the design as outlined above, i.e. SuDS, no mitigation measures will be necessary during the operational phase.

19.5.2 Monitoring

19.5.2.1 Monitoring During Construction

Construction phase mitigation measures have been proposed to ensure that significant negative effects on material assets will be avoided, prevented or reduced during the construction of the proposed development. As such, no monitoring measures are proposed during the construction phase.

19.5.2.2 Monitoring During Operation

As no significant, negative operational effects of the proposed development on material assets are identified, no operational monitoring measures have been proposed.

19.6 Residual Effects

Following implementation of mitigation measures outlined in Section 19.5.1, the residual impact on utility services is considered to be imperceptible.

19.7 Difficulties Encountered

No difficulties were encountered during this assessment.