
Chapter 22

Material Assets: Utilities

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22.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) identifies, describes and presents an assessment of the likely significant effects of the proposed N2 Slane Bypass and Public Realm Enhancement Scheme (hereafter referred to as the 'Proposed Scheme') on Material Assets: Utilities, during both the construction and operational phases of the Proposed Scheme. The assessment presented is informed by the following key chapters of the EIAR: **Chapter 4 – Description of the Proposed Scheme** and **Chapter 5 – Description of Construction Phase**.

Material assets are described in the EPA 2022 Guidelines on the Information to be contained in Environmental Impact Assessment Reports to include “*built services, roads and traffic, and waste management*” as topics for consideration. This chapter addresses the built services element. Other aspects relevant to the Material Assets topic are addressed in other specific chapters of the EIAR, namely:

- **Chapter 7 – Traffic and Transport:** Predicted traffic and mobility effects;
- **Chapter 20 – Material Assets: Agricultural Properties:** Permanent and temporary landtake effects;
- **Chapter 21 – Material Assets: Non-agricultural Properties:** Permanent and temporary landtake effects; and
- **Chapter 23 – Material Assets: Waste Management:** Predicted impacts related to waste and resource management.

22.2 Methodology

The impact assessment has focused on utility conflicts and has utilised information gathered as part of the design development including the following:

- Identification of existing utilities and associated infrastructure;
- Identification of any planned future alterations and/or expansion of existing utilities;
- Identification of potential diversions and the extent of proposed services diversions (including any advance works or temporary diversions) that may be required;
- Assessment of effects (if any) on each built service to understand the potential impacts and determine exact requirements;
- Characterisation of the magnitude and significance of any potential impacts such as diversions, disruption of service, relocation etc;
- Identification of mitigation measures to minimise impacts; and
- Assessment of the significance of any residual effects after mitigation.

22.2.1 Legislation, Policy and Guidance

22.2.1.1 Legislation

There is no specific legislation relating to the assessment of Material Assets: Utilities.

22.2.1.2 Policy

Consideration has been given to the following relevant policy document in the preparation of this chapter:

- MCC (2021) Meath County Development Plan 2021-2027.

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22.2.1.3 Guidance

There is no specific guidance relating to the assessment of Material Assets: Utilities. The impact assessment has therefore followed the overall methodology and guidance relating to the EIA process and preparation as set out in **Section 1.3.3 of Chapter 1 – Introduction**. The impact of the Proposed Scheme on Material Assets: Utilities has been assessed for the construction and operational phases by considering the impacts to electricity, telecommunications, gas, water supply and sewerage infrastructure.

22.2.2 Zone of Influence

There are no guidelines or criteria to define the zone of influence (Zol) for the assessment of Material Assets: Utilities. The Zol has therefore been defined for the purpose of the assessment as the area in which there is potential for direct and indirect impact on utilities as a result of the Proposed Scheme, particularly where temporary and/or permanent diversions are required to facilitate the project whilst maintaining vital services to the general public and to commercial operations.

22.2.3 Sources of Information to inform the Assessment

This assessment of utilities has been carried out by way of a combination of desk-based studies, consultation with service providers, site visits and investigations by the design team. In addition to the Proposed Scheme Description and description of the Construction Phase detailed in **Chapter 4** and **Chapter 5** respectively, a number of sources of information were used to inform the assessment as summarised in **Table 22-1**.

Table 22-1: Summary of Key Data Sources for Material Assets – Utilities

Title	Source	Year
Meath County Development Plan (CDP)	Meath County Council	2021 – 2027
Utility providers – existing assets data	Electricity Supply Board (ESB), Irish Water and Eir	2017 – 2021
Utilities and topographical surveys (including ground penetrating radar [GPR]) and associated scheme-specific reports prepared by third parties	Supplied by Meath County Council	2017 – 2021

22.2.4 Key Parameters for Assessment

The key parameters for assessment that have potential to result in likely significant effects on utilities are outlined below:

- Degree of conflicts with built services including electricity networks, communication networks, gas networks and water supplies/ wastewater services;
- Level of temporary diversions/ interruptions to service during construction; and
- Requirement for alterations for permanent reinstatement of services e.g. relocation, provision of new or modified services, changes to maintenance access arrangements.

22.2.5 Assessment Criteria and Significance

The following tables (

Table 22-2 to Table 22-5) consider the sensitivity of the various utilities, and the impacts that a disruption to a utility could cause. The magnitude of the impacts that could arise as a result of the Proposed Scheme and the significance of impacts has also been considered. These assessments are broadly based on the requirements of the EPA Guidelines (2022).

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Table 22-2: Definition of Terms relating to Environmental Sensitivity

Sensitivity	Utilities
High	High importance, national scale and limited potential for substitution: <ul style="list-style-type: none"> – High Pressure (HP) gas pipelines – High Voltage Electricity overhead lines (OHL) and underground cables (>38 kV) – Transmission pipelines (potable water) – Large scale foul water infrastructure
Medium	High or medium importance, regional scale, limited potential for substitution: <ul style="list-style-type: none"> – Low and medium pressure gas pipelines – Medium voltage electricity OHL and underground cables (400 V up to 38 kV) – Distribution pipelines (potable water) – Small scale foul sewers and local collection systems – Telecommunications infrastructure
Low	Low or medium importance, local scale: <ul style="list-style-type: none"> – Local connections for water – Low voltage (LV) electricity OHL and underground cables (up to 400 V)
Negligible	Low importance, local scale: <ul style="list-style-type: none"> – Domestic connections for service

Table 22-3: Definition of Terms relating to Magnitude of Impact

Magnitude of Impact	Utilities
High	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Negative) Large scale or major improvement or resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial)
Medium	Loss of resource, but not adversely affecting integrity of resource; partial loss of/damage to key characteristics, features or elements (Negative) Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial)
Low	Some measurable change in attributes, quality or vulnerability, minor loss or, or alteration to, one (maybe more) key characteristics, features or elements (Negative) Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial)
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Negative) Very minor benefit to, or positive addition of one or more characteristics, features or elements (Beneficial)

The definitions for significance in **Table 22-4** are defined as per the EPA Guidelines (2022), with a description of the criteria for utilities.

Table 22-5 outlines the matrix used for assessing the significance of the impact, taking account of the sensitivity of the receptor and the magnitude of the impact.

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Table 22-4: Definition of Terms relating to the Significance of Effect Levels

Significance of Impact	Definitions	
	EPA (2022) Guidelines Definition	Criteria for Utilities/ Built Services
Imperceptible	An effect capable of measurement but without significant consequences.	Minor works or works in proximity only to service which does not affect the quality, or lead to interruption of, a service.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.	Local works which require protection in place and do not affect the quality or temporarily interrupts a service; diversion of low and medium voltage ESB network, telecommunications or water supply/ foul sewer services.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.	Local short-term temporary disruption/ interruption to service or quality of service.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.	Planned outage or noticeable change to the quality of a service that affects a smaller number of residences and/or commercial/ business properties; diversion of high voltage ESB network (38 kV or above).
Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.	Planned outage to service that affects a large number of residences and/or commercial/ business properties and/or of a longer term duration.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.	Unplanned outage to or loss of a service that affects a large number of residences and/or commercial/ business properties and/or of a longer term duration.
Profound	An effect which obliterates sensitive characteristics.	Unplanned and complete loss of service; where a material asset of regional or national importance is permanently damaged or lost.

Table 22-5: Matrix used for the assessment of the Significance of the Impact

		Magnitude of Impact			
		Negligible	Low	Medium	High
Sensitivity of Receptor	Negligible	Imperceptible	Imperceptible or Not Significant	Not Significant or Slight	Slight
	Low	Imperceptible or Not Significant	Not Significant or Slight	Slight	Slight or Moderate
	Medium	Not Significant	Not Significant or Slight	Moderate or Significant	Significant or Very Significant
	High	Not Significant	Slight or Moderate	Significant or Very Significant	Very Significant or Profound

22.3 Description of Existing Environment (Baseline Scenario)

22.3.1 Current Baseline Environment

A review of existing utilities and associated infrastructure was undertaken as part of the design development process. The utility providers identified within, or adjacent to, the footprint of the Proposed Scheme include:

- **Electricity Supply:** ESB Networks;
- **Water Mains and Foul Sewers:** Irish Water; and
- **Telecommunications:** Eir.

Gas Networks Ireland (GNI) confirmed in February 2020 that there are no GNI services in the area.

Drawings shows the approximate locations of known services are provided in **Volume 3 Technical and Design Drawings** on the following drawings series:

- **N2 and N51 Mainlines:** MDT0806-RPS-01-N2-DR-C-UT0000 – UT0007 (Existing Utilities and Proposed Diversions); and
- **Slane village / Public Realm:** MDT0806-RPS-01-PR-DR-C-UT8000 – UT8010 (Existing Utilities) and MDT0806-RPS-01-PR-DR-C-UT9000 – UT9010 (Proposed Diversions).

These drawings were prepared following liaison with the various service providers. In some instances, topographical survey and site investigation data (slit trenches etc.) has been used to verify these locations. A description of the utilities within the Proposed Scheme is provided in the following sections.

22.3.1.1 Electricity Supply

ESB overhead lines are encountered across the Proposed Scheme at multiple locations as follows:

- **N2 Mainline:**
 - Medium voltage (MV) (10 – 20 kilovolts [kV]) overhead line crosses the scheme between Ch. 150 to Ch. 350;
 - MV overhead line runs adjacent to the proposed mainline between Ch. 885 to Ch. 1500;
 - MV overhead line crosses the scheme at approximately Ch. 950;
 - MV overhead line crosses Attenuation Pond 2 at approximately Ch. 1200;
 - MV overhead line crosses raised tow path at approximately Ch. 1250;
 - MV overhead lines crosses access track (Overbridge 3) at approximately Ch. 1575;
 - MV overhead line crosses the proposed mainline at approximately Ch. 1650; and
 - Low voltage (LV) (up to 400 volts [V]) traverses proposed footpath link to Slane at several locations at approximately Ch. 3495.
- **N51 West:**
 - MV overhead line crosses the scheme at approximately Ch. 350; and
 - LV overhead lines crosses the scheme at approximately Ch. 400.
- **N51 East:**
 - LV overhead line crosses the proposed mainline between approximately Ch. 390 to 550;
 - MV overhead line runs between adjacent to the proposed mainline between Ch. 115 to Ch. 390;
 - MV overhead line crosses the proposed mainline at approximately Ch. 375; and
 - High Voltage (HV) 220 kV overhead line traverses the scheme near the tie-in to the existing N51.
- **Slane village and Public Realm Enhancement:**
 - ESB ducting is present on all four arms of the Public Realm Enhancement area, with overhead powerlines also crossing the carriageway on all four arms. Overhead cables and poles are present

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along the eastern verge of the N2 Chapel Street, and also along the southern verge of the N51 Main Street East.

ESB Networks were contacted in relation to the Proposed Scheme and provided with drawings indicating affected utilities and proposed diversions. ESB did not indicate any future plans to alter built services in the area. ESB were also contacted in relation to the 220 kV HV line and were satisfied that the proposal met the Electrical Safety Clearances from HV overhead lines and that the proposed road alignment will be the same as the existing alignment at the crossing location.

22.3.1.2 Water Mains

Water mains are encountered on the Proposed Scheme at several locations, as follows:

- Along the existing N2 at the southern end of the Proposed Scheme;
- Along the existing Rosnaree Road;
- Along the existing N51;
- Along the existing N2 at the northern end of the Proposed Scheme; and
- Along all arms of the Public Realm Enhancement area, both under the carriageway and under the footpaths.

No details of the depth of water mains were available from accessible databases. As such, it was assumed for design purposes that water mains range from approximately 1 m to 1.2 m below ground level (mBGL).

Irish Water were contacted in relation to the Proposed Scheme and provided with drawings indicating the affected utilities including proposed diversion at Rosnaree Road. Irish Water did not indicate if there were any future plans to alter services in the area.

22.3.1.3 Foul Sewers

In Slane village, foul sewers, combined sewers and surface water drains run under the carriageway and footpaths on all arms of the Public Realm Enhancement area of the Proposed Scheme.

Irish Water records indicate that sewer lines should not be encountered on the bypass or N51 elements of the Proposed Scheme.

22.3.1.4 Telecommunications

Eir underground and overhead services are encountered along the Proposed Scheme at several locations, as follows:

- Underground cables and overhead lines along existing N2 at southern end of the Proposed Scheme;
- Overhead lines along existing Rosnaree road;
- Underground cables and overhead lines along existing N51;
- Underground cables and overhead lines along existing N2 at northern end of the Proposed Scheme; and
- Underground cables run under the footpath on all arms of the Public Realm Enhancement area within Slane village. Eir fibre optic cables are present under the southern footpath along the N51 Main Street West and under the northern footpath along the N51 Main Street East. Overhead cables cross the carriageway on all arms of the Public Realm Enhancement area.

Eir were contacted in relation to Proposed Scheme and were provided with drawings indicating the affected utilities and proposed diversions. Eir did not indicate any future proposals to alter services in the area.

22.3.1.5 Unknown Utilities

Slit trench ST303 and the GPR utility survey, carried out on the existing N51, discovered two utility lines in the verge along the west-bound side of the road, near the location of the proposed N51 Roundabout.

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These utility lines are described in the slit trench records as follows:

- **Utility:** Electricity
- **Material:** Metal
- **Diameter:** 30 mm
- **Colour:** Grey

Although the slit trench records indicate that these utility lines belong to the ESB, they are not indicated on any of the records received from ESB Networks or any other service provider.

22.3.2 Evolution of the Environment in the Absence of the Proposed Scheme

Should the Proposed Scheme not proceed, conditions relating to the built services/utilities identified within the ZoI will continue in line with baseline trends. Some general improvements or changes in the area, such as new connections to the various services, may occur due to legislative and local policy-driven measures as well as new service lines/connections associated with new buildings.

If the Proposed Scheme does not proceed, the current utilities and services identified will continue to exist in their current manner as all utility providers did not indicate or were aware of any future plans to alter plant in the area.

22.4 Description of Likely Significant Effects

Sections 22.4.1 and 22.4.2 provide a description of the likely significant effects of the Proposed Scheme on Material Assets: Utilities in cumulation with other existing development in the area. A description of the likely significant effects in cumulation with approved development i.e., development not yet built, is presented in **Section 22.4.3** based on the detailed methodology for CIA included in **Chapter 25**.

The impact interactions between Material Assets: Utilities and other environmental factors are identified and described in **Chapter 26** and assessed throughout **Sections 22.4.1 to 22.4.3**.

The construction of a road project such as the Proposed Scheme has potential for impacts on existing operational utilities intersecting it in the absence of any remedial or reductive measures. The potential for impacts is in the main related to construction of the Proposed Scheme where interruptions and diversions of built services are required, leading to planned temporary short-term loss of services such as access to fresh drinking water, heating, electrical power and foul waste management services; obstruction to communication assets such as fibre optic and telephone networks; and possible damage to utility assets during works. At operation phase, impacts to built services are limited in nature and associated with asset maintenance.

22.4.1 Construction Phase

Enabling works on utilities must be undertaken prior to any other works to maintain connections, or at least minimise downtimes, to public and private customers. Construction, excavation and relocation of services will disrupt utility infrastructure – notably electricity, telecoms and water services. **Table 22-6** to

Table 22-8 provides a summary of the information for each utility conflict.

Table 22-6: Summary of Utility Conflicts – ESB

Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
N2 Mainline Ch. 150 to 350	ESB 10kv - 20kv MV OH	ESB powerlines cross the proposed road alignment diagonally. Existing poles clash with proposed road alignment.	Line to be relocated to cross the route perpendicularly at Ch 75.	Not Significant
N2 Mainline Ch. 885 to 1500	ESB 10kv - 20kv MV OH	ESB powerlines run parallel to west side of proposed alignment close to the top edge of earthworks.	Lines to be relocated further west to ensure poles do not clash with scheme works.	Not Significant

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Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
N2 Mainline Ch. 950	ESB 10kv - 20kv MV OH	ESB powerlines cross the proposed alignment with a pole located at the top of the earthworks on west side of proposed alignment.	Line to be relocated to ensure pole does not clash with scheme works. Appropriate safety measures to be taken for construction under power lines.	Not Significant
N2 Mainline Ch. 1100 to 1550 (Attenuation Pond 2 at approximately Ch. 1200 and towpath at approximately Ch. 1250)	ESB 10kv - 20kv MV OH	ESB powerlines, located west of mainline alignment, cross pedestrian / cyclist link, raised towpath and Pond 2. Poles clash with attenuation pond's earthworks and temporary working platform required to construct the River Boyne Bridge.	Lines to be relocated to ensure pole does not clash with scheme works and line's hazard zone is outside swing / fall radius of cranes. required for construction of River Boyne Bridge. Relocated line to be provided at sufficient height to provide necessary clearances. Appropriate safety measures to be taken for construction under power lines.	Not Significant
N2 Mainline Ch. 1575	ESB 10kv - 20kv MV OH	ESB Powerlines cross proposed access track.	Appropriate safety measures to be taken for construction under power lines.	Imperceptible
N2 Mainline Ch. 1650	ESB 10kv - 20kv MV OH	ESB powerlines cross the proposed road alignment. Existing poles clash with proposed road alignment.	Line to be relocated with perpendicular crossing of road alignment ensuring poles do not clash with scheme works.	Not Significant
N51 West Ch. 350	ESB 10kv - 20kv MV OH	ESB powerline crosses the proposed road alignment.	Appropriate safety measures to be taken for construction under power lines.	Imperceptible
N51 West Ch. 400	ESB LV OH	ESB powerline crosses the proposed road alignment.	Appropriate safety measures to be taken for construction under power lines.	Not Significant
N51 East Ch. 375	ESB 10kv - 20kv MV OH	ESB powerline crosses the proposed road alignment.	Appropriate safety measures to be taken for construction under power lines.	Not Significant
N51 East Ch. 390 to 550	ESB LV OH	ESB powerlines clash with proposed road alignment.	Line to be relocated to ensure pole does not clash with scheme works. Appropriate safety measures to be taken for construction under power lines.	Not Significant
N51 East Ch. 575	ESB 220kV OH	ESB powerlines cross proposed road alignment near tie-in with existing N51.	Appropriate safety measures to be taken for construction under power lines.	Not Significant
N2 Mainline North Roundabout – N2 South Link Ch. 3495	ESB LV OH	ESB powerlines traverse proposed footpath link to Slane at several locations. No works required to the line.	Appropriate safety measures to be taken for construction under power lines.	Imperceptible
Public Realm N51 Main Street West, road crossing Ch. 17	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services to be relocated underground and poles removed throughout Slane village Architectural Conservation Area (ACA) where reasonably practicable.	Not Significant
Public Realm N51 Main Street West, southern verge	ESB UG Service	Proposed landscape planting in vicinity of existing ESB services.	Exact location of ESB underground services to be	Not Significant

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Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
Ch. 165			confirmed on site to avoid clash with proposed planting.	
Public Realm N51 Main Street East, southern verge Ch. 100 to Ch. 172	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout ACA where reasonably practicable.	Not Significant
Public Realm N2 Chapel Street, eastern verge / carriageway Ch. 20 to Ch. 325	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant
Public Realm N2 Chapel Street, road crossing Ch. 67	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant
Public Realm N2 Chapel Street, road crossing Ch. 110	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant
Public Realm N2 Chapel Street, road crossing Ch. 155	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant
Public Realm N2 Chapel Street, road crossing Ch. 202	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant
N2 Chapel Street, road crossing (Public Realm Ch. 264)	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant
Public Realm N2 Chapel Street, road crossing Ch. 312	ESB 10kv - 20kv OH	OH line is within public realm enhancement area.	Existing OH services will be relocated underground and poles removed throughout Slane village ACA where reasonably practicable.	Not Significant

Table 22-7: Summary of Utility Conflicts – Eir

Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
N2 Mainline South Roundabout Ch. 0	Eir UG Cable	Eir cable runs underneath proposed roundabout junction and associated links to existing N2. Localised realignment of ducting may be required to avoid clashes with proposed drainage etc.	Eir ducting to be protected in place during construction. Access covers on chambers to be raised / lowered as required.	Not Significant
N2 Mainline Rosnaree Road Ch. 1100	Eir OH Line	Eir line runs along existing Rosnaree road which is to be replaced with overbridge.	Overhead line to be diverted underground through ducts which will cross overbridge along raised verge.	Not Significant

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Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
N51 West Ch. 0 to 420	Eir UG Cable	Eir cable runs underneath realigned carriageway and verge. Localised realignment of ducting may be required to avoid clashes with proposed drainage etc.	Eir ducting to be protected in place during construction. Access covers on chambers to be raised / lowered as required. Chamber access covers in realigned carriageway to be replaced with suitable D400 grade covers if not already in place.	Not Significant
N51 West Ch. 420 to 710	Eir UG Cable	Eir cable runs underneath existing verge adjacent to realigned road. Localised realignment of ducting may be required to avoid clashes with proposed drainage etc.	Eir ducting to be protected in place during construction.	Not Significant
N51 West Ch. 710 to 815 / N2 Mainline Ch. 2250	Eir UG Cable	Eir cable runs underneath verge along redundant section of existing N51, crossing under proposed N2 Mainline alignment. Proposed road alignment is in shallow cutting at this location and it is considered that there will be insufficient remaining cover depth to keep existing ducting in place.	Eir cable to be diverted in new ducting installed in proposed road verge along realigned N51 with perpendicular crossing of N2 Mainline.	Not Significant
N51 East Ch 525 to 600	Eir UG Cable	Eir cable runs underneath realigned carriageway and verge.	Eir ducting to be protected in place during construction.	Not Significant
N2 Mainline North Roundabout – N2 South and N2 North Links (Ch. 3495)	Eir UG Cable	Eir cable runs underneath proposed links to existing N2. Existing culvert to be removed at this location which will lead to severance of Eir cable.	Eir cable to be diverted in new ducting installed in proposed road verge along links to existing N2 and around North Roundabout with perpendicular crossing of N2 Mainline.	Not Significant
Public Realm N51 Main Street West, road crossing Ch. 65	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant
Public Realm N51 Main Street West, road crossing Ch. 216	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant
Public Realm N51 Main Street East, road crossing Ch. 15	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant
Public Realm N2 South, road crossing Ch. 1021	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant
Public Realm N2 South, eastern verge Ch. 536 to 640	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant
Public Realm N2 South, road crossing Ch. 640	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant

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Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
Public Realm N2 Chapel Street, road crossing Ch. 94	Eir OH Line	Eir overhead cable traverses public realm.	Existing Eir overhead service to be diverted underground.	Not Significant

Table 22-8: Summary of Utility Conflicts – Irish Water

Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
N2 Mainline South Roundabout Ch. 0	Water Main	2 no. water mains proposed roundabout junction and associated links to existing N2.	Water mains and associated apparatus to be protected in place during construction.	Not Significant
N2 Mainline Rosnaree Road Ch. 1100	Water Main	Water main runs along existing Rosnaree road which is to be replaced with overbridge.	Water main to be diverted through duct which will cross overbridge along raised verge.	Not Significant
N51 West Ch. 0 to 420	Water Main	Water main runs underneath realigned carriageway and verge.	Water mains and associated apparatus to be protected in place during construction.	Not Significant
N51 West Ch. 420 to 710	Water Main	Water main runs underneath existing verge adjacent to realigned road.	Water mains and associated apparatus to be protected in place during construction.	Not Significant
N51 West Ch. 710 to 815 / N2 Mainline Ch. 2250	Water Main	Water main runs underneath verge along redundant section of existing N51, crossing under proposed N2 Mainline alignment. Proposed road alignment is in shallow cutting at this location and it is considered that there will be insufficient remaining cover depth to keep existing water main in place.	Water main to be diverted to proposed road verge along realigned N51 with perpendicular crossing of N2 Mainline.	Not Significant
N51 East Ch. 500 to 600	Water Main	Water main runs underneath realigned carriageway and verge.	Water main and associated apparatus to be protected in place during construction. Additional protection measures may be required due to reduction in cover depth.	Not Significant
N2 Mainline North Roundabout – N2 South and N2 North Links Ch. 3495	Water Main	Water main runs along redundant section of existing N2. Existing culvert to be removed at this location which will lead to severance of water main.	Water main to be diverted to proposed road verge along links to existing N2 and around North Roundabout with perpendicular crossing of N2 Mainline.	Not Significant
Public Realm N51 Main Street West, northern verge Ch. 29	Water Main	Crosses area of a proposed tree pit.	Water main to be slewed to avoid tree pit.	Not Significant
Public Realm N51 Main Street West, southern verge Ch. 60	Water Main	Crosses area of a proposed tree pit.	Water main to be slewed to avoid tree pit.	Not Significant

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Location	Service	Conflict	Design Measure to Address Conflict	Significance of Impact
Public Realm N51 Main Street West, southern verge Ch. 150 to Ch. 180	Water Main	Crosses area of a proposed tree pit.	Water main to be slewed to avoid tree pit.	Not Significant
Public Realm N2 South, western verge Ch. 1010 to Ch. 1030	Water Main	Potential conflict with proposed landscape planting.	Exact location of watermain to be confirmed on site to avoid clash with proposed planting.	Not Significant
Public Realm N51 Main Street East, northern verge Ch. 83 to Ch. 100	Water Main	Potential conflict with proposed landscape planting.	Exact location of watermain to be confirmed on site to avoid clash with proposed planting.	Not Significant

Key – OH: Overhead; **UG:** Underground

22.4.2 Operational Phase

No significant impacts to utilities are predicted during the operational and maintenance phase of the Proposed Scheme.

22.4.3 Cumulative Impact

A cumulative impact assessment (CIA) has been undertaken to consider potential for cumulative impact of the Proposed Scheme with other approved development. The detailed methodology for the CIA is described in **Chapter 25 – Cumulative Effects**. The assessment has considered cumulative sources and impact pathways which could impact on Material Assets: Utilities.

The projects listed in **Appendix 25.2** have been assessed. Each project has been considered on a case-by-case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/ temporal scales involved. For Material Assets: Utilities, the main source of impacts relates to temporary diversions and permanent relocation of built services during the construction phase of the Proposed Scheme, none of which are significant in EIA terms.

In considering the nature and type of projects listed in **Appendix 25.2**, one project is identified as potentially relevant, the Stanley Hill treated water storage tank (PR 1), as this relates to the water supply service for Slane village. However, the existing storage tank is likely to have already been upgraded, due to the duration of the construction period identified and the timelines outlined in the project's EIA screening report.

As such, it is considered that there is no potential for significant cumulative effects (either positive or negative) to arise during either the construction or operational phases of the Proposed Scheme with other approved projects for the topic of Material Assets: Utilities.

22.5 Mitigation Measures

22.5.1 Construction Phase

In the majority of cases, conflicts with utilities have been mitigated through the design evolution. Additional mitigation in the construction stage, in the main relates to ongoing liaison and coordination with service providers, advance notice to local residents and business of any temporary interruptions to service and timely reconnection where disruption is required.

The general good practice measures required to be implemented by the contractor in liaison with MCC in relation to Material Assets: Utilities are as follows:

- All existing services will be confirmed prior to construction using service records, further GPR surveys and slit trenches to ensure that their position is accurately identified before excavation works commence.

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- Enabling works on utilities shall be programmed to maintain connections, or at least minimise downtimes, to public and private customers.
- Early consultation shall be undertaken with service providers to enable providers to reroute their service during non-peak periods to maintain connections to customers.
- Where diversions, or modifications are required to utility infrastructure:
 - It will be planned in advance by the appointed contractor and adequate notice (not less than 14 days) will be given to all impacted properties; and
 - Notification shall include information on when interruptions and works are scheduled to occur and the duration of such interruption. Any required works will be carefully planned by the appointed contractor to ensure that the duration of interruptions is minimised in so far as is practicable.
- Where works are required in and around known utility infrastructure, precautions will be implemented by the appointed contractor to protect the infrastructure from damage and avoid unplanned interruptions.
- Any damage to services as a result of the Proposed Scheme shall be repaired / replaced without delay.
- Safety procedures will be put in place to minimise the risk to utility provider personnel and the general public during works on services. Protection measures during construction will include warning signs and markings indicating the location of utility infrastructure, safe digging techniques in the vicinity of known utilities, and in certain circumstances where possible, isolation of the section of infrastructure during works in the immediate vicinity.
- Alternative connections shall be provided before any connections are severed. Supply to existing services will be maintained as far as possible during construction.
- All proposed relocation / diversion works shall be delivered through the appropriate service provider processes e.g. Irish Water Developer Services – Diversion process.
- For unknown utilities encountered during construction works, further liaison with utility providers will be required to establish the preferred solution.
- Works effecting underground services shall be carried out strictly in accordance with the HSA (2016) Code of Practice for Avoiding Danger from Underground Services.
- Works affecting electricity services must also be carried out strictly in accordance with the ESB (2019) Code of Practice for Avoiding Danger from Overhead Electricity Lines. Where construction equipment passes under lines, goalpost barriers will be established within a lateral distance of 6 m either side of the line, ensuring that tall vehicles will not come into contact with overhead lines during construction. A no-tip zone will also be established within 10 m of power lines. All proposed poles will be placed at a sufficient distance from proposed earthworks.
- For 220 kV lines, an exclusion zone shall be established within a 6 m radius of the overhead lines and a hazard zone will be established within a lateral distance of 10 m either side the lines.
- The ESB shall be contacted in a timely manner prior to finalising any designs of infrastructure within 30 m of the 220 kV centreline to ensure that all relevant Building Safety Clearances from the 220 kV OHL are in place.
- For the low voltage network of 10 kV, 20 kV, and 38 kV lines, an exclusion zone shall be established within a 3 m radius of the overhead lines and a hazard zone will be established within a lateral distance of 6 m either side the lines.
- All proposed poles will be placed at a sufficient distance from proposed earthworks.
- As part of the Public Realm Enhancement proposals, existing overhead services will be relocated underground, and poles removed throughout Slane village Architectural Conservation Area (ACA) where reasonably practicable.
- Ducting shall be provided, where required and where practicable, to allow for the provision of services across the newly developed road and any lands compulsorily acquired to severed/retained properties and areas.

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- The relocation of the two poles on the southern bank of the River Boyne to facilitate diversion of the ESB line shall be outside the 10 m setback from the riverbank which is required to protect the riparian zone (see **Chapters 5, 15 and 16** for further details).
- The temporary access route along the field to reach the relocation point for the poles shall be achieved without the need to remove or cut back any hedgerow or tree line.

22.5.2 Operational Phase

As noted above, ducting shall be provided, where required and where practicable, to allow for the provision of services across the newly developed road and any lands compulsorily acquired to severed/retained properties and areas. Same will be retained during the operational phase and wayleaves will be maintained or granted to provide for continuation of all services to any homes/ properties where services have been intersected across the lands compulsorily acquired.

No other significant effects have been identified for the operational phase and as such no further mitigation measures are required.

22.6 Residual Impacts

The implementation of mitigation measures will ensure minimal disruption to utilities and plant infrastructure. The residual impacts associated with utilities mitigation measures are considered to be **Negligible**.

22.7 Monitoring

No specific monitoring is required.

22.8 Chapter References

- EPA (2022) Guidelines on information to be contained in the Environmental Impact Assessment Report.
- ESB (2019) Code of Practice for Avoiding Danger from Overhead Electricity Lines. ESB Networks 2nd Ed.
- HSA (2016) Code of Practice for Avoiding Danger from Underground Services.
- MCC (2021) Meath County Development Plan 2021-2027.