

# 21. Material Assets

## Scope of the Assessment

21.1. Material Assets is a broad term that encompasses a wide range of features and which could cover almost all physical or non-physical sectors of the environment that could be said to have material value. It should be noted that there is no commonly accepted meaning of the term. In the context of this proposed scheme and the potential environmental impacts of this, the term 'Material Assets' is taken to refer to the following:

- Utility Infrastructure;
- Electricity;
- Gas;
- Water (including private installations);
- Telecommunications;
- Aviation Safety;
- Rights of Way; and
- Minerals (e.g. sand & gravel).

21.2. All relevant scoping responses have been duly considered within this assessment.

## Method of Assessment

21.3. A desktop study and site visit have taken place in order to determine material assets in the wider area. Consultation has also taken place with the statutory utility providers, St Angelo Airport and Fermanagh and Omagh District Council (FODC).

21.4. The significant criteria will be that which is outlined in DMRB Volume 11, Section 2, Part 5, HA205/08 'Assessment and Management of Environmental Effects' and uses the matrixes outlined in Section 5 of this report.

21.5. It is considered that the proposed scheme would not have any significant impact on material assets in the area and therefore operational impacts are not considered in this assessment.

## Baseline Conditions

21.6. Within the general area of the proposed scheme there are a wide range of material assets as described:

### Utility Infrastructure

#### Electricity

21.7. There is existing NI Electricity Networks (NIE) cables located along the entire length of the study area including both 11kV and 33kV cables (Figure 21-1). The 11kV cables are carried by poles and the 33kV are carried by pylons and poles. Underground cables rated Medium Voltage and 11Kv are present in the eastern extents of the scheme, traversing the Dublin Road and extending to Killyhevlin Industrial Estate. SONI who work in co-operation with NIE to develop the electricity grid infrastructure for NI have no independent assets in the area.

#### Gas

21.8. It was confirmed through consultation that there is no natural gas infrastructure in the area of the proposed scheme. Scotia Gas Networks (SGN) Limited Natural Gas will however be commencing main laying potentially in 2018/2019 in Enniskillen. SGN Natural Gas have stated that their proposed design will not interfere with the proposals as it intends diverting off the A4 before the point of the scheme and laying the gas main along the Lough Yoan Road before

returning to the A4 after the proposed works. As a result of this, this material asset hasn't been considered further.

## Water

- 21.9. NIW are responsible for both water supplies and sewers within this study area. Existing NIW infrastructure (figure 21-2) is located in the main roads at the eastern and western extents of the scheme. There is also a foul pumped sewer that runs along the concrete track in Lisgoole estate and cuts through the mid-section of the proposed scheme.

## Telecommunications

- 21.10. There is an existing network of fixed and mobile telephone and broadband communications surrounding the proposed development site. BT are the only telecommunication provider in the immediate area and their current infrastructure is displayed in Figure 21-2.

## Aviation Safety

- 21.11. St. Angelo Airport is located approximately 6km from the proposed scheme. During consultation, the Enniskillen Airport replied stating that they had no concerns with the provision of the proposed scheme. The issue of aviation safety is therefore not considered further within this assessment.

## Rights of Way

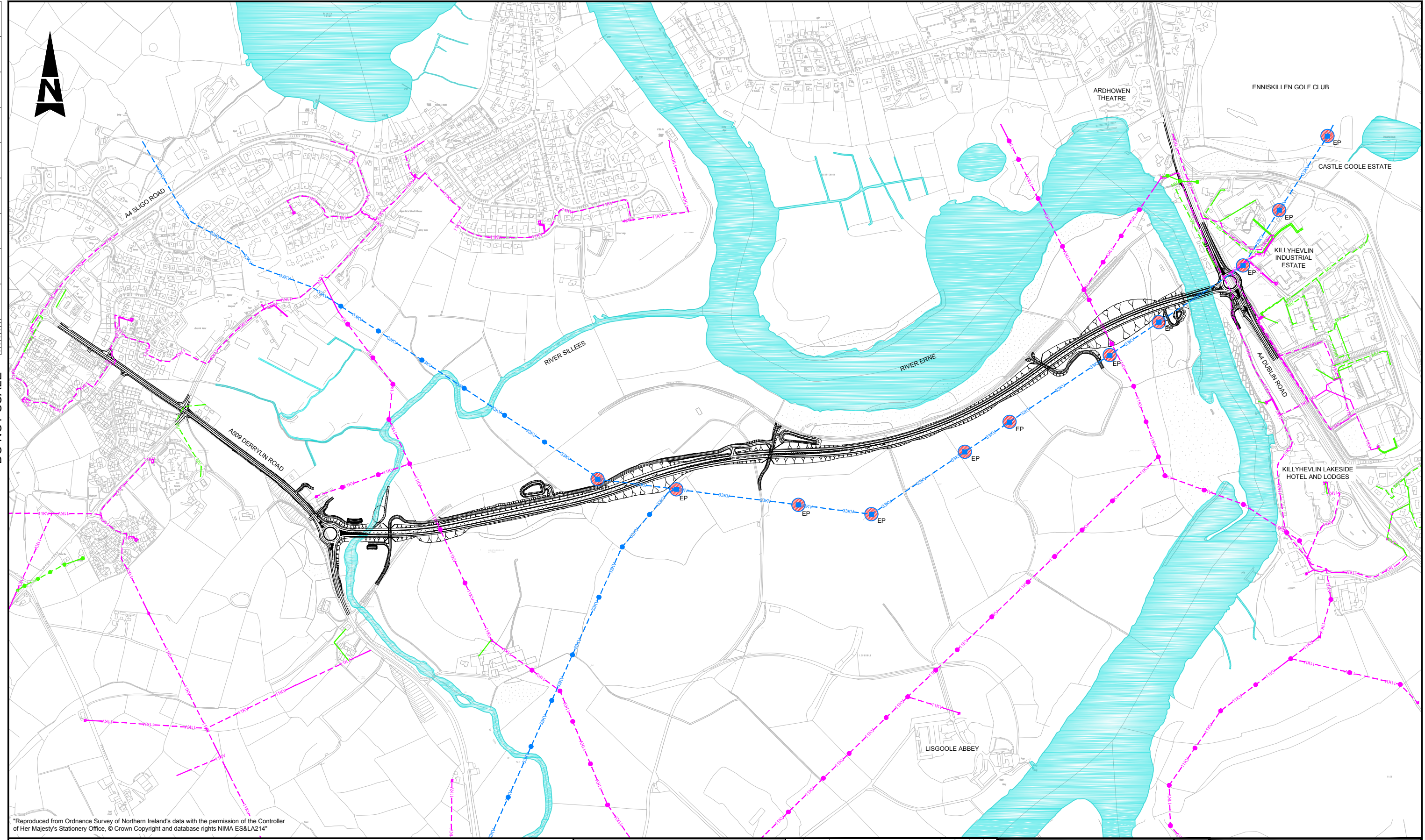
- 21.12. The closest noted right of way is the Bellanaleck Loughshore Walk which is located 3km south of the scheme at its closest point. Another walking route is 'Lisnaskea to Florencecourt' which is included in the Ulster Way walks at its closest point it is approximately 8km southwest of the proposed scheme. The issue is therefore not considered further in this assessment.

## Minerals

- 21.13. There are no extractive quarries in the immediate vicinity of the proposed scheme. The issue of minerals is therefore not considered further within this assessment.

100  
Millimetres

10  
0  
DO NOT SCALE



\*Reproduced from Ordnance Survey of Northern Ireland's data with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright and database rights NIMA ES&LA214\*

- NOTES:
- DO NOT SCALE FROM THIS DRAWING.
  - PROPOSED SCHEME IS SHOWN FOR REFERENCE ONLY.

LEGEND:	
	PROPOSED SCHEME
	OSNI MAPPING
	WATER BODY
	33 kV OVERHEAD CABLES
	11 kV UNDERGROUND CABLES
	11 kV OVERHEAD CABLES
	33 kV ELECTRICITY PYLON
	33 kV ELECTRICITY PYLON CLEARANCE ZONE
	MV UNDERGROUND CABLES
	MV OVERHEAD CABLES

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).							
Construction	None						
Maintenance / Cleaning	None						
Use	None						
Decommissioning / Demolition	None						
Rev.	Date	Description	Org	CHK'd	App'd	Aur'd	
P01	20/02/18	FIRST ISSUE		LG	DT	AO	AM

**FOR INFORMATION**

**ATKINS**  
Member of the SNC-Lavalin Group

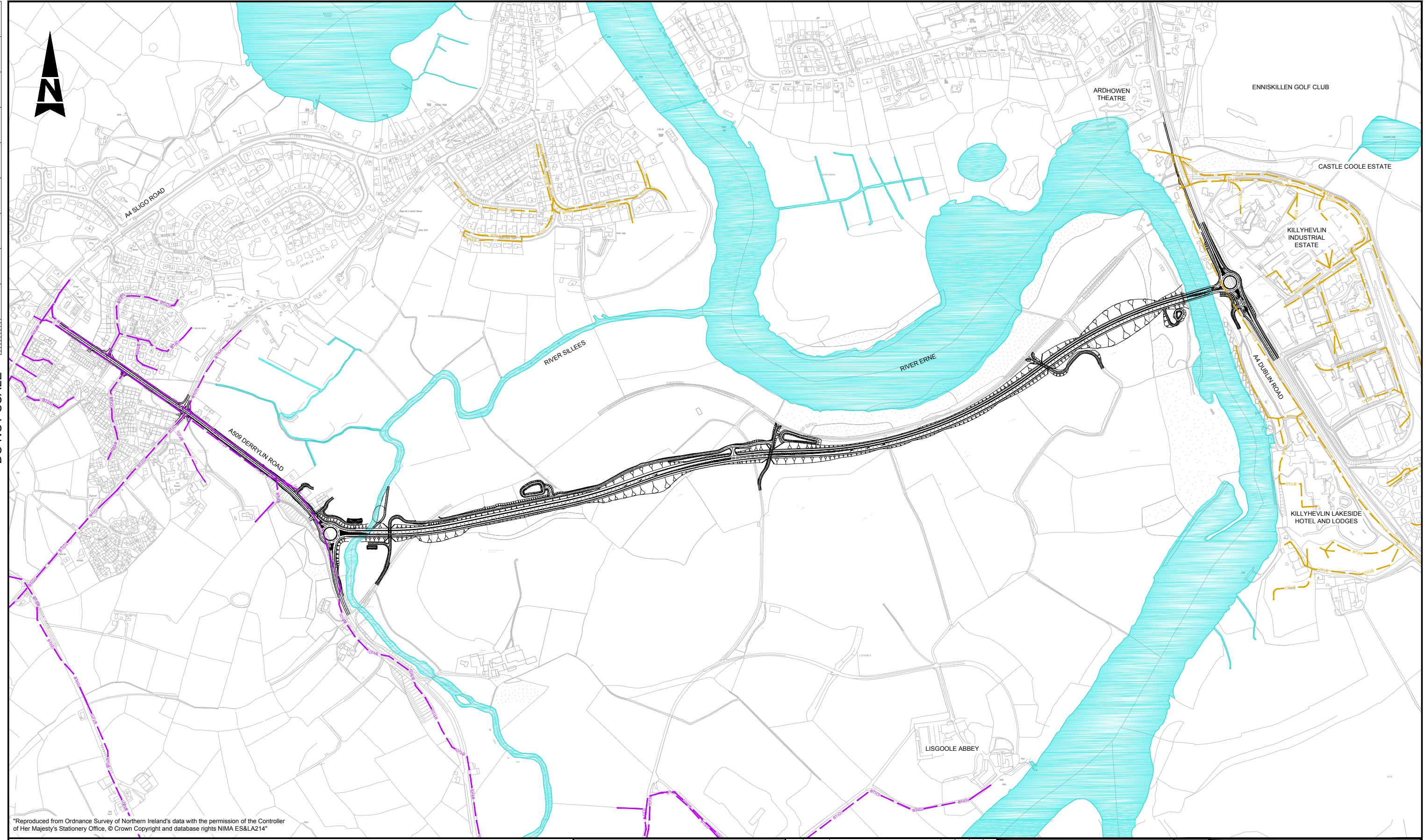
71 Old Channel Road  
Belfast  
Co. Antrim  
Northern Ireland  
BT3 9DE  
Tel: +44 (0)2890 788600  
Fax: +44 (0)2890 788688  
www.atkinsglobal.com

Copyright © Atkins Limited (2018)

Client: **Infrastructure**  
An Roinn  
**Bonneagair**  
www.infrastructure-ni.gov.uk

Design Status	S2				
Project Title	A4 Enniskillen Southern Bypass				
Drawing Title	FIGURE 21-1				
EXISTING ELECTRICAL ASSETS					
Scale	NTS	Originator	Checked	Approved	Authorised
Original Size	A3	Date	Date	Date	Date
Drawing Number	Project	Originator	Volume	Project Ref. No.	
	ESB - ATK - EUT - X0000 - DR - D - 0001			5148441	
Location	Type	Role	Number	Revision	
				P01	

100  
Millimetres  
0 10  
DO NOT SCALE



\*Reproduced from Ordnance Survey of Northern Ireland's data with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright and database rights NIMA ES&LA214\*

- NOTES:
- DO NOT SCALE FROM THIS DRAWING.
  - PROPOSED SCHEME IS SHOWN FOR REFERENCE ONLY.

LEGEND:

	PROPOSED SCHEME
	OSNI MAPPING
	WATER BODY
	BT OVERHEAD
	BT UNDERGROUND

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction	None
Maintenance / Cleaning	None
Use	None
Decommissioning / Demolition	None

P01	20/02/18	FIRST ISSUE	LG	DT	AO	AM
Rev.	Date	Description	Org	CHK'd	App'd	Aur'd

FOR INFORMATION

**ATKINS**  
Member of the SNC-Lavalin Group

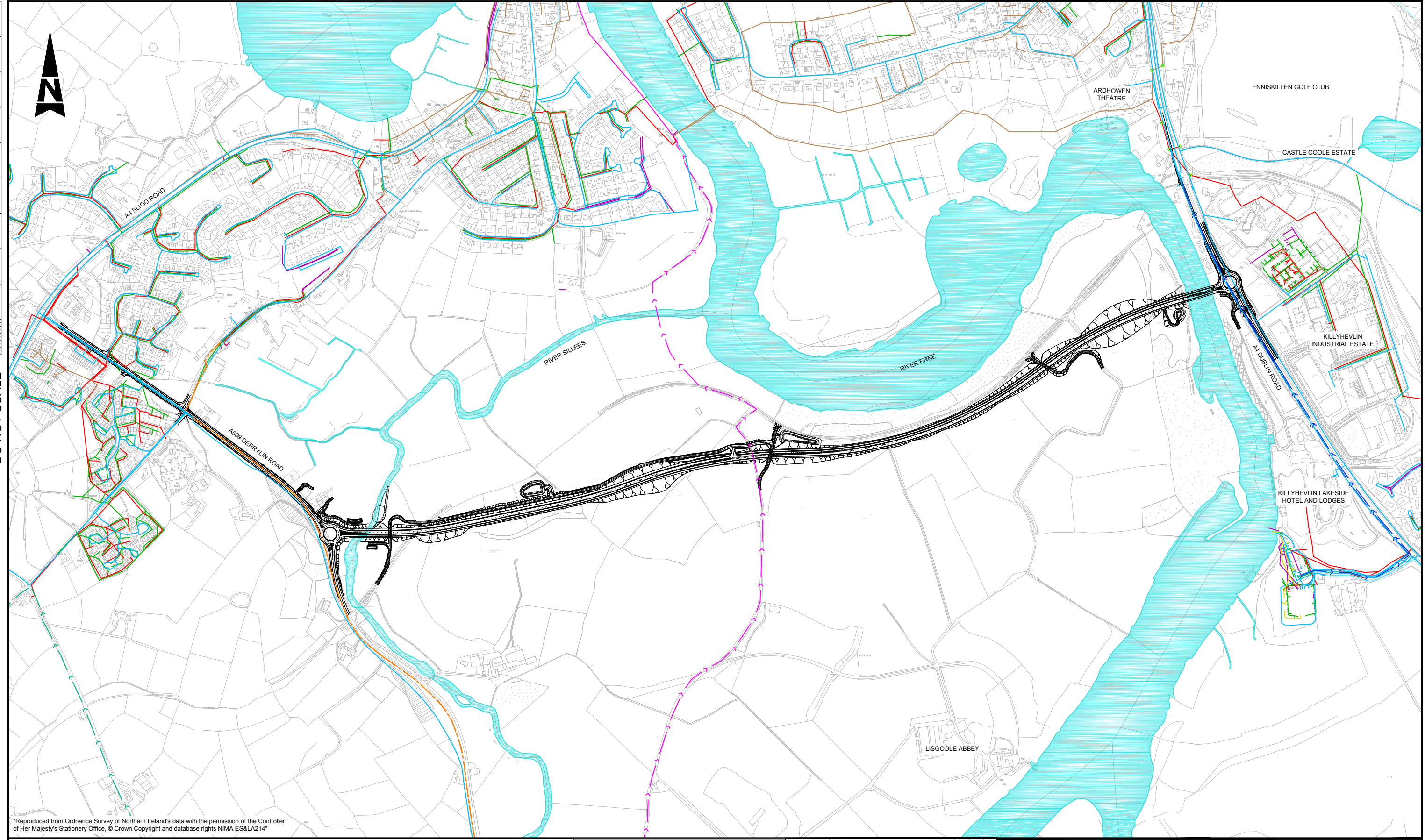
71 Old Channel Road  
Belfast  
Co. Antrim  
Northern Ireland  
BT3 9DE  
Tel: +44 (0)2890 788600  
Fax: +44 (0)2890 788688  
www.atkinsglobal.com

Copyright © Atkins Limited (2018)

Client: Department for Infrastructure  
**Bonneagair**  
www.infrastructure-ni.gov.uk

Design Status	S2	Project Title	A4 Enniskillen Southern Bypass			
Drawing Title	FIGURE 21-2 EXISTING BT ASSETS					
Scale	NTS	Originator	Checked	Approved	Authorised	
Original Size	A3	Date	Date	Date	Date	
Drawing Number	Project	Originator	Volume	Project Ref. No.		
	X0000 - DR - D - 0002	ESB - ATK - EUT -		5148441		
Location	Type	Role	Number	Revision		
				P01		

100  
Millimetres  
0 10  
DO NOT SCALE



\*Reproduced from Ordnance Survey of Northern Ireland's data with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright and database rights NIMA ES&LA214\*

- NOTES:
- DO NOT SCALE FROM THIS DRAWING.
  - PROPOSED SCHEME IS SHOWN FOR REFERENCE ONLY.

LEGEND:	
	PROPOSED SCHEME
	OSNI MAPPING
	WATER BODY
	UNIDENTIFIED SEWER
	COMBINED SEWER
	STORM SEWER
	FOUL SEWER
	FOUL PUMPED SEWER
	MAINS PUMPED DISTRIBUTION
	MAINS DISTRIBUTION
	MAINS RAW WATER
	MAINS TRUNK
	UNKNOWN
	MANHOLE

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).			
Construction			
None			
Maintenance / Cleaning			
None			
Use			
None			
Decommissioning / Demolition			
None			
PO1	21/02/18	FIRST ISSUE	
Rev.	Date	Description	Org
			Chk'd
			App'd
			Aur'd

FOR INFORMATION

**ATKINS**  
Member of the SNC-Lavalin Group

71 Old Channel Road  
Belfast  
Co. Antrim  
Northern Ireland  
BT3 9DE  
Tel: +44 (0)2890 788600  
Fax: +44 (0)2890 788688  
www.atkinsglobal.com

Copyright © Atkins Limited (2018)

Department for  
**Infrastructure**  
An Roinn  
**Bonneagair**  
www.infrastructure-ni.gov.uk

Design Status	S2			
Project Title	A4 Enniskillen Southern Bypass			
Drawing Title	FIGURE 21-3 EXISTING NI WATER ASSETS			
Scale	NTS	Originator	Checked	Approved
Original Size	A3	RM	DT	AO
Date	21/02/18	Date	21/02/18	Date
Date	21/02/18	Date	21/02/18	Date
Drawing Number	Project		Originator	Volume
514841	ESB - ATK - EUT - X0000 - DR - D - 0003			
Project Ref. No.	Revision		Number	
514841	P01			

## Impact Assessment

Table 21-1 Construction Phase Impacts

Baseline		Baseline					
Receptor	Value / sensitivity	Impact	Pre-Mitigation Impact Magnitude	Mitigation measure	Impact magnitude	Residual effect	Significance of effect
Electricity Network	High	Construction activities will cause disruption to the existing network. The proposed scheme will require the diversion of existing NIE cables underneath the River Erne and along the Lough Yoan Road. A new termination tower will be located in the Castle Coole Estate.	Major Adverse	Connection of the proposed scheme to the existing electricity supply networks will be carried out by Northern Ireland Electricity using their standard construction methodologies. Mitigation measures to be utilised would be a matter for NIE and precise details are not known at this stage. Environmental obligations to be addressed by NIE.	Minor Adverse	Temporary impact only. Public will be notified of any disruption to supply.	Slight Adverse <b>Not Significant</b>
Water Network	High	4 mains that are crossed by the proposed scheme will be affected as well as temporary disruption to allow the connection of any new mains provided.	Major Adverse	Any mains affected will be diverted/replaced by NI Water. Environmental obligations to be addressed by NI Water.	Minor Adverse	Temporary impact only. Public will be notified of any disruption to supply.	Slight Adverse <b>Not Significant</b>
Telecommunications Network	Very High	Construction activities could cause disruption to the existing BT network during the works.	Major Adverse	Connection of the proposed scheme to existing as well as new infrastructure will be carried out by BT and the contractors using their standard construction methodologies. Mitigation measures to be utilised would be a matter for BT and	Negligible	Temporary impact only. Public will be notified of any disruption to supply.	Slight Adverse <b>Not Significant</b>

Baseline		Baseline					
Receptor	Value / sensitivity	Impact	Pre-Mitigation Impact Magnitude	Mitigation measure	Impact magnitude	Residual effect	Significance of effect
				the contractors however precise details are not known at this stage. Environmental obligations to be addressed by BT.			

Table 21-2 Operational Phase Impacts

Baseline		Baseline					
Receptor	Value / sensitivity	Impact	Pre-Mitigation Impact Magnitude	Mitigation measure	Impact magnitude	Residual effect	Significance of effect
Electricity Network	High	Removal and repositioning of pylons and burying of cables.	Major Beneficial	N/A	Major Beneficial	Beneficial impacts in terms of visual, ecological (no bird strikes, especially along river) and potential economic/commercial advantages by freeing space previously occupied by pylons.	Large Beneficial <b>Significant</b>

## Mitigation Measures

### Construction

- 21.14. All utility services discovered on the site will be treated as 'live' until proven otherwise. The coordination of switchovers and temporary disruptions for new connections to utility infrastructure will be undertaken in accordance with the standard procedures of the relevant statutory authorities.

### Electricity

- 21.15. A risk assessment will be carried out to determine the most effective means of protecting the electricity pylons and cables which flank the site. This risk assessment will be compiled in consultation with NI Electricity (NIE) to ensure that all works are conducted in a safe manner and that existing supplies are not damaged.
- 21.16. Through consultation with NIE an arrangement has been made that their existing high voltage underground network apparatus will be repositioned due to the location of the proposed scheme.
- 21.17. The existing electricity lines in the area will be identified and protected for the duration of the works. Protection measures will include clear marking of underground routes and warning structures adjacent to any overhead power lines which may cross the site. If any such lines need to be diverted, temporary supplies will be provided.
- 21.18. Services which are confirmed as redundant will be removed by grubbing up where they impact upon the permanent works. Any cabling or other materials derived from this work will be assessed in respect of reuse or recycling opportunities. These removal works will not extend beyond the site boundary.

### Water

- 21.19. All water mains traversing the proposed roundabouts on the Dublin Road and Derrylin Road are to be replaced and realigned in accordance with the new road layout.

### Telecommunications

- 21.20. The proposed scheme will include diversionary works to ensure BT infrastructure such as poles and overhead cables are installed in line with the proposed scheme including both the bypass and footway along the eastern edge of the Derrylin Road.
- 21.21. For future development spare ducting will be provided in the footway of the bypass by the main contractor.
- 21.22. The BT overhead cables are to be repositioned underground in new ducts and boxes provided in the footways to allow recovery of existing poles.

## Summary

- 21.23. The proposed scheme will impact on material assets in the immediate locale. Impacts will be experienced for the most part during the construction stage of the project. It is considered that any effects will not be significant and temporary in nature.
- 21.24. Operationally it is anticipated that a (major) significant beneficial effect will be experienced through the removal of pylons and the burial of cables. Visually this will be beneficial and it will also make additional space available e.g. within the plant hire centre in the Killyhevlin Industrial Estate.