Kildare Meath Grid Upgrade

Appropriate Assessment Screening Report

January 2024

EirGrid

CP966

Appropriate Assessment

Project No:	321084AH
Document Title:	Appropriate Assessment Screening Report.
Document No.:	KMGC-JAC-TN-0210-Screening Report Jan 24
Revision:	Final
Document Status:	Final
Date:	January 2024
Client Name:	EirGrid
Client No:	CP966
Project Manager:	Stephanie Moffatt
Author:	Stuart Cossey
File Name:	KMGC-JAC-TN-0210-Screening Report Jan 24

Jacobs Engineering Ireland Limited

Merrion House
Merrion Road
Dublin 4, D04 R2C5
Ireland
T +353 (0)1 269 5666
F +353 1 269 5497
www.jacobs.com

Document history and status

Revision	Date	Description	Author	Checked	Reviewed	Approved
Final	January 2024	Final	StC	SC	SC	SM

Contents

Glossary of Terminology, Abbreviations and Acronyms

Term, Abbreviation or Acronym	Description
AA	Appropriate Assessment
ACIEEM	Associate Member of the Chartered Institute of Ecology and Environmental Management
AESI	Adverse Effects on Site Integrity
BPRO	Best Performing Route Option
CEMP	Construction Environmental Management Plans
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Conservation Objectives
CP1021	Capital Project 1021
cSAC	Candidate Special Area of Conservation
DoEHLG	Department of Environment, Heritage and Local Government
ECJ	European Court of Justice
EC	European Commission
EPA	Environmental Protection Agency
GIS	Gas Insulated Switchgear
HDD	Horizontal Directional Drilling
IROPI	Imperative Reasons of Overriding Public Interest
LSE	Likely Significant Effects
MCIEEM	Member of the Chartered Institute of Ecology and Environmental Management
MIFI	Member of the Institute of Fisheries Management
MRSB	Member of the Royal Society of Biology
NBDC	National Biodiversity Data Centre
NIS	Natura Impact Statement
NPAD	National Planning Application Database
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
OPR	Office of the Public Regulator
PECR	Planning and Environmental Considerations Reports
pSPA	Potential Special Protection Area
QI	Qualifying Interest
SAC	Special Areas of Conservation
SCI	Special Conservation Interest
SPA	Special Protection Areas
TII	Transport Infrastructure Ireland
UGC	Underground Cable
WFD	Water Framework Directive
ZoI	Zone of Influence

1. Introduction

1.1 Background

This Appropriate Assessment (AA) Screening Report is in relation to the Kildare Meath Grid Upgrade Project, Capital Project 0966 (CP 0966) (the "Proposed Development"). This project involves improvements to the transfer of electricity to the east of Ireland and its distribution within the network in Meath, Kildare, and Dublin. The project will help meet the growing demand for electricity in the east which is due to an increase in economic activity and the planned construction of a number of data centres and other industrial users in the area. The Proposed Development aims to strengthen the transmission network between Dunstown substation in Kildare and Woodland substation in Meath.

Jacobs was engaged by EirGrid to prepare the AA Screening Report for the Proposed Development which is provided to inform the AA Screening determination by An Bord Pleanála (ABP), the competent authority for this application. The Proposed Development comprises the installation of a 400 kV underground cable (UGC) between Dunstown substation in the townland of Dunstown in County Kildare in the south and Woodland substation in the townland of Woodland in County Meath in the north, as well as upgrades to both substations. A description of the Proposed Development is provided in Section 1.2. The route alignment is shown in Figure 1.1.

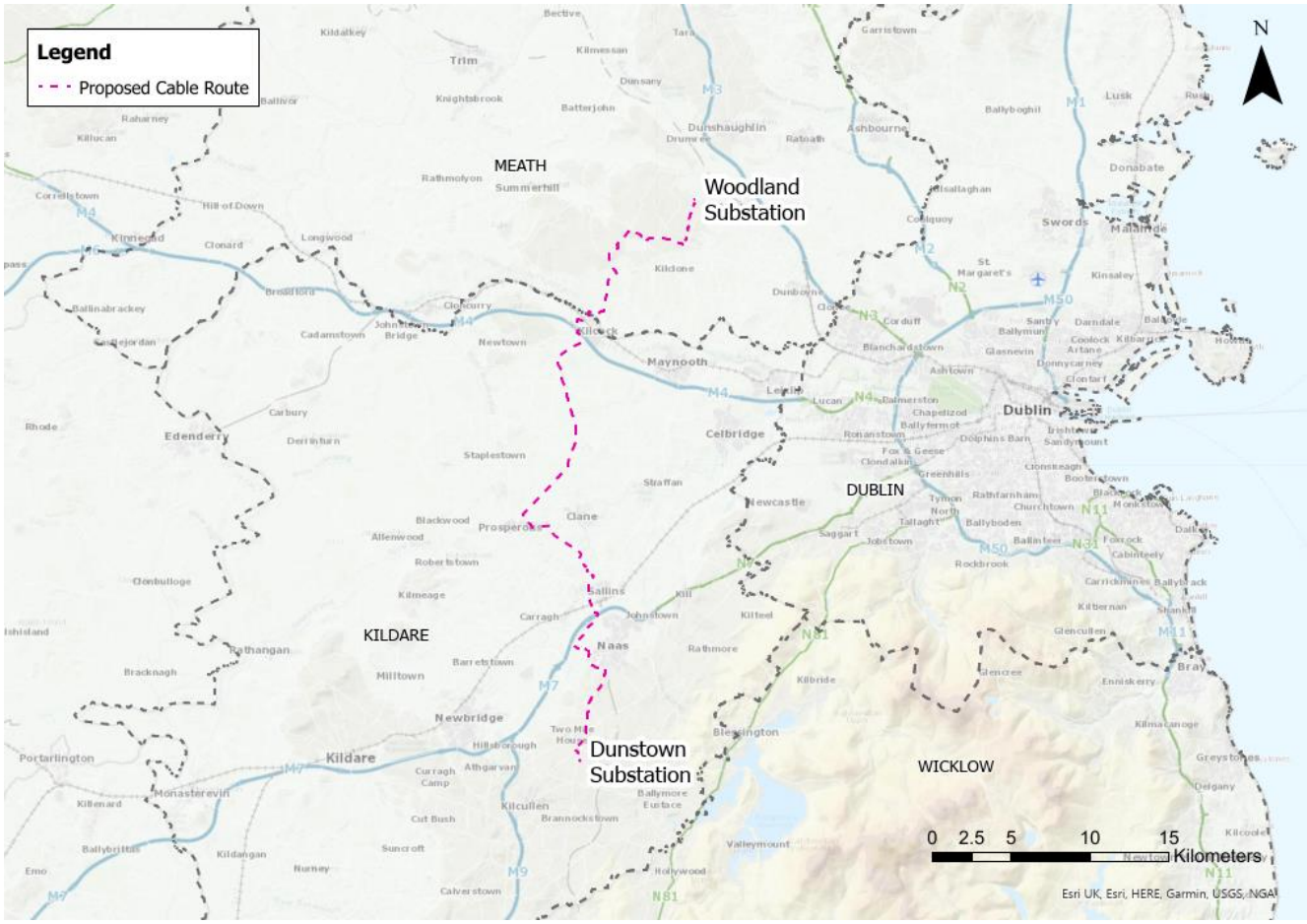


Figure 1.1: Proposed cable route alignment

The Proposed Development will assist in the transfer of electricity from the south and southwest region of Ireland to the east region, and its subsequent distribution within the network in Meath, Kildare and Dublin. A significant number of Ireland's electricity generators are in the south and southwest regions, where many wind farms and some modern electricity generators are located. The power that is generated in these regions needs to be transported to where it is needed – known as demand centres. The power is mainly transported cross-country on

the two existing 400 kV lines from Moneypoint station in County Clare to Dunstown substation in County Kildare and Woodland substation in County Meath. The Proposed Development will connect these two nodes, and this will thereby strengthen the transmission network by improving reliability and security in the east region.

The Proposed Development is essential to meet the Government of Ireland's Climate Action Plan target of up to 80% renewable energy by 2030. The Proposed Development will also help meet the growing demand for electricity in the east region.

There are two drivers that underpin the need for this Proposed Development, namely:

1. Increased demand on East coast – An increase in electricity demand as part of natural growth is expected. In addition, there is a demand increase in the order of 1200 MW due to the planned connection of high energy users. This is based on executed and offered connection agreements mostly in the counties Kildare, Meath and Dublin. Part of this demand started to connect to the system in 2017 and is ramping up to the total demand figure in 2030. The interest is high, and it is expected that this trend will continue with further requests for connection.

2. Integration of generation from the South and South West regions – Significant levels of new renewable generation have connected or are in the process of connecting to the transmission and distribution system in the south and southwest of Ireland. This is also where the newer and more cost effective existing conventional generation units are located. This results in a scenario whereby a significant portion of the generation sources are located in the south and southwest of Ireland away from the main demand centres within the Dublin and Greater Dublin Area, and East region in general. The power produced will hence have to be transported to get to where it is needed (known as demand centres).

These two drivers introduce cross country power flows on the existing transmission system from the West to the East coast. The Proposed Development is needed to ensure compliance with EirGrid's Transmission System Security Planning Standards (TSSPS). To ensure transmission system reliability and security, the performance of the network is compared with the requirements of the Transmission System Security and Planning Standards which are available at www.eirgridgroup.com.

The violations occur for the unplanned loss of any of the existing 400 kV circuits between Moneypoint 400 kV station in the West and Dunstown 400 kV in County Kildare and Woodland 400 kV station in County Meath in the East. The violations relate to two aspects:

- Bringing required power to the East coast; and
- Transferring this power within Counties Dublin, Kildare and Meath once the power reaches the East coast.

The power is currently transported cross-country on the two existing 400 kV lines from the Moneypoint station in County Clare to the Dunstown substation in County Kildare and Woodland substation in County Meath. Transporting large amounts of electricity on these 400 kV lines could cause problems that would affect the security of electricity supply throughout Ireland, particularly if one of the lines is lost unexpectedly. To solve this emerging issue, EirGrid needs to strengthen the electricity network between Dunstown and Woodland to avoid capacity and voltage problems. The Proposed Development will help transfer electricity to the east of the country and distribute it within the network in Meath, Kildare and Dublin, helping to ensure compliance and resolve the emerging issues identified above.

In summary, the Proposed Development involves improvements to the transfer of electricity to the east of Ireland and its distribution within the network in Meath, Kildare, and Dublin. The will help meet the growing demand for electricity in the east which is due to an increase in economic activity and the planned construction of a number of data centres and other industrial users in the area. CP0966 aims to strengthen the transmission network between Dunstown 400 kV substation in Kildare and Woodland 400 kV substation in Meath. The Proposed Development' (see Section 1.2of this report for further details) which will see the installation of a 400 kV underground cable (UGC) between Dunstown substation in the south and Woodland substation in the north, including substations upgrades, whose route alignment is shown in Figure 1.1.

1.2 Description of the Proposed Development

1.2.1 Project Description

The Proposed Development consists of the following principal elements:

A. Installation of an underground cable (UGC), approximately 53 km in length, connecting Woodland 400 kV Substation in the townland of Woodland in County Meath and Dunstown 400 kV Substation in the townland of Dunnstown in County Kildare. The development of the UGC will incorporate the following:

- Construction of a trench of approximately 1.5 m in width and approximately 1.3 m in depth in the public road (approximately 43.5 km) and approximately 1.7 m in depth in private lands (approximately 9.5 km) in which the UGC is laid;
- Construction of joint bays, each approximately 10 m in length and 2.5 m in width – with adjacent communication chambers and link boxes along the alignment of the UGC (on average every 750 m). Where the joint bays are located off-road, permanent hardstanding areas will be created approximately 3 m around the joint bays;
- The laying of communication links and fibre optic cables between both substations, running in the same trench as the UGC;
- The laying of twelve no. permanent access tracks (approximately 4 m in width, approximately 4.5 km in length) over private lands to access the off-road joint bays (and adjacent communication chambers and link boxes);
- The provision of six no. temporary construction compounds (approximately 5.7 ha total) and two no. construction laydown areas along the alignment of the cable route;
- The provision of temporary construction passing bays at 33 joint bay locations, each approximately 100m in length and 5.5 m in width;
- The laying of 11 no. temporary construction tracks (approximately 9.5 km in total length);
- All associated water, rail, road and utility crossings using either trenchless drilling or open cut techniques; and
- All associated and ancillary above and below ground site development works, including works comprising or relating to permanent and temporary construction, roadworks, utility diversions and site and vegetation clearance.

B. Installation of additional electrical equipment and apparatus at the Woodland Substation in the townland of Woodland in County Meath. which is similar to the existing infrastructure and will be installed in a substation compound extension (Meath County Council Reference: 22/1550). This will include:

- Installation of a 400 kV feeder bay and associated electrical shunt reactor (approximately 8 m in height);
- Insulators, instrument transformers, overhead conductors, disconnectors, circuit breakers, surge arrestors (approximately 12.6 m in height) in order to connect the bay to the busbar;
- All ancillary site development works including site preparation works, temporary compound, underground cabling, and earthgrid, as required to facilitate the development.

C. Installation of additional electrical equipment and apparatus at the Dunstown Substation in the townland of Dunnstown in County Kildare which are similar to the existing infrastructure and does not require the extension of the substation compound. This will include:

- Installation of a 400 kV feeder bay and associated electrical shunt reactor (approximately 9 m in height);
- an extension to the 400 kV busbar in order to connect the 400 kV cable feeder bay to the existing 400 kV busbar;
- Ten no. lightning masts (approximately 41 m high);

- Insulators, instrument transformers, current transformers, overhead conductors, disconnectors, circuit breakers, surge arrestors (approximately 12.7 m in height) in order to connect the bay to the busbar; and
- An ancillary site development works including site preparation works, temporary compound, underground cabling and earthgrid, surface water drainage, and lighting poles as required to facilitate the development.

It is anticipated that the construction phase for the Proposed Development will last up to 42 months (excluding vegetation clearance). The construction activities will be phased. The basic elements of the construction phase are:

- **Enabling works:** These are works to allow the construction phase to progress, including site investigations and other survey activities, vegetation clearance, construction of access tracks and the temporary construction areas (e.g. compound areas and haul roads on off-road sections);
- **Phase 1: Installation of passing bays and joint bay structures:** The construction of passing bays (where required) at joint bay locations. On completion of the passing bays, it is proposed that the joint bays will be installed at the same time;
- **Phase 2: Excavation and installation of ducts:** A trench will be dug along the cable route, ducts installed, and the road surfacing or agricultural land will be restored. This will also include physical crossings such as motorways, rivers and railways;
- **Phase 3: Installation of cables:** The cables will be installed at joint bay locations within the ducts. The cables will then be jointed (connected) at each joint bay location to allow the installation of a continuous circuit. The circuits will then be tested to ensure they are ready to be commissioned for use;
- **Substation works**: Construction works are required in the existing Woodland and Dunstown substations to connect the underground cable to the existing electrical grid; and
- **Decommissioning**: At this stage, the project will decommission the temporary construction compounds and passing bays and complete any agreed landscaping works.

The proposed underground cable and substation equipment is highly specialised and is generally custom manufactured for such projects. The design of the Proposed Development is based on the current understanding of such equipment and also proposed construction techniques, statutory requirements, consultations with affected landowners, ground conditions, and environmental constraints.

In line with all large infrastructure projects, there will be a period of detailed design after planning consent and when the contractor is appointed. The contractor will confirm the detailed design of the development following on-site detailed, confirmatory surveys, albeit within the scope, nature and location of the approved development (should this proposed development be approved by the consenting authority). Further details of the Proposed Development and proposed construction activities are provided below.

The proposed underground cable and substation equipment is highly specialised and is generally custom manufactured for such projects. The design of the Proposed Development is based on the current understanding of such equipment and also proposed construction techniques, statutory requirements, consultations with affected landowners, ground conditions, and environmental constraints.

In line with all large infrastructure projects, there will be a period of detailed design after planning consent and when the contractor is appointed. The contractor will confirm the detailed design of the development following on-site detailed, confirmatory surveys, albeit within the scope, nature and location of the approved development (should this proposed development be approved by the consenting authority). Further details of the Proposed Development and proposed construction activities are provided below.

The routing of the cable and associated jointing and passing bays took into consideration the location of mature trees along the route. The route and bay positions were moved to avoid mature trees where possible. However, due to narrow treelined roads in several locations and the requirement for set distances between jointing bays, avoidance of vegetation loss was not possible in all areas and to accommodate the trenches for the UGC there will be significant removal of hedgerows, trees, including mature trees, which are lining the road network where the Proposed Development is located.

Six temporary construction compounds are proposed, each approximately one hectare in size. All temporary construction compounds will be secured with hoarding/ fencing around their perimeter as appropriate. Temporary construction compounds will include facilities such as construction phase car parking and welfare facilities and temporary material storage areas as necessary.

The temporary construction compounds are all located with the planning application boundary and are as follows:

- Compound No. 1: Chainage 3250, off the R156 – approximately 0.8 ha;
- Compound No. 2: Chainage 11000, off the R156 – approximately 0.7 ha;
- Compound No. 3: Chainage 21000, off the R407 – approximately 0.9 ha;
- Compound No. 4: Chainage 31000, off the R408 – approximately 1.5 ha;
- Compound No. 5: Chainage 35750, off the L2002 – approximately 1.1 ha; and
- Compound No. 6: Chainage 52000, off the R448 – approximately 0.7 ha.

Both temporary and permanent tracks are proposed. Where a permanent access track is required to access off-road joint bays, this will comprise of 300mm of fill material and finished to 100mm above ground level and will be 4 m wide. The access track will remain in place to allow access to cables should future maintenance works be required. The permanent access track will be designed and constructed to accommodate heavy plant (5t axel loading) movement. There will be twelve permanent access tracks which will maintained by ESB. These tracks will be used infrequently for operational maintenance by ESB. Where an access track crosses an existing field boundary, a gate will be provided to maintain the boundary. Where an access track crosses from one landowner to another, access will be for ESB only and measures will be put into place to ensure livestock do not escape during ESB access (e.g., double gates). The permanent access tracks are provided to the following joint bays: JB1-4 (one access track for all four joint bays); JB8; JB10; JB15, JB21, JB31, JB42, JB49, JB50, JB54, JB60, and JB70. Where a temporary access track is required, engineering stone fill will be laid and compacted and maintained as required for the duration of the works. Once the works are completed, the engineered stone fill will be removed, and the land will be reinstated to its original condition.

Horizonal directional drilling (HDD) is proposed at major watercourse crossings or where there are significant constraints. Launch and reception pits of approximately 3 m x 5 m will be constructed for the HDD holes and will be constructed within the Planning Application Boundary. HDD is proposed at six locations along the cable route including at Rye Water (WB13) which is approximately 6km direct distance over land and approximately 8km hydrologically, at the closest point to the Planning Application Boundary. The HDD temporary construction compound will comprise welfare facilities, car parking, security lighting, launch or receptor pit, areas for material laydown, material storage, waste storage and HDD ducting storage (see Image 6). The site will have gravel handstanding and security fencing.

- HDD Compound Location No. 1: Chainage Centre Point 15100, Rye Water – approximately 0.9 ha and 0.08 ha;
- HDD Compound Location No. 2: Chainage Centre Point 15500, Royal Canal and railway– approximately 0.019 ha and 0.17 ha;
- HDD Compound Location No. 3: Chainage 1 Centre Point 6700, M4 – approximately 0.38 ha and 0.40 ha;
- HDD Compound Location No. 4: Chainage Centre Point 22000, Tributary of Liffey_010– approximately 0.08 ha and 0.14 ha;
- HDD Compound Location No. 5: Chainage Centre Point 37350, River Liffey – approximately 0.11 ha and 0.12 ha; and
- HDD Compound Location No. 6: Chainage Centre Point 44600, Grand Canal – approximately 0.12 ha and 0.39 ha.

1.2.2 Programme and Timing of Works

Subject to the grant of statutory approvals, it is anticipated that the construction phase will commence in Quarter 2, 2025 with the underground cable element of the Proposed Development becoming fully operational after construction and testing in Quarter 3, 2028.

The works at the Woodland Substation are expected to last approximately 24 months while the works at Dunstown Substation are expected to last approximately 12 months and will run concurrently with the cabling works.

Construction activities will gradually phase out from pre-construction to predominantly civil activities followed by commissioning and testing.

It is anticipated that construction will occur during normal working hours i.e. Monday to Friday 7 am to 7 pm and Saturday from 7 am to 2 pm. There may be localised instances where night-time working is required to facilitate traffic management, however, should working outside these hours / days be required they will only be undertaken with prior agreement with Meath and Kildare County Councils.

Clearance of hedgerow, treeline or scrub vegetation, where required, will take place after 31 August and before 1 March in order to protect breeding birds, (i.e. outside of the bird breeding season). Clearance may take place during the restricted period, if a suitably qualified ecologist has determined that nesting birds and other protected species are absent.

Any element of the Proposed Development requiring instream works in watercourses with fisheries value will be restricted to the fisheries open season (i.e. will only take place during the period July to September), unless with the agreement of IFI.

Table 1.1 Indicative Preliminary Construction Programme

Description	Estimated Construction Programme (Months)	2025				2026				2027				2028			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Proposed Development - Construction Duration																	
Overall Construction Duration	42																
Enabling Works	9 *																
Phase 1: Installation of joint bay and passing bay structures	36																
Phase 2: Excavation and installation of cable ducts	24																
Phase 3: Installation and jointing of cables	24																
Substation works	24																
Testing and commissioning	9																
Energisation and permanent works construction complete	3																

*Enabling works will be undertaken as required during this period. Habitat clearance will be completed outside of the bird nesting season.

The main contract works will be adapted to take account of planning and compliance requirements.

Indicative durations for the proposed works are detailed in Table 1.1. Subject to the grant of consents, it is anticipated that installation of the underground cable will take approximately 42 months in total. Safety requirements for the installation operations / procedures, detailed design considerations and weather condition will however ultimately dictate the final programme.

The majority of the construction activities are not dependent on outages on the existing transmission system, however, specific activities associated with the connection at the existing Woodland and Dunstown substations on to the existing transmission infrastructure will be planned and programmed into EirGrid's multi-year outage programme. This is because the existing live infrastructure needs to be switched off during such connection activities. EirGrid, as Transmission System Operator, develops a detailed plan for such outages each year to ensure the undertaking of the safe and efficient construction and maintenance activities involving or in proximity to existing infrastructure.

1.2.3 Underground Cable

1.2.3.1 Overview

There are three key elements of the underground cable construction:

- **Cable Trench** - an approximately 1.5 m in width, 1.3 m in depth in the public road and 1.8 m in depth in private lands in which the underground cable is laid (see Figure 1.2);
- **Joint Bay** - the cable will be delivered in lengths and will need to be connected (jointed) together. This will happen at the Joint Bays which are underground chambers located at various points on the route. Joint Bays are used as locations to pull the cables into the pre-installed ducts and to connect ('joint') together the individual cables and create a single, overall continuous circuit; and
- **Passing Bay** – a temporary traffic lane to allow traffic flow around Joint Bays while construction works are ongoing.

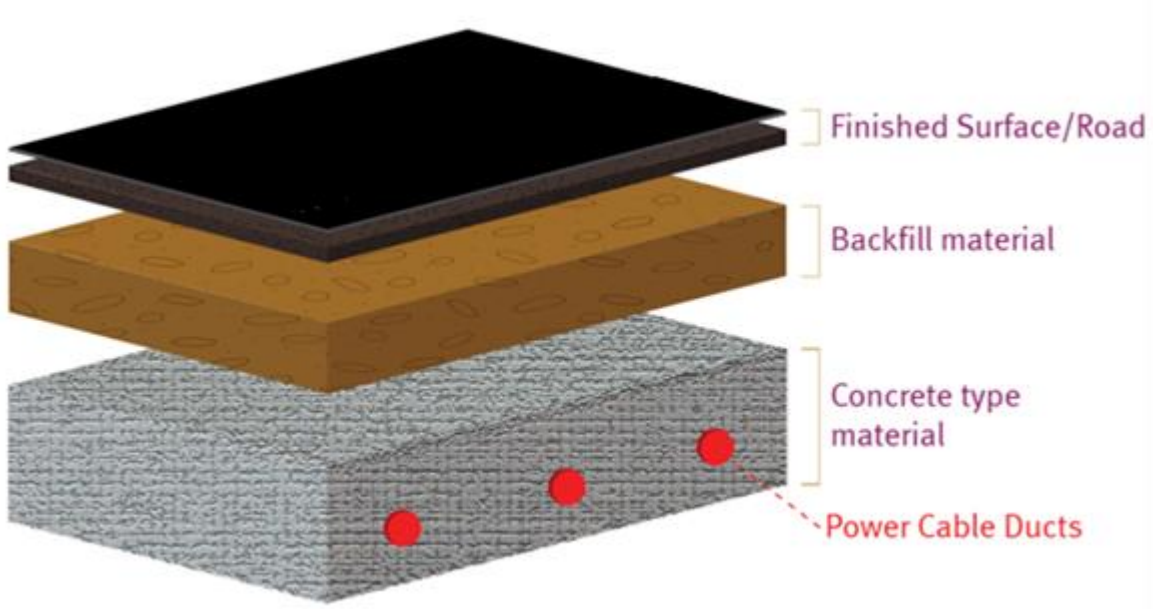


Figure 1.2: Proposed High-Voltage Alternating Current (HVAC) Cable Duct Arrangement (single conductor per phase solution)

The width and depth of the cable trench can vary for crossing of watercourses or utilities and for other technical reasons.

The cable will be delivered to site in individual lengths on cable drums. These lengths will be installed along the route by using 'Joint Bays'.

Smaller buried chambers ('manholes') will be installed alongside various Joint Bay locations. There are two types:

- C2 chambers, which are used to join the fibre optic communication cables pulled into the pre-installed communications ducts; and
- Link box chambers, which are used to accommodate the link box (a device which earths the outer sheaths of the power cables).

As with any telecommunications facilities, these chambers will be provided with removable covers to facilitate access for ongoing maintenance and commissioning works. While the Joint Bays will not require ongoing maintenance, access from the surface is still required in the unlikely event of a cable failure needing replacement.

A proposed Joint Bay under construction is shown in Image 1. An image of a reinstated road after Joint Bay construction is shown in Image 2. Passing Bays to facilitate road traffic management around the 49 proposed Joint Bay construction locations will be required in some locations. There will be 70 Joint Bays along the public road / verge and in off road sections. Passing Bays will be required where the Joint Bays will be in the road carriageways. **Table 1.2** shows locations of both Joint and Passing Bays. A proposed passing Bay is shown in Image 3.

Image 1: Proposed arrangement for a Joint Bay in public roadway.

Image 2: Example of a proposed reinstated road over a Joint Bay (darker tarmac) with the C2 chamber cover visible

Image 3: Proposed arrangement for a passing bay installation.

EirGrid has carefully considered the previous investments made by Meath and Kildare County Councils in maintaining and upgrading their road surfaces. EirGrid will establish key principles and agree appropriate methodologies with the County Councils for road reinstatement, where cable and associated infrastructure has been constructed. This could include reinstatement of road surfacing wider than the underground cable trench and Joint Bays. This will be in accordance with the accepted standard for underground cable development; The Guidelines for Managing Openings in Public Roads (hereafter referred to as The Purple Book) (Department of Transport, Tourism and Sport 2017). This can also be assured by way of an appropriate Condition of planning approval.

As identified in Section1.2.3, the specific location and design of Joint Bays and Passing Bays are subject to refinement at the detailed design stage.

1.2.4 Substations

1.2.4.1 Woodland Substation

The Proposed Development at Woodland Substation will consist of the provision of new electricity transmission infrastructure, comprising of the following (refer to Figure 4.1 (Sheet 2) in Volume 4 of this EIAR for a graphic of the proposed works at Woodland Substation):

- Additional electrical equipment and apparatus which is similar to the existing infrastructure and will be installed in a substation compound extension (Meath County Council Reference: 22/150 221550). This will include:
    - Installation of a 400kV feeder bay and associated electrical shunt reactor);

- Insulators, instrument transformers, overhead conductors, disconnectors, circuit breakers, surge arrestors in order to connect the bay to the busbar; and

- All ancillary site development works including site preparation works, temporary compound, underground cabling, and earthgrid, as required to facilitate the development.

1.2.4.1.1 Woodland Substation Construction Phase Activities

The works at Woodland Substation will be undertaken in parallel with the cable works ongoing between Woodland and Belcamp Substations. Construction access for the works at Woodland Substation will be via the existing substation access road, Redbog Road, off Red Road. A Temporary Construction Compound will be set up in the south-east corner of the substation and will provide site office and welfare facilities as well as material and plant storage for the substation works. There will be no access to the cable route easement from these compounds. The area for the new works in the substation will be cleared and shallow founded reinforced concrete bases installed for the new Air Insulated Switchgear (AIS) plant, as well as a Reinforced Concrete (RC) bund for the reactor. The AIS plant will be installed on the RC base slabs and associated connections installed. The reactor will be delivered to site as an abnormal load with the appropriate measures to minimise impact to local traffic (refer to Appendix B (Construction Traffic Management Plan) of the Construction Environmental Management Plan (CEMP), which are included as standalone documents in the planning application pack). The reactor will be slid into place on its bund off the delivery trailer. A mobile crane will be used to lift into place the new AIS plant. The new 400kV cable will be trenched across the substation from the south-west corner to connect to the new cable sealing end. Once the 400kV cable has been installed and the works at Belcamp and Woodland Substations have been completed, the whole system will be tested and commissioned.

1.2.4.2 Belcamp Substation

- Construction of a new 400 kV Gas Insulated Switchgear (GIS) eight bay building (73 m long, 17.8 m wide, 16.0 m in height (1,745 sqm)) within the recently consented extended substation compound. A GIS substation building is where gas (Sulphur Hexafluoride – SF6) is used as the insulation between circuits. This requires the electrical equipment to be contained internally in buildings above ground.

- Installation of 1 no 400/220 kV Power Transformer east of the new GIS building, including connections to the new GIS building;

- Installation of a 400kV feeder bay and associated electrical shunt reactor (approximately 8 m in height);

- Insulators, instrument transformers, overhead conductors, disconnectors, circuit breakers, surge arrestors (from 7.9 m to 12.8 m in height) in order to connect the bay to the GIS building; and

- All ancillary site development works including site preparation works, site clearance, hardstanding, internal access tracks and a temporary construction compound, underground cabling and earthgrid, surface water drainage connections to the substation network, foul water drainage connection to the substation foul system and lightning protection (8 x 3 m air rods on the top of the 400 kV GIS building)

1.2.4.2.1 Belcamp Substation Construction Phase Activities

The works at Belcamp Substation will be undertaken in parallel with the cable construction works. A Temporary Construction Compound (TCC6) will be set up to the west of the substation accessed along a temporary access track off Stockhole Lane to the west. Construction materials will be delivered to site via the existing substation main entrance off the R139 Regional Road.

The area for the new works at Belcamp will be prepared to install the new in-situ reinforced concrete bases for the GIS building, transformers and other miscellaneous AIS plant. The steel frame of the GIS building will be erected and then the roof and wall cladding added to make weather tight. A mobile crane will be used for the erection of the steel frame and cladding. The GIS equipment will be craned into place inside the building using the gantry

crane within the building, and then the GIS building will be fitted out with all associated protection and control equipment, Low Voltage Alternating Current (LVAC) equipment etc. At the same time, the external AIS equipment will be installed and associated connections installed. The reactor and transformers will be delivered to site as abnormal loads with all the relevant traffic management requirements / restrictions in place for such abnormal loads (refer to Appendix B (Construction Traffic Management Plan) of the Construction Environmental Management Plan (CEMP), which are included as standalone documents in the planning application pack). These will be slid into place directly from their transport trailer onto their RC bunds. The new 400 kV cable will be trenched into the substation and under the RC perimeter wall to connect up to the AIS cable sealing end outside the GIS building. Once the new 400 kV cable has been installed and tested, and the works at Woodland Substation completed, the whole system will be connected together, tested and then commissioned.

1.2.5 Cable Construction Phase Activities

The following sections describe the proposed Construction Phase activities associated with the installation of the new underground cable. The laying of the new underground cables is a standard construction technique undertaken by a range of utility and other services providers. Underground cables will be installed in a flat formation in the following phases:

- Phase 1 – Installation of Joint Bays and Passing Bay structures;
- Phase 2 – Excavation and installation of ducts; and
- Phase 3 – Installation and jointing of cables.

Duct and Joint Bay installation are the most construction-intensive and invasive elements of cable route installation as digging of a trench is required. For in-road cable laying, this phase will have the largest potential impact on traffic, including the potential need for rolling road closures (to through traffic) and diversions.

While the specifics of any cable-laying schedule are dependent upon the appointed contractor and the nature and location of the development, it is proposed that that cable ducts will be laid in a road at a rate of 40 m to 50 m per day, although a reduced rate is anticipated in constrained sections of the route for example where existing utilities are present.

Joint Bays are proposed to be located at average intervals of 750 m along the cable route of the Proposed Development. However, shorter intervals may occur where the route alignment is more complex. Joint Bays are proposed to be installed in three days. Road reinstatement along the route of the cable trench will follow the completion of the trenching and ducting, moving in sequence along the route.

Cable pulling and jointing, which will commence when the trenching and ducting is well advanced along the route, will be executed from the Joint Bay locations. Where this activity is likely to require a road closure, the provision of a Passing Bay at the location of the Joint Bay, where possible, will facilitate movement of traffic along the road by means of a signal-controlled lane adjacent to the Joint Bay.

Image 4 shows a proposed cable trench in a public road after installation of ducts and prior to backfilling. Marker boards can be seen within the trench prior to final reinstatement. Image 5 presents a reinstated road following laying of the underground cable circuit.

Image 4: Example of a Proposed Cable Trench In-Road with Cables in Flat Formation.

Image 5: Example of a Reinstated Road Following the Laying of Underground Cables

1.2.6 Joint and Passing Bays

Every 500 m to 800 m (approximately 750 m where possible) joint bays will be installed (buried in the ground) which are approximately 2.5 m wide. 2.6 m deep and 10 m long. Sand or lean mix concrete will be used as a foundation layer to the underside of the chamber. The ducts will be installed to each end of the chamber, then checked, cleaned and sealed.

The open concrete chamber will temporarily support the retained ground on the outside of the chamber during the ducting activities. Once these activities are completed, the open chamber will be temporarily backfilled with

appropriate material and the road temporarily reinstated until cable installation. During cable installation, the joint bay will be reopened and material within the chamber removed and replaced following completion of the cable installation. The joint and passing bay locations are provided in Table 1.2.

Table 1.2 Proposed Joint Bay and Passing Bay Locations

Joint Bay	Approximate Chainage	Approximate Distance from previous Joint Bay	Location	Passing Bay required?	Side of road Passing Bay is located	Hard Standing Area
JB 01	706	N/A	Off-road	N/A	N/A	Yes
JB 02	1494	788	Off-road	N/A	N/A	Yes
JB 03	2241	747	Off-road	N/A	N/A	Yes
JB 04	2978	737	Off-road	N/A	N/A	Yes
JB 05	3750	772	In-road	Y	North	No
JB 06	4521	771	In-road	Y	South	No
JB 07	5190	669	In-road	Y	North	No
JB 08	5919	729	Off-road	N/A	N/A	Yes
JB 09	6629	710	In-road	Y	South	No
JB 10	7283	654	Off-road	N/A	N/A	Yes
JB 11	8028	745	In-road	Y	North	No
JB 12	8585	557	Off-road	N/A	N/A	Yes
JB 13	9144	559	In-road	Y	South	No
JB 14	9914	770	In-road	Y	East	No
JB 15	10730	816	Off-road	N/A	N/A	Yes
JB 16	11457	727	In-road	Y	East	No
JB 17	12294	837	In-road	Y	East	No
JB 18	13036	742	In-road	Y	East	No
JB 19	13893	857	Off-road	N/A	N/A	Yes
JB 20	14758	865	Off-road	N/A	N/A	Yes
JB 21	15390	632	Off-road	N/A	N/A	Yes
JB 22	16144	754	Off-road	N/A	N/A	Yes
JB 23	16885	741	Off-road	N/A	N/A	Yes
JB 24	17546	661	Off-road	N/A	N/A	Yes
JB 25	18296	750	In-road	Y	South	No
JB 26	19172	876	In-road	Y	East	No
JB 27	20010	838	In-road	Y	East	No
JB 28	20759	749	In-road	Y	East	No
JB 29	21507	748	In-road	Y	East	No
JB 30	22288	781	Off-road	N/A	N/A	Yes
JB 31	23010	722	Off-road	N/A	N/A	Yes
JB 32	23770	760	In-road	Y	West	No
JB 33	24439	669	In-road	Y	East	No
JB 34	25269	830	Off-road	N/A	N/A	Yes
JB 35	25950	681	In-road	Y	East	No
JB 36	26640	690	Off-road	N/A	N/A	Yes
JB 37	27380	740	In-road	Y	North	No

Joint Bay	Approximate Chainage	Approximate Distance from previous Joint Bay	Location	Passing Bay required?	Side of road Passing Bay is located	Hard Standing Area
JB 38	28196	816	In-road	Y	North	No
JB 39	29029	833	In-road	Y	North	No
JB 40	29824	795	In-road	Y	South	No
JB 41	30656	832	In-road	Y	South	No
JB 42	31365	709	Off-road	N/A	N/A	Yes
JB 43	32062	697	In-road	Y	South	No
JB 44	32943	881	Off-road	N/A	N/A	Yes
JB 45	33656	713	In-road	Y	West	No
JB 46	34466	810	In-road	Y	North and South*	No
JB 47	35221	755	In-road	Y	North	No
JB 48	35998	777	In-road	Y	East	No
JB 49	36814	816	Off-road	N/A	N/A	Yes
JB 50	37431	617	Off-road	N/A	N/A	Yes
JB 51	38250	819	Off-road	N/A	N/A	No
JB 52	38920	670	Off-road	N/A	N/A	No
JB 53	39675	755	Off-road	N/A	N/A	No
JB 54	40378	703	Off-road	N/A	N/A	Yes
JB 55	41165	787	In-road	N	Not required due to road width	No
JB 56	41800	635	In-road	N	Not required due to road width	No
JB 57	42744	944	In-road	N	Not required due to road width	No
JB 58	43433	689	Off-road	N/A	N/A	No
JB 59	44073	640	Off-road	N/A	N/A	No
JB 60	44884	811	Off-road	N/A	N/A	Yes
JB 61	45373	489	In-road	N	Not required due to road width	No
JB 62	46109	736	In-road	N	Not required due to road width	No
JB 63	46876	767	In-road	Y	East	No
JB 64	47635	759	In-road	Y	West	No
JB 65	48392	757	In-road	Y	East	No
JB 66	49148	756	In-road	Y	West	No
JB 67	49915	767	In-road	Y	West	No
JB 68	50689	774	In-road	Y	East	No
JB 69	51366	677	Off-road	N/A	N/A	Yes
JB 70	52116	750	Off-road	N/A	N/A	Yes

*A passing bay is currently on both sides of the road at Joint Bay 46. At detailed design stage, one location will be selected, and the other passing bay location will not be utilised.

In some locations, where joint bays are installed in the road, passing bays may be required to facilitate future maintenance without the requirement for traffic management measures. This is most likely to occur on very narrow roads but may be required elsewhere, for example on very busy road corridors or where installations are close to significant road junctions such as at motorways. These passing bays are proposed to be between 60 and 120 m long within the parameters of the proposals set out in the planning application.

The installation of the passing bay requires removing and temporarily storing the ground top layers off-road, to the side of the carriageway. This material will be used to allow reinstatement later. The passing bays will then be constructed to a standard agreeable to Meath County Council and Kildare County Council. The passing bay will be constructed to be at the level of the existing road surface. This may require the importation of fill material in certain locations. Roadside drains will be maintained and where it is required; culverts and piping will be used to maintain the waterflow under the passing bay. Temporary drainage will be provided to ensure appropriate run-off from the new road surface.

The passing bays will not be in use for the full duration of the construction period. The bays will be used during the joint bay construction and the cable pulling and jointing process. When the bays are not in use, measures will be put in place to ensure no illegal parking.

The reinstatement of the passing bays will occur on the completion of Phase 3 of the construction period. The materials used to construct the bays will be removed from site and taken to a suitably licensed facility. The area will be reinstated and relandscaped to reflect the previous landform at each location.

1.2.7 Watercourse crossings

Several watercourse crossings will be required along the cable route (Table 1.3). These crossings will be facilitated by either horizonal directional drilling (HDD) or open cut trenches as appropriate for the particular crossing.

HDD, also known as directional boring, is a minimal impact trenchless method of installing underground utilities, including cables, in a relatively shallow arc along a prescribed underground path using a surface-launched drilling rig. HDD offers environmental advantages over open trench excavations and will be used when conventional trenching is not practical or when minimal surface disturbance is required. Competent specialist contractors will be appointed to undertake the work.

Where HDD is not being used open cut method is planned. Open cut trenching is an area excavated through fields or in road where the cable is constructed. Open cut trenches at water crossings have the potential to generate silt and suspended solids. It is proposed to carry out all these works in a dry works area. The dry works area will be isolated by installing an impermeable barrier between the watercourse and the works area. The impermeable barrier will be tailored to the watercourse in question.

Table 1.3 Proposed waterbodies and the crossing methodologies.

Waterbody number (WB)	Waterbody name	Chainage	Waterbody location – Grid reference	Proposed Crossing
WB01	Tributary of the Tolka 020	800	N 95028 46797	Instream trenching
WB02	Dunboyne Stream_010	1900	N 94782 46269	Instream trenching
WB03	Rye Water_030	3615	N 93930 45180	Diversion from in-road to off-road, by instream trench.
WB04	Jenkinstown stream_010	6000	N 91730 45313	Diversion from in-road to off-road, by instream trench.
WB05	Pond	7385	N 90677 45988	Instream trenching
WB06	Jenkinstown Stream_010	8080	N 90246 45483	Diversion from in-road to off-road, by instream trench.
WB07	Jenkinstown Stream_010	10700	N 89775 43468	Diversion from in-road to off-road, by instream trench.

Waterbody number (WB)	Waterbody name	Chainage	Waterbody location – Grid reference	Proposed Crossing
WB08	Jenkinstown Stream_010	11180	N 89661 43153	Diversion from in-road to off-road, by instream trench.
WB09	Unassigned stream	11400	N 89419 43023	Diversion from in-road to off-road, by instream trench.
WB10	Rye Water_020 (Brides Stream)	12370	N 89243 42178	Diversion from in-road to off-road, by instream trench.
WB11	Newtownmoyaghy Stream tributary of Rye Water_020	13650	N 89076 40939	Not crossed by cable
WB12	Rye Water_020 (Padistown)	14400	N 88410 40767	Diversion from in-road to off-road, by instream trench.
WB13	Rye Water_010	15050	N 88065 40613	HDD
WB14	Royal Canal	15400	N 87874 40210	HDD
WB15	Lyreen_010	19920	N 86262 37369	Affected by passing bay
WB16	Drainage ditches	20870	N 86442 36490	Not crossed by cable
WB17	Drainage ditches	21250	N 86592 36149	Diversion from in-road to off-road, by instream trench.
WB18	Drainage ditch	21300	N 86589 36154	Diversion from in-road to off-road, by instream trench.
WB19	Lyreen_010 (Baltracey Trib Lyreen)	21650	N 86673 35787	Diversion from in-road to off-road, by instream trench.
WB20	Tributary of Lyreen_010	22000	N 86754 35459	HDD
WB21	Drainage ditches	22300	N 86823 35188	Diversion from in-road to off-road, by instream trench.
WB22	Clonshanbo_010	23620	N 87176 33938	Diversion from in-road to off-road, by instream trench.
WB23	Drainage ditches	24150	N 87298 33417	Not crossed by cable
WB24	Clonshanbo_020	25800	N 86916 31840	Diversion from in-road to off-road, by instream trench.
WB25	Kilmurry_010	27300	N 86272 30537	Diversion from in-road to off-road, by instream trench.
WB26	Tributary of Kilmurray_010	27600	N 86151 30369	Diversion from in-road to off-road, by instream trench.
WB27	Liffey_130	30000	N 84449 28586	Crossed in-road

Waterbody number (WB)	Waterbody name	Chainage	Waterbody location – Grid reference	Proposed Crossing
WB28	Tributary of Liffey_130	30250	N 84283 28429	Diversion from in-road to off-road, by instream trench.
WB29	Liffey_130	30400	N 84425 28283	Crossed in-road
WB30	Tributary of Slate_010	31360	N 84237 27559	Instream trenching
WB31	Liffey_130	31360	N 84807 27542	Not crossed by cable
WB32	Liffey_120	36150	N 87519 25081	Instream trenching
WB33	Drainage ditch	36650	N 87844 24820	Crossed in-road
WB34	Drainage ditch	36900	N 87950 24710	Instream trenching
WB35	Liffey_120	37200	N 88001 24231	HDD
WB36	Liffey_120	37900	N 88281 24006	Crossed by bridge
WB37	Liffey_120	39000	N 88110 23008	Crossed by bridge
WB38	Grand Canal	39400	N 88152 22604	Crossed by bridge
WB39	Liffey_110	41510	N 88249 21068	Crossed in-road
WB40	Liffey_110	42300	N 87711 20395	Crossed in-road
WB41	Liffey_110	42900	N 87394 20021	Crossed in-road
WB42	Grand Canal	44600	N 88288 19245	HDD
WB43	Liffey_100	45330	N 88310 18467	Crossed in-road
WB44	Drainage ditch	49000	N 88077 15749	Diversion from in-road to off-road, by instream trench.
WB45	Dunstown Stream	52700	N 87555 12433	Instream trenching
WB46	Tributary of Liffey_120	37600	N 88017 24231	Not crossed by cable

1.3 Legislative Context for Appropriate Assessment

Habitats and species of European importance are provided legal protection under the the EU Habitats Directive 92/43/EEC (the Habitats Directive) and the EU Birds Directive 2009/147/ES (the Birds Directive). These Directives set out a system of protection for habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as the Natura 2000 network (hereafter referred to as European sites[1]). European sites comprise Special Areas of Conservation (SACs[2]) and Special Protection Areas (SPAs[2]).

The Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC) have been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) as amended. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites.

Article 6(3) establishes the requirement for AA:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in-combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site ' s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public. "

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. "

1.4 Stages in Appropriate Assessment

The stages of AA are as follows:

- **Screening:** The purpose of the screening stage is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in-combination with other plans or projects, could have significant effects on a European site in view of the site's conservation objectives. All potential effects between activities associated with the plans or projects and the ecological components of European sites must be considered. This includes potential effects on mobile species, notably birds, mammals, invertebrates and migratory fish. There is no necessity to establish such an effect; it is merely necessary for the competent authority to determine that there may be such an effect. The threshold at this first stage is a very low one and operates as a trigger in order to determine whether a Stage Two AA must be undertaken by the competent authority on the implications of the proposed development for the conservation objectives of a European site. Therefore, where significant effects are likely, uncertain or unknown at screening stage, a second stage AA will be required. Measures intended to avoid or reduce the harmful effects of the proposed development on European sites (i.e. "mitigation measures") cannot be taken into account in the screening stage appraisal.
- **Appropriate Assessment**: If it cannot be excluded, on the basis of objective information, that the plan or project, individually or in combination with other plans or projects, would have a significant effect on a European site, the plan or project must be taken forward to the next stage of the process and an AA must be carried out. The competent authority then must carry out a focused and detailed examination, analysis and

1 The term Natura 2000 network was replaced by 'European site' under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011.

2 Candidate SAC (cSAC) and potential SPAs (pSPAs) are afforded the same protection as SACs and SPAs and are therefore assessed in the same manner within this report.

evaluation of whether the plan or project will adversely affect the integrity of a European site(s) either individually or in-combination with other plans and projects in view of the site's conservation objectives. Where potential adverse effects on site integrity are identified, appropriate mitigation measures are proposed to avoid adverse effects. For projects, the AA process is documented within a Natura Impact Statement (NIS), which the developer, consultant my prepare. The developer may prepare a Natura Impact Statement (NIS) to inform the competent authority's AA process.

Case law has established that such an Appropriate Assessment, to be lawfully conducted, in summary:

(i) must identify, in the light of the best scientific knowledge in the field, all aspects of the proposed development which can, by itself or in-combination with other plans or projects, affect the conservation objectives of the European site;

(ii) must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and

(iii) may only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of the identified potential effects. If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to the next stages.

Following AA, including mitigation proposals, if adverse effects on site integrity remain and the project/plan is to be progressed, an Assessment of Alternative Solutions is required under the provisions of Article 6(4) of the Habitats Directive. This process examines the alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. If no suitable alternatives exist, or all alternatives would result in adverse effects on the integrity of a European site, then the project will move on to the next stage in the process.

Where an Assessment of Alternative Solutions fails to identify any suitable alternatives, then for a project or plan to be progressed it must demonstrate that it must nevertheless be carried out for imperative reasons of overriding public interest (IROPI) in accordance with Article 6(4) of the Habitats Directive. If, in light of an assessment of IROPI, it is deemed that the project or plan should proceed, all compensatory measures necessary to ensure the protection of the overall coherence of the European site must be put in place in accordance with Article 6(4) of the Habitats Directive. The process is set out in ImageImage 61, below.

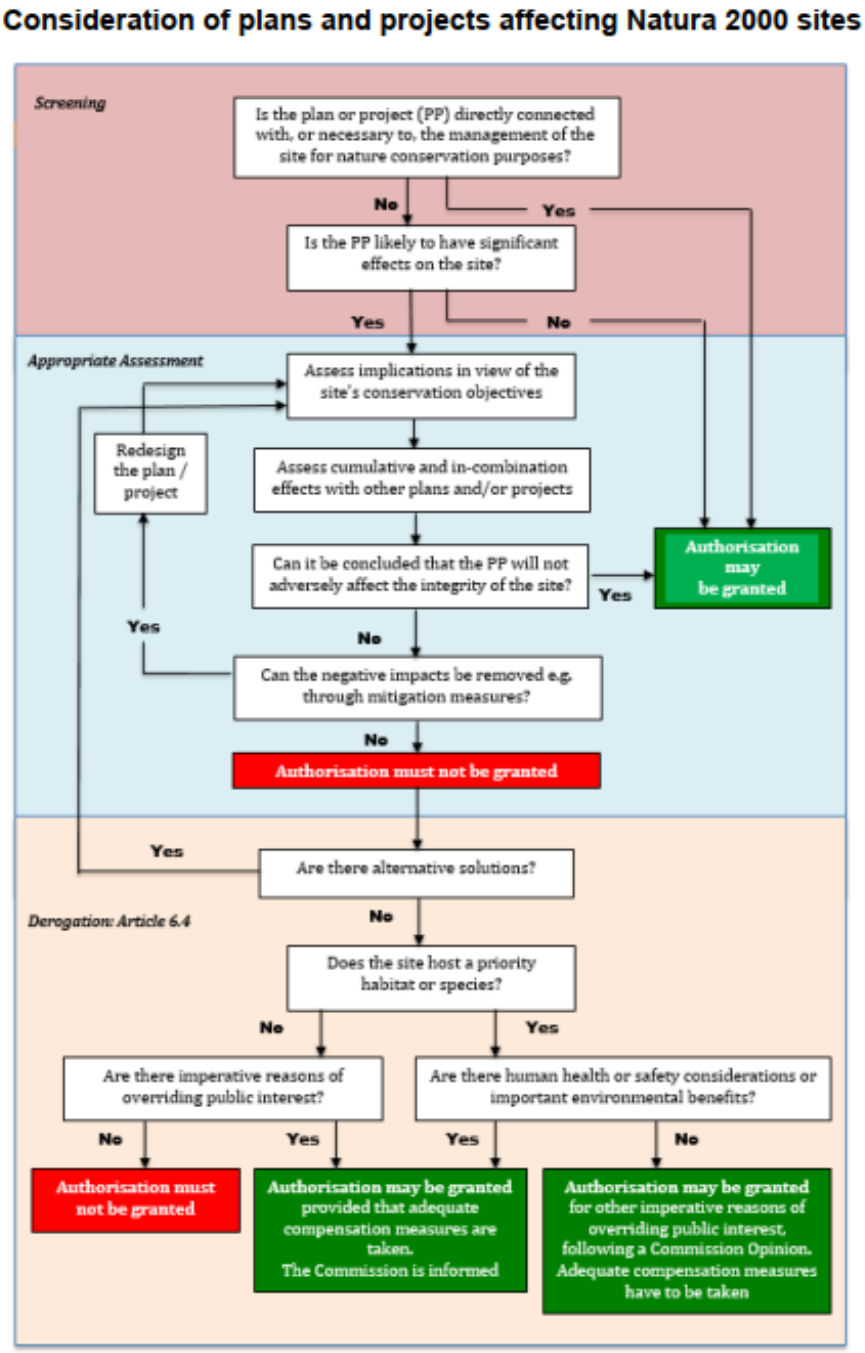


Image 61 table 4.2Flow chart of Article 6 (3) and (4) procedure (European Commission, 2018).

1.5 Purpose of this report

In the context of Article 6(3), an Bord Pleanála as the competent authority for this project, must carry out screening for AA of the Proposed Development to assess whether, on the basis of objective scientific information and in view of best scientific knowledge, the Proposed Development either individually or in-combination with other plans or projects, is likely to have a significant effect on the conservation objectives of a European site(s). This report presents the information required for the competent authority to undertake Screening for AA for the Proposed Development.

1.6 Authors' qualifications and expertise

This report was prepared by Harry Jones, then updated by Duncan Smith and Dr Irene Bottero and check/reviewed by Stuart Cossey and Dr Susie Coyle.

Harry Jones is a Senior Environmental Consultant and an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM). Harry has a Master's degree (MAI) in Civil, Structural and Environmental Engineering from Trinity College Dublin, as well as a Postgraduate Certificate (PGCert) in Ecological Surveying from Oxford University. He has more than five years' professional experience working predominantly in environmental coordination and ecological surveying. He has worked on a variety of projects of all sizes across various disciplines including water, wastewater, transportation, and infrastructure.

Duncan Smith is a Principal Ecologist and Chartered Environmentalist. He has a BSc (Hons) in Zoology from the University of Leeds, an MSc in Environmental Technology with Ecological Management from Imperial College and as MSc in Marine Environmental Protection from Bangor University. He has twenty-nine years professional ecological experience specialising in botanical surveying, habitat management and evaluation for Ecological Impact Assessment. During his career he has worked in the private, public, and voluntary sectors, including sixteen years in the private sector, seven years for UK Statutory Nature Conservation Bodies in England and Wales and two years in the voluntary sector.

Dr Irene Bottero is an Ecologist in Jacobs and holds BSc (Hons) in Natural Science, MSc (Hons) in Evolution of Animal and Human Behaviour from University of Studies of Torino (Italy) and a PhD in Botany from Trinity College Dublin. Irene has authored several ecology and environment papers relating to insect communities and has worked in consultancy over a three-year period, carrying out multiple surveys for habitats, insects and river monitoring.

Stuart Cossey is a Senior Ecologist and holds a BSc (Hons) in Conservation Biology and Ecology from Exeter University. Stuart has four years of consultancy associated project experience and three years' experience in conservation. Stuart has authored AA Screening Reports, NISs, Ecological Assessment Reports and Building Research Establishment Environmental Assessment Method (BREEAM). Stuart has a strong background in ornithology and is well practiced in a range of survey techniques.

The report was checked and reviewed by a Senior Associate Director of Ecology. Dr Susie Coyle holds a BSc (Hons) in Aquatic Bioscience and a PhD in fish biodiversity from the University of Glasgow. She is a Chartered full Member of the Royal Society of Biology (MRSB), a full Member of CIEEM (MCIEEM) and a Member of the Institute of Fisheries Management (MIFI). Susie has coordinated Jacobs' ecologists both in Ireland and in the UK and has experience of multiple ecological survey techniques and associate reporting. She has seventeen years of consultancy experience in aquatic and terrestrial ecology with over twenty years' experience of field surveys and environmental sampling techniques. One of Susie's main roles is the check and review of reports including Appropriate Assessment Screening Reports and Natura Impact Statements.

2. Methodology

2.1 Desk review

The following key resources were analysed to inform the baseline description of the sites and surrounding environment. The full list of references used in this report are shown in Section 7:

Aerial imagery (Bing, https://www.bing.com/maps; ESRI).

Environmental Protection Agency (EPA) rivers and water quality data Water Framework Directive (WFD) status) https://gis.epa.ie/EPAMaps/ (accessed December 2023).

Mapping of European site boundaries available online at www.npws.ie.

National Parks and Wildlife Service (2019a). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

National Parks and Wildlife Service (2019b). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

Online data available on Natura 2000 sites, including Conservation Objectives, as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data.

Other opensource information available online regarding fisheries (e.g., www.salmonireland.com and www.fishingireland.info).

Protected and invasive species data from the National Biodiversity Data Centre (NBDC) online at http://www.biodiversityireland.ie/ (accessed December 2023).

2.2 Baseline surveys

Baseline surveys were undertaken by experienced Jacobs's ecologists multiple times in 2021 and 2022 beginning on 11/10/2021. The study area extent varied across the Proposed Development according to the infrastructure associated with the Proposed Development and its likely ecological impacts. Study areas are described in Table 2.1. Surveys included wintering and breeding birds, mammals, fish, invertebrate and habitats. The study area includes all areas of works required for the Proposed Development. All surveys were undertaken within the relevant optimal surveying period (National Roads Authority, 2009). Habitats within the study area were assessed for their potential to support rare or protected species and/ or qualifying interests (Annex I habitats or Annex II species) associated with European sites. The assessment of protected species and habitats and/ or invasive species was undertaken in line with the following guidelines and informed this Screening for AA:

- A Guide to Habitats in Ireland. The Heritage Council (Fossitt, 2000).
- Article 17 reports (NPWS, 2019a, 2019b, and 2019c).
- CIEEM Good Practice Guidance for Habitats and Species (CIEEM, 2021).
- CIEEM Guidelines for Preliminary Ecological Appraisal. Second Edition (CIEEM, 2017).
- CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018).
- Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (NRA, 2010).
- Transport Infrastructure Ireland (TII) The Management of Invasive Alien Plant Species on National Roads - Standard (TII, 2020a).
- Transport Infrastructure Ireland (TII) The Management of Invasive Alien Plant Species on National Roads - Technical Guidance (TII, 2020b).

Ecology surveys, their study areas and dates completed are shown in Table 2.1, below.

Table 2.1 showing all ecological surveys, their study areas and dates carried out for the Kildare to Meath Proposed Development.

Species/Habitat	Survey methodology/target species/study area	Survey date(s)
Habitat Survey	Habitat classification (Fossitt, IVC etc.) A corridor along the Proposed Development where works are proposed and habitats that could be directly or indirectly affected during construction / operation. Habitats within a minimum of 150 m of the Proposed Development were mapped using a combination of survey and aerial photographs. All hedgerows / tree lines at proposed joint bays were inspected and where vegetation could be impacted / lost, e.g., narrow roads.	June 2022 – October 2022 (Week commencing: 06.06.2022, 27.06.2022, 11.07.2022, 18.07.2022, 22.08.2022, 05.09.2022, 26.09.2022, 12.10.2022)
Habitat Suitability Assessment	Reptile and amphibian A corridor of approximately 100 m from the Proposed Development was surveyed for fauna species that could be directly or indirectly affected during construction/operation of the Proposed Development. Habitat suitability was used as a proxy for species presence. Amphibians and reptiles are assumed present where suitable habitat is found within the study area unless otherwise stated.	December 2021 –June 2022 (week commencing 13.12.21; 27.6.22)
	Terrestrial invertebrate (Marsh fritillary) Habitats within c. 100 m of the Proposed Development were assessed for their suitability to support marsh fritillary butterfly. Incidental sightings of marsh fritillary and other terrestrial invertebrates of conservation interest were recorded where present.	December 2021 – June 2022 week commencing 13.12.21; 27.6.22
	Fish white-clawed crayfish, White-clawed crayfish habitat to c100m either side of the Proposed Development was assessed for features that provide suitable refuge such as substrates large enough to provide cover and not armoured. eDNA sampling was carried out at six watercourses within the study area.	June 2022 – October 2022 (Week commencing: 06.06.2022, 27.06.2022, 11.07.2022, 18.07.2022, 22.08.2022, 05.09.2022, 26.09.2022, 12.10.2022)
Mammal Survey Mammal species other than bats i.e. otter, badger, red squirrel etc.	A corridor of approximately 100 m from the Proposed Development was surveyed for fauna species that could be directly or indirectly affected during construction/operation of the	October 2021 – April 2022, October 2023

Species/Habitat	Survey methodology/target species/study area	Survey date(s)
	Proposed Development. The study area extended to 150 m from the Proposed Development and beyond if required (i.e. along watercourses hydrologically linked to the Planning Application Boundary (PAB)).	
Birds	Winter Bird Surveys Wintering bird surveys were carried out for all the route options as a preferred route was not available at that time. Each of the four route options was surveyed to 800 m on either side of the option from vantage points and drive-by. This was considered the distance in which birds count be directly or indirectly affected by construction/operation operations. Therefore, some birds were recorded up to 9 km away from the Proposed Development and are included in the results to provide as much data as possible. The survey focused on areas of suitable habitat for foraging / roosting winter birds, including waterbodies and wetlands.	October 2021 – April 2022 (Week commencing: 11.10.2021, 01.11.2021, 06.12.2021, 10.01.2022, 07.02.2022, 07.03.2022, 11.04.2022)
	Hen harrier winter roost surveys Vantage point surveys for roosting hen harrier within 2km of the PAB	October 2021 – March 2022 (Week commencing 11.10.2021, 18.10.2021, 01.11.2021, 06.12.2021, 10.01.2022, 07.02.2022, 07.03.2022)
	Breeding bird surveys A corridor along the Proposed Development where works are proposed, and in locations where breeding birds could be directly or indirectly affected during construction / operation. Transect surveys undertaken predominantly within a 250 m survey corridor however, extended outside of the 250 m corridor on occasions. The surveys focused on areas of suitable bird nesting habitat.	March – May 2022 (Week commencing: 28.03.2022, 25.04.2022, 23.05.2022, 30.05.2022)
Bats	Identification of potential roost features (PRFs) in trees/buildings Day-time inspection from the ground of trees / structures potentially directly impacted by the Proposed Development during construction / operation were surveyed for potential bat roosts.	February 2022 – September 2022 (week commencing 21.2.22; 21.3.22; 6.6.22; 15.7.22; 22.8.22; 5.9.22
	Static detector surveys	May 2022 – August 2022

Species/Habitat	Survey methodology/target species/study area	Survey date(s)
	Trees with identified bat roost potential were subject to static surveys	(Week commencing 16.05.2022, 23.05.2022, 30.05.202, 06.06.2022, 27.06.2022, 04.07.2022, 18.07.2022, 25.07.2022, 01.08.2022, 08.08.2022)
	Emergence/re-entry surveys (structures and trees) Trees with identified bat roost potential were subject to emergence / return surveys	May 2022 – July 2022 (Week commencing 16.05.2022, 23.05.2022, 30.05.2022, 06.06.2022, 17.06.2022, 18.07.2022, 25.07.2022)
Fish and White Clawed Crayfish	eDNA Sampling for Atlantic salmon, European eel at white clawed crayfish at 11 waterbodies (rivers and tributaries). See EIAR for map showing locations)	August 2022 – September 2022 (Week commencing: 08.08.2022, 19.09.2022)
Smooth newt	eDNA Sampling for smooth newt at WB19 and WB05. See EIAR for map showing locations.	August 2022 – October 2022 (Week commencing: 08.08.2022, 19.09.2022, 10.10.2022)

2.3 Guidance documents

This Screening Report was produced with compliance with the following guidance:

- Appropriate Assessment Screening for Development Management. OPR Practice Note PN01. (OPR, 2021).
- Appropriate Assessment of Plans and Proposed Schemes in Ireland. Guidance for Planning Authorities (Department of Environment, Heritage and Local Government (DoEHLG), 2010).
- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021a).
- Communication from the Commission on the Precautionary Principle (EC, 2000).
- Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission (EC, 2007).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021b).
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018).
- Marine Natura Impact Statements in Irish SACs - A Working Document (NPWS, 2012).
- Commission Notice: Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (2021/C 437/01).

2.4 Screening methodology

The guidance documents outlined above set out the process for carrying out AA, the first stage of which is referred to as Screening. Steps required for Screening consist of the following.

- Determination of whether a project or plan is directly connected with or necessary to the conservation management of any European sites[3].

3 The Proposed Development is not directly connected with or necessary to the conservation management of any European sites.

- Description of the details of the project/ plan (including the site characteristics/ plan area).
- Identification of all European sites that might be affected and description of the characteristics of European sites that might be affected (i.e., identification of Qualifying Interest (QI which refers to the habitats and/or non-bird species for which an SAC is designated), and Special Conservation Interests which refers to the habitats and bird species for which an SPA is designated))and conservation objectives (CO) that could be affected as a result of progressing the project/ plan.
- Assessment of LSEs on relevant European sites in view of the sites' CO, both individually and in-combination with other plans and projects.
- Presentation of a screening assessment which determines if the project/ plan individually or in-combination with other plans and projects could undermine the CO of the site(s) and give rise to LSEs. Measures intended to avoid or reduce the harmful effects of the proposed development on European sites (i.e. "mitigation measures") or best practice measures cannot be taken into account in the screening stage appraisal.

2.4.1 Guiding principles and case law

The most recent Irish guidance in relation to AA was published by the Office of the Public Regulator (OPR), namely, *Appropriate Assessment Screening for Development Management*. This document provides information and guidance on the Irish planning application process and how to undertake a Screening for AA. Several legal cases have been brought to both the national and European courts in relation to the AA process. Therefore, relevant case law, European Court of Justice (ECJ) rulings and EC publications have also been considered in the preparation of this Screening Report for AA.

2.4.2 Source-pathway-receptor model and Zone of Influence

When established the Zone of Influence (ZoI) the 'source-pathway-receptor' model is applied taking consideration of all potential impact pathways connecting elements of the project or plan to European sites in view of their conservation objectives.

The source-pathway-receptor conceptual model is a standard tool in environmental assessment. For an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means that there is no likelihood for the effect to occur (e.g., no potential for LSEs). Potential impact pathways that may arise from a development may include but are not limited to:

- Removal or loss of QI/ Special Conservation Interest (SCI)[4] habitat.
- Removal or loss of habitat with which QI species are associated.
- Mortality of QI species.
- Physical disturbance to QI species.
- Risk of pollution/ reduction in water quality impacting on QI species.

The 'source- pathway-receptor' model is focused solely on the QIs for which European sites are designated as shown on the latest conservation objectives from the NPWS website[5].

The ZoI is the area over which effects could occur to ecological features from a project. The determination of a ZoI for a project should be identified on a case-by-case basis as there may be an effect on European sites that are at a distance from the works. For example, where there is a hydrological link between the development site and a European site.

- Considerations key in determining the potential ZoI include:
- Ecological features within and in proximity to the Proposed Development.

4 The specific named bird species for which a SPA is selected is called the 'Special Conservation Interests' (SCIs). However, in practice, the common terminology of Qualifying Interests applies also to SCI (and is used throughout this report for simplicity).
5 www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives.

- Migratory/ mobile species of the area.
- Construction/ operational activities that may cause a significant effect.
- Linkages to European sites or sensitive habitats connected to those sites.

For the desk based review, the source-pathway-receptor' model was used to identify European sites potentially within the ZoI, which extended to 50 km for the Proposed Development due to hydrological linkages. For species and habitats of conservation interest search area extended to 2 km. Habitats were assessed for mobile species from European sites that may be within ZoI for the Proposed Development Planning Application Boundary and therefore habitat assessment was carried out to at least 150 m to understand functionally liked land and wintering bird surveys extended to 800m which mobile QI birds could be affected by the project. Further information on effects pathways from developments is provided in Section 4, Table 4.1.

3. Baseline Characterisation

The results of the desk-based review and surveys are presented in the following sections. Habitat descriptions below are in the past tense, to reflect their accuracy at a point in the recent past. For the desk based review, the s-p-r model was used to identify European sites potentially within the ZoI which extended to 50 km for the Proposed Development. For species and habitats of conservation interest search area extended to 2 km.

3.1 Overview of the baseline environment

3.1.1 Habitats

Habitats within 150 m of the planning application boundary comprised predominantly arable fields, built surfaces, hedgerows and tree lines. The full list of habitats recorded within 150 m of the planning application boundary are as follows (habitat codes as per Fossitt (2000). Note that no Annex I habitats associated with any of the SAC habitats listed in Section 4.2.1, were recorded during the survey:

- (Mixed) broadleaved woodland (WD1).
- Mixed broadleaved/ conifer woodland (WD2).
- Conifer plantation (WD4)
- Scattered trees and parkland (WD5)
- Riparian woodland (WN5)
- Scrub (WS1)
- Immature woodland (WS2)
- Ornamental / non-native shrub (WS3)
- Recently felled woodland (WS5)
- Hedgerows (species-rich) (WL1)
- Treeline (WL2)
- Improved agricultural grassland (GA1).
- Amenity grassland (GA2).
- Marsh (GM1)
- Dry calcareous and neutral grassland (GS1)
- Dry meadows and grassy verges (GS2)
- Wet grassland (GS4)
- Spoil and bare ground (ED2)
- Re-colonising bare ground (ED3)
- Arable crops (BC1).
- Horticultural land (BC2)
- Flower beds and borders (BC4)
- Earth banks (BL2)
- Buildings and artificial surfaces (BL3).
- Other artificial lakes and ponds (FL8)
- Depositing lowland river (FW2).

- Drainage ditches (FW4)

3.1.2 Species (including Annex II)

A search of the NBDC returned records of QI species, within approximately 2 km of the Proposed Development Planning Application Boundary, see Table 3.1. The distance of 2 km distance was used as the maximum distance within which species and habitats from European sites within the ZoI have a reasonable likelihood of being affected by the Proposed Development and is consistent with search areas used by other development project. Records of legally protected, rare and / or notable species within 150 m of the Proposed Development Planning Application Boundary are listed in Table 3.2.

Table 3.1 Records of species Protected, Rare and Other Notable Fauna Within 2km of the Proposed Development (NBDC, 2023) (Species in Bold are Designated Under European Sites within ZoI)

Species Name	Scientific Name	Protection[2]	Conservation Status
Barn swallow	*Hirundo rustica*	WA	Birds of Conservation Concern – Amber List
Black-headed gull	*Chroicocephalus ridibundus*	WA	Birds of Conservation Concern – Red List
Brown long-eared bat	*Plecotus auritus*	HDIV, WA	Least concern
Common coot	*Fulica atra*	BDIII, WA	Birds of Conservation Concern – Amber List
Common frog	*Rana temporaria*	WA	Least concern
Common pheasant	*Phasianus colchicus*	BDIII, WA	Least concern
Common pipistrelle	*Pipistrellus pipistrellus*	HDIV, WA	Least concern
Common snipe	*Gallinago gallinago*	BDIII, WA	Birds of Conservation Concern – Amber List
Common starling	*Sturnus vulgaris*	WA	Birds of Conservation Concern – Amber List
Common swift	*Apus apus*	WA	Birds of Conservation Concern – Amber List
Common wood pigeon	*Columba palumbus*	BDIII, WA	Least concern
Daubenton's bat	*Myotis daubentonii*	HDIV, WA	Least concern
Eurasian badger	*Meles meles*	WA	Least concern
Eurasian curlew	*Numenius arquata*	WA	Birds of Conservation Concern – Red List
Eurasian red squirrel	*Scirus vulgaris*	WA	Least concern
European otter	*Lutra lutra*	HDII, HDIV, WA	Near threatened
Glutinous snail	*Myxas glutinosa*	N/A	Endangered
House martin	*Delichon urbicum*	WA	Birds of Conservation Concern – Amber List
House sparrow	*Passer domesticus*	WA	Birds of Conservation Concern – Amber List
Hen Harrier	*Circus cyanus*	WA, BDI	Birds of Conservation Concern – Amber List
Yellowhammer	*Emberiza citronella*	WA	Bird of Conservation Concern – Red List
Lesser black-backed gull	*Larus fuscus*	WA	Birds of Conservation Concern – Amber List
Lesser bulin	*Merdigera obscura*	N/A	Endangered
Lesser noctule	*Nyctalus leisleri*	HDIV, WA	Near threatened
Little egret	*Egretta garzetta*	BDI, WA	Least concern

Species Name	Scientific Name	Protection[2]	Conservation Status
Little grebe	*Tachybaptus ruficollis*	WA	Birds of Conservation Concern – Amber List
Mallard	*Anas platyrhynchos*	BDIII, WA	Least concern
Marsh fritillary	*Euphydryas aurinia*	HDII	Vulnerable
Merlin	*Falco columbarius*	WA, BDI	Bird of Conservation Concern - Amber List
Mute swan	*Cygnus olor*	WA	Birds of Conservation Concern – Amber List
Natterer's bat	*Myotis nattereri*	HDIV, WA	Least concern
Northern lapwing	*Vanellus vanellus*	WA	Birds of Conservation Concern – Red List
Pine marten	*Martes martes*	WA	Least concern
Red deer	*Cervus elaphus*	WA	Least concern
Rock pigeon	*Columba livia*	WA, BDIII	Birds of Conservation Concern – Amber List
Sand martin	*Riparia riparia*	WA	Birds of Conservation Concern – Amber List
Sky-lark	*Alauda arvensis*	WA	Birds of Conservation Concern – Amber List
Smooth newt	*Lissotriton vulgaris*	WA	Least Concern
Soprano pipistrelle	*Pipistrellus pygmaeus*	HDIV, WA	Least concern
Tufted duck	*Aythya fuligula*	BDIII, WA	Birds of Conservation Concern – Amber List
West European hedgehog	*Erinaceus europaeus*	WA	Least concern

Table 3.2 Records of protected, rare and other notable flora and fauna within 150 m of the Proposed Development (data from NPWS and the NBDC, accessed March and July 2022, and December 2023).

Species Group	Common Name	Scientific Name	Protection[3]	Conservation Status Mammals[4]; Birds[5]; Amphibian, reptile, and freshwater fish[6];
Lower Plants	N/A	N/A	No notable or protected species found within 150 m of development.	N/A
Higher Plants	N/A	N/A	No notable or protected species found within 150 m of development.	N/A
Invertebrates	Large red tailed bumble bee	*Bombus lapidarius*	N/A - notable	Near threatened
Fish	N/A	N/A	No notable or protected species found within 150 m of development.	N/A
Amphibians	N/A	N/A	No notable or protected species found within 150 m of development.	N/A
Amphibian	Common frog	*Rana temporaria*	WA	N/A
Reptiles	N/A	*N/A*	No notable or protected species found within 150 m of development.	N/A
Birds	Common Snipe	*Gallinago gallinago*	BDIII, WA	Birds of Conservation Concern – Amber List
Birds	Common Wood Pigeon	*Columba palumbus*	WA. BDII	N/A
Birds	Eurasian curlew	*Numenius arquata*	WA	Birds of Conservation Concern – Red List
Birds	Lesser black-backed gull	*Larus fuscus*	WA	Birds of Conservation Concern – Amber List

Species Group	Common Name	Scientific Name	Protection[3]	Conservation Status Mammals[4]; Birds[5]; Amphibian, reptile, and freshwater fish[6];
Birds	Little egret	*Egretta garzetta*	BDI, WA	Least concern
Terrestrial mammals	Lesser noctule	*Nyctalus leisleri*	HDIV, WA	Least concern
Terrestrial mammals	Common pipistrelle	*Pipistrellus pipistrellus*	HDIV, WA	Least concern
Terrestrial mammals	Soprano pipistrelle	*Pipistrellus pygmaeus*	HDIV, WA	Least concern
Terrestrial mammals	Eurasian badger	*Meles meles*	WA	Least concern
Terrestrial mammals	European otter	*Lutra lutra*	HDII, HDIV, WA	Near threatened
Terrestrial mammals	Pine marten	*Martes martes*	HAV, WA	Least concern
Terrestrial mammals	West European hedgehog	*Erinaceus europaeus*	WA	Least concern

A potential otter holt was recorded along the River Liffey during the field survey on 09/06/2022 at approximately ITM E687929, N724445. This is located approximately 28km from the River Boyne and River Blackwater SAC (the nearest SAC for which otter is a qualifying feature) An otter slide was recorded along the River Liffey at approximately ITM E687940, N724511, approximately 66m from the potential otter holt. This is also located 28 km for the River Boyne and the River Blackwater SAC.

Marsh fritillary was not recorded during the site visits, although its main food source devil's bit scabious (*Succisa pratensis*) was recorded at one location on Harristown Common (Grid Reference N 87879 12976), which lies c462 m from the Planning Application Boundary at its nearest location and 17.0km from Ballynafagh Lake SAC at its nearest location. The location of the devil's bit scabious on Harristown Common is well beyond the footprint of the Proposed Development and separated from it by an amenity sports pitch. The nearest SAC to the Proposed Development which has marsh fritillary as a QI feature is Ballynafagh Lake SAC, which lies c2.75 km from the Planning Application Boundary at its nearest location.

In consideration of Greylag goose and lesser black-backed gull, the bird species listed as Special Conservation Interest for Poulaphouca Reserve SPA, Jacobs' winter bird survey (Jacobs, 2023) did not record any Greylag goose. Most records for wintering birds were from round several ponds or lakes at Oberstown attenuation pond., where no SCI birds were recorded so no SCI birds will be impacted by the Proposed Development. The remaining records were of birds in flight or occasionally foraging in agricultural fields.

Jacobs' winter bird survey (Jacobs, 2023) recorded lesser black backed gull on two occasions foraging in fields, with a maximum count of 42 birds in a field of winter barley, approximately 224 m to the west of the Proposed Development. The SPA citation states that the reservoir attracts roosting gulls during winter, including a large population of lesser-black backed gull, which in Ireland are rare away from the south coast.

Jacobs' winter birds survey recorded two Annex I bird species within 800 m of the Proposed Development as follows:

Golden plover (*Pluvialis apricaria*) was recorded on one occasion within the study area (c70 m to the east of the Proposed Development, south of Ballybrack feeding in recently sown winter barley). The nearest SPA designated for this SCI is North Bull Island SPA, 28.7 km SW.

Kingfisher (*Alcedo atthis*), the nearest SPA designated for the SCI is the River Boyne and River Blackwater SPA (18.7 km NW). Kingfisher was recorded as part of the wintering bird survey on the River Liffey, but due to its distance away from the SPA, is not part of the population of the SPA.

3.1.3 Aquatic environment

The Waterbodies (WB) crossed by the Proposed Development linked to European sites within the ZoI are shown in Table 3.3, below. The locations of the WB crossing in relation to the proposed cable are shown in Figure 2 (321084AH-JAC-ZZ-XX-DR-K-3001 to 3034), Appendix B. Table 3.3 shows all waterbodies in the study area (as described in Table 2.1) and the river waterbody Water Framework Directive (WFD) status for the 2016-2021 monitoring period, and the risk rating where available (Environmental Project Agency (EPA) Maps website, 2023). The WFD status of WBs in the vicinity of the Proposed Development is shown in Figure 3 (321084AH-JAC-ZZ-XX-DR-K-3035), Appendix C.

Table 3.3. Waterbodies within the study area and Water Framework Directive status and risk rating of for WFD watercourses.

Waterbody/Watercourse	WFD status (EPA, 2021)	Risk rating (EPA, 2021)	Monitoring techniques (EPA,2021)	No. crossing
Rye Water_030	Poor	At risk	Monitoring	1
Jenkinstown Stream_010	Moderate	At risk	Monitoring	3
Unassigned stream	Unassigned stream	Unassigned stream	Monitoring	1
Rye Water_020 (Brides Stream)	Good	Under review	Monitoring	1
Rye Water_010	Good	Under review	Monitoring	1
Rye Water_010	Moderate	At risk	Monitoring	1
Royal Canal	Good	Under review	Monitoring	1

The WFD status of the rivers and streams within the study area of the Proposed Development are detailed in Table 3.4 below along with proposed crossing type.

Table 3.4. WFD Waterbodies within the study area, status and proposed crossing type.

Waterbody Ref.	Chainage	Waterbody Name	WFD status (EPA, 2021)	Proposed Crossing method
WB01	800	Trib of Tolka_020	Moderate	Open Cut Trenching
WB02	1900	Dunboyne stream_010	Poor	Open Cut Trenching
WB03	3615	Rye Water_030	Poor	Open Cut Trenching
WB04	6000	Jenkinstown stream_010	Moderate	Open Cut Trenching
WB07	10700	Jenkinstown stream_010	Moderate	Open Cut Trenching
WB08	11180	Jenkinstown stream_010	Moderate	Open Cut Trenching
WB10	12370	Rye Water_020 (Brides Stream)	Good	Open Cut Trenching
WB12	14400	Rye Water_020 (Padistown)	Good	Open Cut Trenching

Waterbody Ref.	Chainage	Waterbody Name	WFD status (EPA, 2021)	Proposed Crossing method
WB13	15050	Rye Water_010	Moderate	Horizontal Directional Drilling (HDD)
WB14	15400	Royal Canal	Good	HDD
WB15	19920	Lyreen_010	Poor	N/A
WB19	21650	Lyreen_010 (Baltracey Trib Lyreen)	Poor	Open Cut Trenching
WB22	23620	Clonshanbo_010	Poor	Open Cut Trenching
WB24	25800	Clonshanbo_010	Poor	Open Cut Trenching
WB25	27300	Kilmurry_010	Poor	Open Cut Trenching
WB27	30000	Liffey_130	Good	N/A
WB29	30400	Liffey_130	Good	N/A
WB30	31360	Trib of Slate_010	Poor	Open Cut Trenching
WB31	31360	Liffey_130	Good	N/A
WB32	36150	Longton_Demesne_Trib of Liffey_120	Good	Open Cut Trenching
WB35	37200	Liffey_120	Good	HDD
WB36	37900	Liffey_120	Good	N/A
WB37	39000	Liffey_120	Good	N/A
WB38	39400	Grand Canal	Good	N/A
WB39	41510	Liffey_110	Good	N/A
WB41	42900	Liffey_110	Good	N/A
WB42	44600	Grand Canal	Good	HDD
WB43	45330	Liffey_100	Good	N/A

Several drainage ditches (Fossitt code FW4), some wet and some dry, were identified predominantly along field boundaries in the vicinity of the Proposed Development (see Table 3.5). It should be noted, however, that these contained water intermittently. Fossitt (2000) states that... 'drainage ditches include linear water bodies or wet channel that are entirely artificial in origin, and some sections of natural watercourses that have been excavated or modified to enhance drainage and control the flower of water. Drainage ditches either contain water (flowing or stagnant) or are wet enough to support wetland vegetation. One waterbody (WB19 see Table 3.4) was surveyed using eDNA as it was considered to have potential to support smooth newt (see Chapter 9 of the EIAR), but this is not connected to any European feature.

Table 3.5. Non-WFD Classified Surface Water Features identified within study area.

Waterbody Reference	Chainage	WFD Sub-Catchment	Watercourse type / WFD Waterbody Name (where applicable)	Proposed Crossing by Proposed Development
WB05	7385	RyeWater_SC_010	Pond/ watercourse	Open Cut Trenching
WB06	8080	RyeWater_SC_010	Jenkinstown stream The Stream is supplemented by ditches	Open Cut Trenching
WB09	11400	RyeWater_SC_010	Jenkinstown stream The Stream is supplemented by ditches	Open Cut Trenching
WB11	13650	RyeWater_SC_010	Newtownmoy Aghy Stream Trib of RYE WATER_020	N/A
WB16	20870	Lyreen_SC_010	Drainage ditches	N/A
WB17	21250	Lyreen_SC_010	Drainage ditches	Open Cut Trenching
WB18	21300	Lyreen_SC_010	Drainage ditches	Open Cut Trenching
WB20	22000	Lyreen_SC_010	Trib of Liffey_010	HDD
WB21	22300	Lyreen_SC_010	Drainage ditches	Open Cut Trenching
WB23	24150	Lyreen_SC_010	Drainage ditches	N/A
WB26	27600	Liffey_SC_050	Trib of Kilmurry_010	Open Cut Trenching
WB28	30250	Liffey_SC_050	Trib of Liffey_130	Open Cut Trenching
WB33	36650	Liffey_SC_050 / Liffey_SC_060	Drainage ditches	N/A
WB34	36900	Liffey_SC_050 / Liffey_SC_060	Drainage ditches	Open Cut Trenching
WB40	42300	Liffey_SC_060	Liffey_110	N/A
WB44	49000	Liffey_SC_050	Drainage ditches	Open Cut Trenching
WB45	52700	Liffey_SC_050	Dunstown	Open Cut Trenching

3.1.4 Invasive species

A search of the NBDC identified a number of records of invasive species within 2km of the Planning Application Boundary (see Table 3.6).

Table 3.6: Records of Invasive species within 2km of the Planning Application Boundary (NBCD 2023) (Species in Bold are Designated as Third Schedule Invasive Species)

Common Name	Scientific Name	Species group	Location grid	Designation	Impact
American mink	*Mustela vison*	terrestrial mammal	Throughout all the Proposed Development cable route	Regulation S.I. 477 (Ireland)	High
Brown rat	*Rattus norvegicus*	terrestrial mammal	Throughout all the Proposed Development cable route	Regulation S.I. 477 (Ireland)	High
Budapest slug	*Tandonia budapestensis*	mollusc	In grid N81, N84 that the Proposed Development overlies	N/A	Medium
Cherry laurel	*Prunus laurocerasus*	flowering plant	In several location within Proposed Development including grids: N885195, N856230, N853246, N838250, N83	N/A	High
Common garden snail	*Cornu aspersum*	mollusc	In several location within Proposed Development included in grids: N81, N82, N84 that the Proposed Development overlies	N/A	Medium
Eastern grey squirrel	*Sciurus carolinensis*	terrestrial mammal	Throughout all the Proposed Development cable route	EU Regulation No. 1143/2014 Regulation S.I. 477 (Ireland)	High
European rabbit	*Oryctolagus cuniculus*	terrestrial mammal	Throughout all the Proposed Development cable route	N/A	Medium
Fallow deer	*Dama dama*	terrestrial mammal	Within 2km of the Proposed Development (grid N867125)	Regulation S.I. 477 (Ireland)	High
Greater, white-toothed shrew	*Crocidura russula*	terrestrial mammal	In several location within and in the vicinity (2km) of the Proposed Development, such as in grids N881199, N892202, N889202, N870208, N856297	N/A	Medium
Harlequin Ladybird	*Harmonia axyridis*	Insect – beetle	Found in a location in the proximity of Proposed Development (within 2 km) (grid N902204)	Regulation S.I. 477 (Ireland)	High
Japanese knotweed	*Reynoutria japonica*	flowering plant	In several location within Proposed Development included in grid: N81	Regulation S.I. 477 (Ireland)	High
Jenkins' spire snail	*Potamopyrgus antipodarum*	mollusc	In several locations included in grids N81, N82, N83, that the Proposed Development overlies	N/A	Medium
New Zealand flatworm	*Arthurdendyus triangulatus*	flatworm	In the vicinity of the Proposed Development (grid N895230)	N/A	High
Parrot's-feather	*Myriophyllum aquaticum*	flowering plant	Within the Proposed Development (including in grids N8327, N8939)	EU Regulation No. 1143/2014 Regulation S.I. 477	High
Spanish bluebell	*Hyacinthoides hispanica*	flowering plant	Within 2 km of the Proposed Development in grids N819273, N819274	Regulation S.I. 477 (Ireland)	N/A
Sycamore	*Acer pseudoplatanus*	flowering plant	In several location included in grid N81 and N83, that Proposed Development overlies, and other scattered grids that are within 2 km from it (e.g.N867278, N9645)	N/A	Medium

Common Name	Scientific Name	Species group	Location grid	Designation	Impact
Three-cornered garlic	*Allium triquetrum*	flowering plant	Within 2 km from Proposed Development in grid N889404	Regulation S.I. 477 (Ireland)	Medium

Himalayan balsam was recorded during the field survey along the River Liffey at approximately ITM E687941, N724498 and in the back garden of a private residence at E687974, N724322.

4. Screening

4.1 Potential effect pathways from Proposed Development

Table 4.1 outlines broad categories of potential impacts that could occur as a result of generic development, and the potential effects on European sites.

Table 4.1 Generic potential effect pathways from development on European sites.

Broad categories of potential impacts on European sites	Potential effect pathways
Physical loss of habitats including supporting habitat [6]and functionally linked habitat[7]	Development could result in direct loss of QI habitat (terrestrial or aquatic) in a European site. Physical loss of habitat is only likely to be significant if it is within the boundary of a European site, or within an area of functionally linked habitat outside of the European site (for example, off-site area of known foraging, roosting, breeding habitat for a QI for which a European site is designated).
Mortality	Mortality of species could occur through direct impact (e.g. destruction of an otter holt) or as a result of pollution to habitats that support QI species, aquatic species in particular.
Habitat degradation – changes in water quality (pollution)	Water quality can be affected by oil, chemicals, heavy metals and so on, or through chronic runoff of such materials. Water quality can also be affected by sedimentation through runoff from construction sites. Changes in water quality could directly affect QI species or habitats or affect them indirectly through loss of aquatic prey species, or through changes in their habitat. Pollution effects can occur outside of a European site and at a considerable distance from works (for example, via hydrological link).
Habitat degradation – hydrological/ hydrogeological changes	Construction impacts could affect groundwater quality and/or quantity and thereby the existing hydrological regime. Changes in hydrology can alter geomorphological processes which can affect the deposition of shingle or other material potentially impacting on QI fish species amongst others. Changes in these processes can impact aquatic/riparian/terrestrial habitats and species either directly or indirectly.
Disturbance (including biological disturbance)	Development could result in disturbance of QI species. This disturbance may include, but not be limited to, noise, vibration, movement (of people and/or vehicles) and lighting. Disturbance may lead to the abandonment of habitats or resting sites by QI species, which could include designated or supporting habitats outside of a European site. Spread of non-native invasive species.

4.2 European Site within the ZoI of the Proposed Development

The 'source-pathway-receptor' model was applied taking consideration of all potential impact pathways connecting elements of the Proposed Development to European sites in view of their conservation objectives .

[6] Supporting habitat is habitat within a protected site (SPA, SAC or NHA) which supports a QI species which is designated by a separate protected site (SPA, SAC or NHA).

[7] Functionally linked habitat is habitat within unprotected land which supports QI species designated by a protected site (SPA, SAC or NHA) in the vicinity of said land.

The Proposed Developments was examined with reference to location to European sites, and taking account of the potential effects outlined in Table 4.1.

A map showing the location of the European sites within 50 km of the Planning Application Boundary is shown in Figure 1 (321084AH-JAC-ZZ-XX-DR-K-3000), Appendix A.

Two European sites are within the ZoI of the Proposed Development, and their conservation objectives and qualifying interest are shown in Table 4.2:

- River Boyne and River Blackwater SAC and
- Rye Water Valley/Carton SAC.

Table 4.2: Conservation objectives of the River Boyne and River Blackwater SAC, and Rye Water Valley / Carlton SAC, which are within the ZoI of the Proposed Development

European site name and code	Distance of site from the Proposed Development and Ecological connectivity	Conservation Objectives and Qualifying Interests (*=priority habitat).
Special Area of Conservation (SAC)		
Rye Water Valley/Carton SAC (site code 001398) **(NPWS, 2021b)**	The Proposed Development will be 6.2 km west at the closest distance from the SAC (at Dolanstown). The Proposed Development is in the same water catchment (WFD catchment 09 Liffey and Dublin Bay) and the shortest hydrological distance between the Proposed Development and this SAC is 8.15 km, commencing at Kilcock (Rye Water, WB13) Hydrologically linked.	***To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.*** **Annex I habitats:** Petrifying springs with tufa formation (*Cratoneurion*) [7220] **Annex II species:** Narrow mouthed whorl snail (*Vertigo angustior*) [1014] Desmoulin's whorl snail [1016]
River Boyne and River Blackwater SAC (site code: 002299) **(NPWS, 2018).**	The Proposed Development will be 14.2 km east at its closest distance from the SAC (at Brannockstown Not hydrologically linked as the SAC is in separate catchment (Boyne 07_01) to the Proposed Development which is in Liffey 09_01) (EPA mapper). However, there is potential for otter to be disturbed as they can travel between catchments over land.	***To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.*** **Annex I habitats:** Alkaline fens [7230] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)* [91E0] **Annex II species:** River lamprey (*Lampetra fluviatilis*) [1099] Salmon (*Salmo salar*) [1106] Otter (*Lutra lutra*) [1355]

4.2.1 Other European sites within the vicinity of the Proposed Development but outside the ZoI

The following European sites are considered to be within the vicinity, i.e. there is a potential effects pathway to a receptor from the Proposed Development works, however on further examination the European sites are considered outside the ZoI with the reasons provided below which demonstrates that one or more elements of the source-pathway-receptor model is absent and therefore there is no likelihood for the effect to occur:

River Boyne and River Blackwater SPA (Site code 004232) is approximately 14 km distant and in a separate catchment to that of the Proposed Development (the Boyle catchment rather than the Tolka catchment), and

therefore it has no hydrological connectivity to the Proposed Development. The SPA is designated for kingfisher (*Alcedo atthis*) only. The territories of kingfishers tend to cover at least 1km of river but may extend over up to 5km depending on the amount of food available, and on the bird population in the area (RSPB, undated). There is no potential for the Proposed Development to impact the QI species within or linked to the SPA for the following reasons.

Given the overland distance (>14 km) and lack of hydrological connectivity/ecological connectivity this is considered outside the ZoI of the Proposed Development.

- Given the distance of the SPA from the Proposed Development, kingfisher populations along the SPA are not considered to be affected by the works.

Ballynafagh Bog SAC (Site code 000391) is located 1.6 km west of the Proposed Development at its nearest point. It is designated for active raised bogs, degraded raised bogs still capable of natural regeneration, depressions on peat substrates of the *Rhynchosporion* (NPWS, 2015a). Although there may be some interactions with ground water, raised bogs are generally rainwater fed, receiving water and nutrients from precipitation (Gilroy, *et al*., 2008). There is no potential for the Proposed Development to impact upon the QI habitats within or linked to the SAC for the following reasons:

- Works are proposed at Maynooth Road, which, at grid reference N 83909 28033 lies 220 m from a tributary which flows, after 2 km, into a watercourse running along the southern boundary of Ballynafagh Bog SAC. This tributary crosses Maynooth Road at N 83742 27890. There is no hydrological link between the SAC and the Proposed Development due to the distance between the Proposed Development and where the tributary crosses Maynooth Road.
- Given the lack of hydrological connectivity/ any other type of ecological connectivity, and therefore no potential for the SAC features, which are water dependent, to be impacted by the Proposed Development this SAC is considered outside the ZoI of the Proposed Development.
- Ballynafagh Bog SAC does not have species as qualifying interest (i.e., no mobile birds and mammals).

Ballynafagh Lake SAC (Site code 001387) is located 2.8 km west of the Proposed Development. It is designated for alkaline fens, Desmoulin's whorl snail (*Vertigo moulinsiana*), and marsh fritillary (*Euphydryas aurinia*) (NPWS, 2021a). There is no potential for the Proposed Development to impact upon the QI habitats or species within or linked to the SAC for the following reasons.

- Marsh fritillary butterfly is found in a range of habitats in which its larval food plant, devil's bit scabious occurs and although populations may occur occasionally on wet heath, bog margins and woodland clearings, most colonies are found in damp acidic or dry calcareous grassland[8]. The Proposed Development is within the potential foraging range of marsh fritillary. A mark release recapture study of this species found the longest straight distances flown by adults was 7.6 km (Zimmerman et al., 2011). Marsh fritillary was identified on the NBDC within 2 km of the Proposed Development. Marsh fritillary was not recorded in the study area during the site visits, although its main food plant devil's bit scabious was recorded at one discrete location on Harristown Common at (Grid Reference N 87879 12976), which lies c462 m east of the Proposed Development at its nearest location and therefore not within the Proposed Development Planning Application Boundary. The plant is separated from the Proposed Development by an amenity playing field and lies well outside the Proposed Development's footprint, and is not expected to have an impact on this species. In addition, the habitat between the SAC and the proposed works is predominantly arable, with limited opportunity for devil's bit scabious to flourish.
- Aerial images show the habitat between the SAC and Proposed Development is predominantly arable. Desmoulin's whorl snail is restricted to calcareous wetlands where it lives on reed grasses and sedges[9] There is no similar habitat between the SAC and the Proposed Development area. Given the absence of suitable habitat and that there is no hydrological connectivity due to the SAC being upstream of the Proposed Development this SAC is considered outside the ZoI of the Proposed Development as there is no effects pathway to European site and no supporting ex situ habitat for QI species of the SAC.

[8] JNCC (2022). Marsh Fritillary: https://sac.jncc.gov.uk/species/S1065/
[9] JNCC (2022): Desmoulin's whorl snail. https://sac.jncc.gov.uk/species/S1016/

Mouds Bog SAC (Site code 002331) is located 6 km west of the Proposed Development. It is designated for active raised bogs, degraded raised bogs still capable of natural regeneration, and depressions on peat substrates of the *Rhynchosporion* (NPWS, 2015b). There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SAC for the following reasons:

- This SAC lies upstream of the Proposed Development.
- Given the overland distance and no hydrological connectivity/ ecological connectivity this is considered outside the ZoI of the Proposed Development, as no effects pathway to this European site as the site is upstream of the Proposed Development and therefore cannot be effected.

Poulaphouca Reservoir SPA (Site code 004063) is located 8 km east of the southern extent of the Proposed Development. It is designated for greylag goose (*Anser anser*), and lesser black-backed gull (*Larus fuscus*) (NPWS, 2022a). It should be noted that this SPA provides the main roost for this species. There is no potential for the Proposed Development to impact upon the QI species within or linked to the SPA for the following reasons.

- Greylag goose and lesser black-back gulls feed on improved grassland and could potentially fly from this SPA to the improved fields adjoining the Proposed Development: the foraging range for greylag goose during the winter season is 15-20 km (SNH, 216) and the nearest distance of the Proposed Development to Poulaphouca Reservoir SPA is 8 km away and therefore within for foraging range of this species. However, 85% of the works are proposed to take place within the road and the habitat within and adjacent to the Proposed Development is unsuitable for them as it comprises predominantly trees and hedgerows and road surface. Where the Proposed Development is off-road, it does cross some improved pasture, which could potentially be used by greylag goose. The desk study found greylag goose wintering at Poulaphouca Reservoir mainly use fields at Threecastles to the northeast of Blessington Bridge and roost on the adjacent section of the reservoir, approximately 12.06 km west of the Proposed Development at their nearest location; they may also use fields at Mount Seskin in County Dublin around 8 km to the north-east of Threecastles and approximately 17.57 km from the Proposed Development at their nearest location. They also formerly roosted near Ballymore Eustace, around 5km to the south-west, and approximately 5.43 km from the Proposed Development at its nearest location (Boland and Crowe, 2008).
- Jacobs' winter bird survey (Jacobs, 2023) did not record any greylag goose. Most records for wintering birds were from round several ponds or lakes at Oberstown attenuation pond, none of which will be directly impacted by the Proposed Development due to screening effects from vegetation. The Proposed Development crosses WB39 which flows into the pond lying between Osberstown Millennium Park Road and the M7. The winter birds survey did not record birds using this pond which are QI of SPAs within foraging range of the pond, and therefore no indirect potential impacts on SPAs are predicted from birds using this pond. The Proposed Development does not any waterbodies with hydrological linkage to the pond lying between the R411 and Naas General Hospital and will therefore have no direct or indirect effect on the birds using this pond. The remaining records were of birds in flight or occasionally foraging in agricultural fields.
- Jacobs' winter bird survey (Jacobs, 2023) recorded lesser black backed gull on two occasions foraging in fields, with a maximum count of 42 birds in a field of winter barley (6.45% of SPA roosting population), approximately 224 m to the west of the Proposed Development. The SPA citation states that the Poulaphouca Reservoir attracts roosting gulls during winter, including a large population of lesser-black backed gull, which in Ireland is rare away from the south coast. Given the preference of gulls for the coast and given the abundance of similar agricultural habitat available between the Proposed Development and the SPA 8 km away, this species is not expected to be present in large numbers.

In summary given that: 1) the majority of other nationally important sites for greylag goose and lesser black-backed gull lie nearer to the coast than Poulaphouca Reservoir SPA; 2) the desk study found greylag goose at Poulaphouca Reservoir SPA mainly using the fields in the vicinity of the SPA; 3) Jacob's winter bird survey (Jacobs 2024) did not record any greylag goose; 4) the majority of works will be undertaken in habitats unsuitable for foraging graylag geese and lesser black-baked gulls and; 5) given the extent of other similar unimpacted habitat in the vicinity of the Proposed Development, as well as that lying between the SPA and the Proposed Development, the temporary loss of the improved grassland is not expected to have a significant effect on these SPA bird populations.

Pollardstown Fen SAC (Site code 000396) is located 9 km west of the Proposed Development. It is designated for the following habitats: 1) calcareous fens with *Cladium mariscus* and species of the *Caricon davallianae*, petrifying springs with tufa formation (*Cratoneurion*); 2) petrifying springs with tufa formation; and 3) alkaline fens. It is also designated for the following three species: Geyer's whorl snail (*Vertigo geyeri*), narrow-mouthed whorl snail, and Desmoulin's whorl snail (NPWS, 2022b). There is no potential for the Proposed Development to impact upon the QI habitats within or linked to the SAC for the following reasons:

- This SAC lies in a separate catchment (Barrow 14_01) to the Proposed Development (Liffey 09_01) (EPA mapper), therefore there is no surface water hydrological link.
- Pollardstown Fen SAC is a ground water dependent ecosystem (GWDTE). The cable trench will be 1.5 m width by 1.3 m depth and given that the SAC is 9 km away from the Proposed Development and the likelihood of greatest impact to GWDTE is within 250m where excavation works are >1m deep (SEPA, 2001), therefore there is no groundwater hydrological link.
- The three habitats for which the SAC is designated, and which are water dependent, do not have hydrological, surface or groundwater, connectivity with the Proposed Development area. Connected habitat suitable to support the three QI species or the water dependent habitats for which the Pollardstown Fen SAC is notified, was not present between the proposed works and SAC. The habitat requirements for narrow-mouth whorl snail and Desmoulin's whorl snail are described above for Ballynafagh Lake SAC. Geyer's whorl snail is found in relatively exposed, constantly humid calcareous flush-fens that are fed by tufa-depositing springs.[10]

North Dublin Bay SAC (Site code 000206) is located 29 km east of the Proposed Development and hydrologically connected to it (31 km). It is designated for the following habitats: 1) Mudflats and sandflats not covered by seawater at low tide [1140]; 2) Annual vegetation of drift lines [1210]; 3) Salicornia and other annuals colonising mud and sand [1310]; 4) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]; 5) Mediterranean salt meadows (*Juncetalia maritimi*) [1410]; 6) Embryonic shifting dunes [2110]; 7) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]; 8) Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]; 9) Humid dune slacks [2190]; and for the following species: 1) *Petalophyllum ralfsii* (petalwort) [1395] (NPWS 2022b). There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SAC for the following reasons:

- There is a hydrological link 31 km in length, including the estuary, which is considered *de minimus* due to the intervening distance and dilution rates to cause significant impacts.

South Dublin Bay SAC (000210): is located 31.6 km east of the Proposed Development and hydrologically connected to it (40 km). It is designated for the following habitats: 1) Mudflats and sandflats not covered by seawater at low tide [1140]; 2) Annual vegetation of drift lines [1210]; 3) Salicornia and other annuals colonising mud and sand [1310]; 4) Embryonic shifting dunes [2110]. This site is an example of a coastal system, with extensive sand and mudflats, and incipient dune formations. There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SAC for the following reasons:

- Given the overland distance (31.6 km) and hydrological connectivity distance (40 km), which includes the estuary, effects are considered *de minimus* due to the intervening distance and dilution rates, which would dilute a pollution event reaching the South Dublin Bay SAC which is 40km distant from the proposed Development. It is considered that this European site is outside the ZoI of the Proposed Development. There are no other types of connectivity that could impact this SAC

Howth Head SAC (000202): is located 33.5 km east of the Proposed Development and hydrologically connected to it (36.7 km). It is designated for the following habitats: 1) Vegetated Sea Cliffs [1230]; and 2) Dry Heath [4030]. There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SAC for the following reasons:

- The hydrological connectivity is through the estuary and the sea. The Vegetated Sea Cliffs and Dry Heath are located on the slopes above the sea cliffs in the area of summit, thus there will not be direct contact with the area hydrologically connected to the Proposed Development. Given the overland distance (33.5 km) and hydrological connectivity distance (36.7 km), which includes the estuary, effects are considered *de minimus*

[10] JNCC (2022) Geyer's whorl snail: https://sac.jncc.gov.uk/species/S1013/

due to the intervening distance and dilution rates, which would dilute a pollution event reaching the Howth Head SAC which is 36.7 km distant from the proposed Development.

Rockabill to Dalkey Island SAC (003000): is located 35 km east of the Proposed Development and hydrologically connected to it (37.2 km). It is designated for the following habitats: 1) Reefs [1170]; and the following species 1) *Phocoena phocoena* (Harbour porpoise) [1351]. There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SAC for the following reasons:

- Given the overland distance (35 km) and hydrological distance (37.2 km), which includes the estuary, the Proposed Development is not ecologically connected to Rockabill and Dalkey Island SAC. Dilution rates are considered to be *de minimus* due to the intervening distance and dilution rates, which would dilute a pollution event reaching the Rockabill to Dalkey SAC which is 37.2km distant from the proposed Development. As such this SAC is considered outside the ZoI of the Proposed Development. There are no other types of ecological connectivity to the SAC.

South Dublin Bay and River Tolka Estuary SPA (004024): is located 25.5 km east of the Proposed Development. The SPA is designated for light-bellied Brent goose (*Branta bernicla hrota*) [A046]; oystercatcher (*Haematopus ostralegus*) [A130]; ringed plover (*Charadrius hiaticula*) [A137]; grey plover (*Pluvialis squatarola*) [A141]; red knot (*Calidris canutus)* [A143]; sanderling (Calidris alba) [A144]; dunlin (*Calidris alpina*) [A149]; bar-tailed godwit (*Limosa lapponica*) [A157]; redshank (*Tringa totanus*) [A162]; black-headed gull (*Chroicocephalus ridibundus*) [A179]; roseate tern (*Sterna dougallii*) [A192]; common tern (*Sterna hirundo*) [A193]; Arctic tern (*Sterna paradisaea*) [A194]; and [A999] Wetland and Waterbirds. There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SPA for the following reasons:

- There is a hydrological link 27.7 km in length which is considered *de minimus* due to the intervening distance of and dilution rates to cause significant impacts.

- According to the conservation objectives of South Dublin Bay and River Tolka Estuary SPA the wetlands habitat should be maintained stable to as a resource for regularly occurring migratory waterbirds that use it. Moreover, no significant decrease in the range, timing or intensity of use of areas should occur. The Proposed Development will not interfere with wetland habitats, mainly being laid along existing road and aerial images show the habitat between the SPA and Proposed Development is predominantly arable. Furthermore, given the overland distance (25.5 km) and hydrological distance (27.7 km) the Proposed Development is not ecologically connected to South Dublin Bay and River Tolka Estuary SPA and will not interfere in the range, timing or intensity of use of areas of the bird species that designate the site.

- Jacobs' winter bird survey (Jacobs, 2023) recorded black-headed gull across the study area (as described in Table 2.1) on 14 occasions primarily foraging / loafing in lakes / ponds in aggregations ranging from 1 to 45 birds. However, given the presence of these birds on waterbodies, which will not be directly impacted by the Proposed Development, due to distance and intervening land use, they are outside the ZoI for disturbance.

- Jacobs' winter bird survey (Jacobs, 2022) did not record any light-bellied Brent goose, oystercatcher, ringed plover, grey plover, red knot, sanderling, dunlin, bar-tailed godwit, redshank, roseate tern, common tern, Arctic tern for which the site is designated, within the study area.

North Bull Island SPA (004006) is located 29 km east of the Proposed Development. The SPA is designated for light-bellied Brent goose [A046]; shelduck (*Tadorna tadorna*) [A048]; teal (*Anas crecca*) [A052]; pintail (*Anas acuta*) [A054]; shoveler (*Spatula clypeata*) [A056]; oystercatcher [A130]; golden plover (*Pluvialis apricaria*) [A140]; grey plover [A141]; Knot [A143]; sanderling [A144]; dunlin [A149]; black-tailed godwit (*Limosa limosa*) [A156]; bar-tailed godwit [A157]; curlew (*Numenius arquata*) [A160]; redshank [A162]; turnstone (*Arenaria interpres*) [A169]; black-headed gull [A179]; and [A999] Wetland and Waterbirds: There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SPA for the following reasons:

- There is a hydrological link 31 km in length which is considered *de minimus* due to the intervening distance of and dilution rates to cause significant impacts.

- According to the conservation objectives of North Bull Island SPA the wetlands habitat should be maintained stable to as a resource for regularly occurring migratory waterbirds that use it. Moreover, no significant

decrease in the range, timing or intensity of use of areas should occur. The Proposed Development will not interfere with wetland habitats, mainly being laid along existing road and aerial images show the habitat between the SPA and Proposed Development is predominantly arable. Furthermore, given the overland distance (>15 km) and hydrological distance (>15 km) the Proposed Development is not ecologically connected to North Bull Island SPA and will not interfere in the range, timing or intensity of use of areas of the bird species that designate the site. There are no other types of ecological connectivity between the Proposed Development and this SPA.

- Jacobs' winter bird survey (Jacobs, 2022) recorded black-headed gull across the study area on 14 occasions primarily foraging / loafing in lakes / ponds in aggregations ranging from 1 to 45 birds. However, given the presence of these birds on waterbodies, which will not be directly impacted by the Proposed Development, due to distance and intervening land use, they are outside the ZoI for disturbance.

- Jacobs' winter bird survey (Jacobs, 2023) recorded golden plover on one occasion c70m to the east of the Proposed Development, south of Ballybrack, feeding in recently sown winter barley. Due to the distance of North Bull Island SPA from the Proposed Development (28.7 km), 11 km being the maximum range of golden plover, and 3km being the core foraging range, the golden plover recorded during the survey are not considered likely to be part of the North Bull Island SPA population. As such, the Proposed Development does not contain functionally linked habitat for this species.
- Jacobs' winter bird survey (Jacobs, 2023) recorded teals on two occasions within ponds. However, because none of the ponds will be directly impacted by the Proposed Development, due to distance and intervening land use, they are outside the ZoI for disturbance.
- Jacobs' winter bird survey (Jacobs, 2023) did not record any light-bellied brent goose, shelduck, pintail, shoveler, oystercatcher, grey plover, knot, sanderling, dunlin, black-tailed godwit, curlew, redshank, turnstone for which the site is designated, within the study area (as described in Table 2.1).

North-West Irish Sea SPA (004236) is located 29.7 km east of the Proposed Development. The SPA is designated for: [A001] red-throated diver (*Gavia stellata*); great northern diver (*Gavia immer*) [A003]; fulmar (*Fulmarus glacialis*) [A009]; Manx shearwater (*Puffinus puffinus*) [A013]; cormorant (*Phalacrocorax carbo*) [A017]; shag (*Gulosus aristotelis*) [A018]; common scoter (*Melanitta nigra*) [A065]; little gull (*Larus minutus*) [A177]; black-headed gull [A179]; common gull (*Larus canus*) [A182]; lesser black-backed gull [A183]; herring gull (*Larus argentatus*) [A184]; great black-backed gull (*Larus marinus*) [A187]; kittiwake (*Rissa tridactyla*) [A188]; Roseate tern [A192]; common tern [A193]; Arctic tern [A194]; little tern (*Sterna albifrons*) [A195]; guillemot (*Uria aalge*) [A199]; razorbill (*Alca torda*) [A200]; puffin (*Fratercula arctica*) [A204]. There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SPA for the following reasons:

- There is a hydrological link 33.3 km in length which is considered *de minimus* due to the intervening distance of and dilution rates to cause significant impacts.
- According to the conservation objectives of North-West Irish Sea SPA the wetlands habitat should be maintained stable to as a resource for regularly occurring migratory waterbirds that use it. Moreover, no significant decrease in the range, timing or intensity of use of areas should occur. The Proposed Development will not interfere with wetland habitats, mainly being laid along existing road and aerial images show the habitat between the SPA and Proposed Development is predominantly arable. Furthermore, given the overland distance (29.7 km) and hydrological distance (33.3 km) the Proposed Development is not ecologically connected to the North-west Irish Sea SPA and will not interfere in the range, timing or intensity of use of areas of the bird species that designate the site. No other types of ecological connectivity are present between the Proposed Development and the SPA.
- Jacobs' winter bird survey (Jacobs, 2023) recorded lesser black backed gull on two occasions foraging in fields, with a maximum count of 42 birds in a field of winter barley, approximately 224 m to the west of the Proposed Development. However, given the typical foraging distance of 20.8 km and the higher tendency of marine foraging (Isaksson *et al.*, 2016), the Proposed Development can be considered to not include functionally linked habitat and thus be outside the ZoI for disturbance or habitat degradation for this species.
- Jacobs' winter bird survey (Jacobs, 2023) recorded black-headed gull across the study area (as described in Table 2.1) on 14 occasions primarily foraging / loafing in lakes / ponds in aggregations ranging from 1 to 45

birds; cormorant in one occasion along the canal and herring gull eleven occasions mainly in flight or foraging in ponds or fields. However, given the presence of these birds along waterbodies, which will not be directly impacted by the Proposed Development due to distance and intervening land use, they are outside the ZoI for disturbance.

- Jacobs' winter bird survey (Jacobs, 2023) did not record any red-throated diver, great northern diver, fulmar, Manx shearwater, shag, common scoter, little gull, common gull, roseate tern, common tern, Arctic tern, little tern, guillemot, razorbill, puffin, for which the site is designated, within the study area (as described in Table 2.1).

Howth Head Coast SPA (004113): is located 36.2 km east of the Proposed Development. The SPA is designated for: kittiwake [A188]. There is no potential for the Proposed Development works to impact upon the QI habitats within or linked to the SPA for the following reasons:

- There is a hydrological link 36.2 km in length which is considered *de minimus* due to the intervening distance of and dilution rates to cause significant impacts.
- According to the conservation objectives of Howth Head Coast SPA the wetlands habitat should be maintained stable to act as a resource for regularly occurring migratory waterbirds that use it. Moreover, no significant decrease in the range, timing or intensity of use of areas should occur. The Proposed Development will not interfere with wetland habitats, mainly being laid along existing road and aerial images show the habitat between the SPA and Proposed Development is predominantly arable. Furthermore, given the overland distance (>15 km) and hydrological distance (36.2 km) the Proposed Development is not ecologically connected to Howth Head Coast SPA and will not interfere in the range, timing or intensity of use of areas of the bird species that designate the site.
- Jacobs' winter bird survey (Jacobs, 2023) did not record any kittiwake, for which the site is designated, within the study area (as described in Table 2.1).

5. Assessment of Likely Significant Effects (LSEs)

5.1 Screening Exercise

A screening exercise is presented in Table 5.1 below which examines the potential effects of the Proposed Development on 1) Rye Water Valley/Carton SAC and 2) the River Boyne and River Blackwater SAC and their qualifying interest (Annex I habitats and Annex II species) for which they are designated. The results of this exercise and the rationale for 'screening in or screening out' European sites within the ZoI (and therefore, of potential relevance to the AA) are also detailed in Table 5.1.

Table 5.1: European Site with the Potential for likely significant effects from the Proposed Development (grey text = qualifying feature with no effect pathway identified.)

European site name and code	Distance of site from the Proposed Development	Conservation Objectives and Qualifying Interests (*=priority habitat).	Pathway	Likely Significant Effects (LSEs)**
Special Area of Conservation (SAC)				
Rye Water Valley/Carton SAC (site code 001398, version 1) **(NPWS, 2021b)**	The Proposed Development is 6.2 km west at the closest distance from the SAC (at Dolanstown) The Proposed Development is in the same catchment and the shortest hydrological distance between the Proposed Development and this SAC is 8.15 km, commencing at Kilcock (Rye Water, WB13)	*To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.* Annex I habitats: Petrifying springs with tufa formation (*Cratoneurion*) [7220] Annex II species: Narrow mouthed whorl snail (*Vertigo angustior*) [1014] Desmoulin's whorl snail (*Vertigo moulinsiana*) [1016]	Habitat degradation (Pollution) There is hydrological connectivity to this SAC where the Proposed Development crosses waterbodies which flow indirectly to Rye Water, since Rye Water flows through Rye Water Valley/Carton SAC. The nearest is WB13 which is 8.15km from this SAC. HDD is proposed here which could potentially cause a pollution event resulting from: oil and fuel spillages from drilling rig operation. inadvertent drilling fluid returns (bentonite breakout) and drilling fluid disposal. A total of ten further waterbody crossings have hydrological connectivity with the SAC. There is potential for surface sediment run-off during construction of the Proposed Development to enter	LSEs cannot be excluded. Petrifying springs with tufa formation (*Cratoneurion*), narrow mouthed whorl snail and Desmoulin's whorl snail screened in on a precautionary basis as all the SAC QI could be indirectly impacted by pollution caused by inadvertent drilling fluid returns from HDD in WB13 and/or surface sediment run-off into one of the connecting watercourses.

European site name and code	Distance of site from the Proposed Development	Conservation Objectives and Qualifying Interests (*=priority habitat).	Pathway	Likely Significant Effects (LSEs)**
			waterbodies at these locations and be transported to the SAC. Therefore, water pollution incidents at these watercourses have the potential to indirectly affect the SAC's qualifying habitats and species. Petrifying springs have exacting water level and quality requirements and are therefore potentially susceptible to a water pollution/ hydrological incident. Desmoulin's whorl snail was recorded at the SAC in the 2014-2017 survey season (Long and Brophy, 2019) while narrow mouthed whorl was last recorded on the site in 1997 (NPWS, 2021b). Water pollution has the potential to significantly affect these snails. There is potential that the snail's food supply could become contaminated and inedible from pollution, thus potentially causing the snail to starve. There are no other types of ecological connectivity between the Proposed Development and the SAC. Further assessment needed. Direct mortality	

European site name and code	Distance of site from the Proposed Development	Conservation Objectives and Qualifying Interests (*=priority habitat).	Pathway	Likely Significant Effects (LSEs)**
			Desmoulin's whorl snail is restricted to calcareous wetlands where it lives on reed grasses and sedges. Such habitat does not connect the SAC to the Proposed Development area, so there is no likelihood of direct mortality of this species from habitat loss. Narrow mouthed whorl snail is found primarily in marshy ground of high, even humidity, with flowing groundwater, but subject neither to deep or prolonged flooding nor to periodic desiccation. It requires unshaded conditions and lives amongst short vegetation, composed of grasses, mosses or low herbs, that is quickly warmed by the sun. The vegetation may be grazed. Such habitat does not connect the SAC to the Proposed Development area, so there is no likelihood of direct mortality of this species from habitat loss. No further consideration needed.	
River Boyne and River Blackwater SAC (site code: 002299) **(NPWS, 2018).**	The Proposed Development is 14.2km from the SAC at its closest location. There is no hydrological link or any other type of connectivity between the SAC and the Proposed Development.	*To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.* Annex I habitats: *Alkaline fens*	Habitat loss The Proposed Development is 14.2km from the SAC at its nearest location, so there is no potential for direct loss of SAC habitat. The SAC is in a separate catchment therefore there is no hydrological link. No further consideration needed.	LSEs can be excluded, alone and in combination with other plan or projects, as there is no potential for habitat loss as the SAC is 14.2 km distance from the Proposed Development or effects from pollution as the SAC is in a separate catchment and therefore there is no effects pathway. Effects on otter are not likely as although the SAC is in a separate catchment and otter can travel

European site name and code	Distance of site from the Proposed Development	Conservation Objectives and Qualifying Interests (*=priority habitat).	Pathway	Likely Significant Effects (LSEs)**
		Alluvial forests with Alnus glutinosa and Fraxinus excelsior Annex II species: River lamprey Salmon Otter (potential effect pathway identified)	Disturbance Otter is a qualifying feature of the River Boyne and River Blackwater SAC, and otter signs were recorded close to the Proposed Development during the Jacobs 2021/22 survey season as follows: potential otter holt was recorded along the River Liffey at approximately ITM E687929 N724445, (this grid reference lies along the route the proposed HDD where it crosses the River Liffey, WB35. an otter slide at approximately ITM E687940, N724511 (this grid reference lies approximately 16m east of the cable route. The Proposed Development is located 14.2km south-east of the SAC at its closest point. The otters present adjacent to the River Liffey are in a different catchment to those in the SAC, and the otter signs are approximately 28km south-east of the SAC at its nearest point. The Proposed Development lies 14.2km from this SAC at its nearest point, and a male otter's territory is 13.2 ± 5.3km[11]. However, as there are no other rivers	over land the distance to the nearest point of the Proposed Development exceeds the mean territorial range (13.2 km) for otter. Further, as the SAC extends for approximately 65 km to the Baltry Estuary, is it considered that otters are more likely to remain in the River Boyne and River Blackwater SAC catchment than to migrate into Liffey catchment and as such this QI is unlikely to be present. .

[11] National Otter Survey of Ireland 2010/12, published by the National Parks and Wildlife Service (2013)

European site name and code	Distance of site from the Proposed Development	Conservation Objectives and Qualifying Interests (*=priority habitat).	Pathway	Likely Significant Effects (LSEs)**
			designated for otters between the SAC and the proposed works, the SAC is considered the core area for otters, rather than in intervening rivers and tributaries. As the SAC extends for approximately 65km to the Baltry Estuary, is it considered that otters are more likely to remain in the River Boyne and River Blackwater SAC catchment than to migrate into Liffey catchment. Therefore, the Proposed Development is not considered to have a likely significant effect on otters, a QI of this SAC. No further consideration needed. Direct mortality As described in the paragraph above the proposed route lies close to the otter signs on the River Liffey. However, as the otters at this location belong to a different population to those of the River Boyne and River Blackwater SAC, the interest feature of the SAC will not be impacted by the Proposed Development. No further consideration needed. Pollution There is no hydrological pathway between the SAC and the Proposed Development since the water flowing in the River Boyne and River Blackwater lies in the Boyne catchment rather than the Liffey and	

European site name and code	Distance of site from the Proposed Development	Conservation Objectives and Qualifying Interests (*=priority habitat).	Pathway	Likely Significant Effects (LSEs)**
			Dublin Bay catchment, the location of the Proposed Development. Consequently, there is no potential for a pollution event to occur. No further consideration needed.	

** As identified in Section 1.4 of this report, Measures intended to avoid or reduce the harmful effects of the proposed development on European sites (i.e. "mitigation measures") or best practice measures cannot be taken into account in the screening stage appraisal. Therefore, the likely significant effects identified in this table are assessed in the absence of mitigation measures. As also identified in Section 6, appropriate mitigation measures are proposed to avoid adverse effects in the Appropriate Assessment, documented in the Natura Impact Statement for the Proposed Development.

5.2 Determination of Likely Significant Effects

Potential pathways were identified and assessed between the Proposed Development and the two European designated sites which lay with the ZoI (the Rye Water Valley/Carton SAC and the River Boyne and River Blackwater SAC) as outlined in full Table 5.1. The River Boyne and River Blackwater SAC is situated in a separate water catchment and therefore there is no pathway through surface water to the QI of the European site. Otter, which is a QI of this SAC, can move over land between catchments however, the Proposed Development is beyond an otter's territorial range and therefore it is considered that this QI would be absent and therefore not effected by the Proposed Development. Neither were there any other plans or projects with the potential to disturb otters in-combination with the Proposed Development.

The determination of LSEs takes account of any effect that may possibly occur as a consequence of the Proposed Development that would undermine the conservation objectives for the site's QI features. In the assessment of LSEs, consideration is given to what would constitute a significant effect in terms of loss, fragmentation, disruption, disturbance and changes to key elements affecting the QI features that may compromise the conservation objectives for that feature.

The determination found that there was potential for LSEs on the Rye Water Valley/Carton SAC as a result of the Proposed Development, individually or in-combination with other plans or projects cannot be excluded. LSE are from potential pollution of watercourse during works including open cut trenching and accidental release of pollutants during horizontal direction drilling, of hydrologically connected to the SAC. . It was concluded that it can be excluded, on the basis of objective information, that the Proposed Development will, individually or in-combination with other plans or projects, have a significant effect on the River Boyne and River Blackwater SAC or any other European Site.

6. In-Combination Effects

In order to take account of in-combination effects, proposals in adopted plans and in finalised draft plans which have been formally published or submitted for consultation or adoption, and projects that are completed, approved but not commenced or uncompleted, or proposed (for which an application for approval or consent has been made but not yet approved, including refusals subject to appeal and not yet determined) should be considered in appropriate assessment screening (EC, 2021a). A search of the National Planning Application Database (NPAD) (DoHLGH, accessed December, 2023 and February 2024) within 1km (which is considered a precautionary and proportionate distance for ZoI of direct impact) of the Proposed Development. in the last three years (the three year period would cover any projects likely still in their construction phase that could overlap with the Proposed Development construction programmed)(has been undertaken to identify other projects that may result in cumulative impacts. The search was up to date at the time of submission of the AA.

Planning applications that have been proposed or granted permission within 1km of the Proposed Development are presented below in Table 6. 1.

The following websites were used in the search in addition to the national Planning Application Database.

- An Bord Pleanála: https://www.pleanala.ie/en-ie/home
- Kildare County Council: ttps://kildarecoco.ie/AllServices/Planning/PlanningApplicationsandPermission/
- Meath County Council: https://www.eplanning.ie/MeathCC/searchtypes

Table 6. 1 Plans and significant developments within 1km of the Proposed Development.

Planning ref.	Planning Authority	Project Description	Comment
N/A	Meath County Council	The Meath County Development Plan indicates in the event of construction activities in the environs of Maynooth there is potential for impacts on water quality from inadequate wastewater treatment and subsequent discharge to surface waters, or run-off of contaminated waters.	Various types of development in the Development Plan could impact on the Rye Valley due to the scope of the Development Plan. There is potential for in-combination effects from pollution if Construction Phases of the projects within the Meath County Development run concurrently with the Proposed Development if there are hydrological connects to the Rye Water Valley/ Carton SAC.
N/A	Kildare County Council	Kildare County Development Plan 2017-2023. A Natura Impact Report was prepared (CAAS, 2017) in support of the Kildare County Development Plan 2017-2023. This report assessed potential impacts arising from the Kildare County Development Plan 2017-2023 (Kildare County Council, 2017). The NIS identified that the construction, operation and/or decommissioning of potential developments identified within the Plan have the potential to impact upon Rye Water/Carton SAC.	As the objectives of the Kildare County Development Plan are either high level or cannot be location specific, a likely significant impact on Rye Water Valley/ Carton SAC cannot be rule out at this time. Various types of developments provided for by the Kildare County Development Plan could impact upon this site (Rye Valley), including those for which are not exclusively spatially specific. Should projects Construction Phases run concurrently with the Proposed Development and if there is a hydrological link then there is

Planning ref.	Planning Authority	Project Description	Comment
			potential for in-combination effects from pollution on the Rye Water Valley/ Carton SAC.pollution on the Rye Water Valley Development.
N/A	Kildare County Council	Kildare County Council Development Plan 2023-2029. A Natura Impact Report was prepared (Arup, 2022) in support of the Draft Kildare County Development Plan 2023-2029. This report assessed potential impacts arising from the Draft Kildare County Development Plan 2023-2029. The EirGrid Transmission Development Plan 2020-2029 was included in the assessment. No adverse impacts were identified on site integrity after implementation of mitigation on any of the European sites identified within the ZoI of the Proposed Development. As such, no in-combination effects are anticipated between the Proposed Development and the Kildare County Development Plan 2023-2029.	The construction, operation and/or decommissioning of potential developments identified within the Plan have the potential to impact upon the Rye Water Valley /Carton SAC. Should projects Construction Phases run concurrently with the Proposed Development and if there is a hydrological link then there is potential for in-combination effects from pollution.
N/A	EirGrid Grid Implementation Plan 2017-2022 and Draft Grid Implementation Plan	The policies, objectives and projects within EirGrid's Grid Implementation Plan were screened for their potential to have Likely Significant Effects (LSEs) on European sites and five projects identified with the potential for LSE. These were assessed in the NIS for the plan. Potential for in-combination effects are possible between the Proposed Development and the Grid Implementation Plan 2017-2022, and Draft Grid Implementation Plan 2023-2028.	Due to the scale, nature and type of projects included in the Implementation Plan Development Plan, there is potential for in-combination effects from pollution where there are hydrological links and where project(s) Construction Phases run concurrently with the Proposed Development.
201143	Kildare County Council	Conditional permission granted for a proposed extension to a Distribution Centre of height 19 m to comprise of a: warehouse extension (approx. 11,82 m^2), main office extension over two storeys; dispatch and extension goods-in office over two storeys; new one storey transport office; and vehicle maintenance unit extension. The gross floor area of the premises will increase from 29,106 m^2 to 41,891 m^2, an increase of 12,785 m^2. Some demolition will be required. Additional new vehicle parking areas will be provided including a new HGV parking area located to the east of the Distribution Centre and a new additional car parking area to the south of the Distribution Centre, on the south side of the R148. Provision of 172 no. car parking spaces; 175 no. HGV trailer parking spaces; 27 no. tractor (HGV cab) parking spaces; and 128 no. bicycle parking spaces and associated infrastructure. The development will involve minor alterations to the	An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) were submitted to the Planning Authority with the planning application (Scott Cawley, 2020). This NIS concluded that 'the Proposed Development will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plants or projects and there is no reasonable scientific doubt in relation to this conclusion. There is no connectivity to any European site and therefore no potential for in-combination effects.

Planning ref.	Planning Authority	Project Description	Comment
		existing entrance at R148 which will provide vehicular, pedestrian and cyclist access and egress to the Distribution Centre. An additional new vehicular, pedestrian and cyclist access and egress will be provided off R148 to a new car parking area to the south of the main Distribution Centre site. A pedestrian crossing over this road will be provided connecting the southern car park to the main site. The associated site and infrastructural works include provision for all landscaping works; boundary treatment; internal roads and footpaths; PV panels and electrical services. The Proposed Development will involve modifications to a previous permission - Planning Register Reference 02/1561. Project has hydrological connectively with Rye Water Valley /Carton SAC and lies 9.1km from it.	
20840/310016	Kildare County Council/ ABP	Boran Plastic Packaging Ltd. Construction of a 5,627 square metre Specialist Packaging Single Storey High Level Manufacturing Facility with Three Storey Head office incorporating, administration, sales, design, research and development departments, staff changing room, staff canteen, car parking, bicycle parking, ESB sub station, two storey services plant room, loading bay, entrance gates, pedestrian gate, building signage, landscaping, extension to existing estate service road and all associated siteworks on a site of 2.5672 hectares. The project lies adjacent to the Planning Application Boundary at Oldtown Demesne, Nass where the Proposed Development follows the Millenium Parkway. The project was granted planning permission in July 2020.	There is potential for the construction phase of the Boran Plastic project to overlap with the Proposed Development. However, there are no pathways for European site habitats or species to be impacted by the project because there are no pathways that connect them. Osberstown Pond, is 210m west of the project does not support SCI wintering birds as confirmed by wintering bird surveys at the pond and there are no watercourses that link to any European site.
N/A **Exempted Development**	N/A Exempted Development	EirGrid CP0869 Maynooth - Woodland 220kV Line Uprate. Overlaps with the Proposed Development at Woodland Substation Planning Application Boundary . Construction timeline unknown but due to be energised by Q4 2024	Considering the nature, scale and location of this development, there is no potential for Operational Phase to result in in-combination effects with the Proposed Development.
PCI0001	An Bord Pleanála (ABP)	EirGrid CP0466 North South Interconnector This project involves a second, higher-capacity interconnector being added, to connect the electricity grids of Ireland and Northern Ireland. It will connect to the network in Northern Ireland in	Timelines are unknown but there is potential for Construction Phases to overlap. No in-combination effects are likely on the Rye Water /Carton SAC from the Interconnector Project as there is no hydrological linkage to the SAC.

Planning ref.	Planning Authority	Project Description	Comment
		Co Tyrone, cross the border between Armagh and Monaghan, and then join the network in Ireland at an existing substation in County Meath. Planning application is granted. Overlaps with the Proposed Development at Woodland Substation Planning Application Boundary.	
2360296	Meath County Council (MCC)	EirGrid CP1235 Louth - Woodland 220 kV Uprate. Proposed uprate of the existing Louth – Woodland 220 kV overhead powerline (OHL) between the existing Louth 220 kV substation in the townland of Monavallet, County Louth and the existing Woodland 220 kV substation in the townland of Woodland, County Meath. This project overlaps with the Proposed Development at Woodland Substation Planning Application Boundary Lodged for planning. Not determination of as yet.	Considering the nature, scale and location of this project (i.e., uprating an existing overhead line), there is no potential for in-combination effects to occur.
22837/23 136	Meath County Council	GDA Energy 4 Ltd Proposed development constitutes a new battery energy storage facility & synchronous condenser, with associated change of use on lands currently in agricultural use. The proposed development will comprise of rechargeable battery units with grid forming inverters contained within 253 no. 40 foot containers on site at Woodland, County Meath.	The timeline is unknown, but construction is estimated to take ten years. There is potential for the construction phases to overlap. Considering type, scale and location of the project however there is no potential for in-combination effects from potential pollution impacts as there is no hydrological link to any European site.
N/A	Meath County Council/Fingal County Council/ABP	EirGrid CP1021 East Meath – North Dublin Grid Upgrade 37.5 kilometres of new 400 kV underground cables between the existing Woodland Substation in the townland of Woodland, near Batterstown, County Meath and the existing Belcamp Substation in the townland of Belcamp in Fingal, north County Dublin. A new 400kV Gas Insulated Switchgear Hall and associated transformers will also be required at Belcamp Substation. Overlaps with the Proposed Development at Woodland Substation and along the 'Woodland Corridor' between Woodland Substation and the R156 Regional Road. Planning application in preparation. Due to be submitted to ABP in Q1 2024.	Considering the nature, scale and location of this project, there is potential for in-combination effects to occur. As both developments cross the Dunboyne Stream _010 watercourse.

Planning ref.	Planning Authority	Project Description	Comment
N/A **Future Planned Project as part of the TDP 2023 - 2032**	N/A	EirGrid CP1214 North County Dublin Bulk Supply Point. Bulk Supply Points are interface points between the Transmission System and Distribution System. Planning status is Future Planned Project as part of the TDP 2023 – 2032. Exact location and detail unknown at this stage of the project.	N/A
N/A **Future Planned Project as part of the TDP 2023 - 2032**	N/A	EirGrid CP1218 West County Dublin Bulk Supply Point. Bulk Supply Points are interface points between the Transmission System and Distribution System. Planning status is Future Planned Project as part of the TDP 2023-2032. Exact location and detail unknown at this stage of the project.	N/A
N/A **Future Planned Project as part of the TDP 2023 - 2032**	N/A	EirGrid CP1273 Dublin Central Bulk Supply Point. Bulk Supply Points are interface points between the Transmission System and Distribution System. Planning status is Future Planned Project as part of the TDP 2023-2032. Exact location and detail unknown at this stage of the other project.	N/A
221550	Meath County Council	EirGrid PLC CP1110 Woodland Station 400 - 220kV Protection Upgrade, not part of the Proposed Development. The project will consist of 1. Installation of outdoor Air Insulated Switchgear (AIS) electrical apparatus, including an associated extension to the hardstand compound (approximately 4 hectares) to facilitate same. Overlaps with the Proposed Development at Woodland Substation.	There will not be any overlap in Construction Phases as the project will be energised at the end of 2024 and the construction phase for the Proposed development will commence in Quarter 2, 2025. Therefore, there is no potential for in-combination effects.
211175	Kildare County Council	EirGrid Proposed project, not part of the Proposed Development will consist of an extension to the western boundary of the existing Dunnstown 400 kV substation to allow connection of series compensation equipment to the Dunnstown-Moneypoint 400 kV circuit. Planning permission is granted. Overlaps with the Proposed Development at Dunnstown Substation.	There is potential for Construction Phases to overlap. Considering the nature, scale and location of this project, there is potential for in-combination effects from pollution impacts if Construction Phases were to overlap. However, as there is no effects pathway to any European site there is no potential for in-combination effects.

Planning ref.	Planning Authority	Project Description	Comment
PCI000-ABP	Connection to the network in Northern Ireland in Co Tyrone, cross the border between Armagh and Monaghan, and then join the network in Ireland at an existing substation in County Meath.	North-South 400 kV Interconnection Development EirGrid plc (EirGrid) North-South 400 kV Interconnection Development EirGrid plc (EirGrid) and System Operator Northern Ireland Ltd (SONI) (the respective applicants)1 are jointly planning a major cross-border electricity transmission development between the existing high-voltage transmission networks of Ireland2 and Northern Ireland. The overall interconnection project is a 400 kV overhead line (OHL) circuit linking the existing 400 kV substation in Woodland, County Meath with a planned substation in Turleenan, County Tyrone. The proposed interconnector will provide a second high-capacity electricity interconnector between Ireland and Northern Ireland. The existing interconnector is a 275 kV double circuit OHL which connects the existing Tandragee and Louth substations. The proposed interconnector is planned to traverse the counties of Tyrone, Armagh, Monaghan, Cavan and Meath	No in-combination effects are predicted. No effects are likely on any European site as there are no hydrological linkages. .
313276/22313276	ABP/KCC	The Land Development Agency. Strategic Housing Development, including the demolition of an existing structure on the eastern boundary of the site, construction of 219 no. residential units (42 no. houses, 177 no. apartments), creche and associated site works at John Devoy Road, Naas, County Kildare.	Considering the nature, scale and location of this project, there is potential for in-combination effects if Construction Phases were to overlap. However, there is no hydrological link to any European site therefore no effects pathway and no potential for in-combination effects.
22314564	Kildare County Council	Strategic Housing Development at this site to south of the R148 and east of the R158 abutting the M4 Junction 8 roundabout, Boycetown, Kilcock, Co. Kildare. Proposed development (30,839 m^2 GFA) will consist of the demolition of a detached, vacant cottage (gfa 69 m^2) and the construction of 272 residential units (149 no. houses, 65 apartments and 58 duplexes), childcare facility and foul pumping station along with associated ancillary works and site works. The 149 no. dwellings consist of: • 40 no. 4 bed 2 storey houses (House Type A1, A2, A3, A4, A5) • 8 no. 4 bed 3 storey houses (House Type E1, E2) • 90 no. 3 bed 2 storey houses (House Type B1, B2, B3, C1, C2)	An AA screening Report carried out by Niamh Ní Bhroin in 2022 for the planning application Ltd. found no likely significant effects. However, the project is beside the proposed cable route along the R158 and R148 and is within 380m of the Royal Canal and 850m from the Rye Water here is potential for cumulative effects if the Construction Phases run concurrently.

Planning ref.	Planning Authority	Project Description	Comment
		• 11 no. 2 bed 2 storey houses (House Type D1) The proposed apartments and duplexes are provided in 7 no. blocks (Blocks A, B, C, D, E, F, G) ranging in height from 3 to 4 storeys, with the exception of 1 no. Duplex Block (Type N1), which is a 3 storey, end of terrace unit. Block A and Block B contain Rooftop terraces at 4th floor level. The Duplex Blocks (Type J1, Type, J2, Type J3, Type J4, Type K1, Type L1, Type M1, Type N1) are all 3-storey and contain 58 units divided as follows: • 6 no. 1 bed ground floor apartment units (Units L1-A) • 23 no. 2 bed ground floor apartment units (Units J1-A, J2-A, J3-A, J4-A, K1-A, M1-A, N1-A) • 1 no. 2 bed duplex unit (two-storey unit) (Units K1-B) • 25 no. 3 bed duplex units (two-storey units) (Units J1-B, J2-B, J3-B, J4-B, L1-B) • 3 no. 4 bed duplex units (two-storey units) (Units M1-B, N1-B) The 65 apartments are located within Blocks A, B, C and D divided as follows: - • 17 no. 1 bed units (Type F1, Type F2, Type F3, Type F4, Type F5, Type F6) • 37 no. 2 bed units (Type G1, Type G2, Type G3, Type G4, Type G5-A, Type G5-B, Type G6, Type G7, Type G8) • 11 no. 3 bed units (Type H1, Type H2) Block D also contains a childcare facility (gfa.526.2 m^2) and includes a dedicated outdoor play area (c.210 m^2). Ancillary works including 1 no. vehicular entrances off the R148 to the north and 1 no. vehicular entrance off the R158 to the west, a spine road which will link with the permitted spine road on the adjoining lands to the south-east under PL09.306826, internal roads, footpaths, cycle lanes, car parking (465 no. spaces), cycle storage/parking (426 no. spaces), 2 no. bus stops, bin storage, public open space, hard and soft landscaping, natural play area, play equipment, boundary treatments, public lighting, 3 no. substations (14 m^2 each) and controlled pedestrian crossing on the R148. A new application has been submitted in 2024.	

Planning ref.	Planning Authority	Project Description	Comment
2043	Kildare County Council	Project involves the demolition of an existing building on site and recladding the shared gable to match the remaining neighboring building. The construction of a new three story over basement mixed use development consisting of a basement car park and plant room, pharmacy unit, convenience store unit and retail unit at ground floor, 4 No. units of medical consultation suites at first floor and 1 unit of medical consultation suites. Ancillary works include office space at second floor, car-parking, boundary treatments, new site entrances and siteworks. Planning permission is granted.	Considering the nature, scale and location of this project, there is potential for in-combination effects if Construction Phases were to overlap. However, there is no hydrological link to any European site therefore no effects pathway and no potential for in-combination effects
22325	Kildare County Council	Project involves the installation of new external steel racking to the existing materials yard (the racking is to be mounted on top of the existing concrete hard standings) and all associated site works. AASR carried out and no potential for significant negative environmental effects were identified. Planning permission is granted.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects
21386	Kildare County Council	Project involves (a) Erection of a single story type house; (b) Garage/fuel store for domestic use; (c) Installation of septic tank and percolation area; and (d) Upgrading of existing agricultural entrance to a new recessed vehicular entrance and all associated site works. AASR carried out and no potential for significant negative environmental effects were identified. Planning permission is granted.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects
18502	Kildare County Council	Project involves alteration works to an existing bungalow on the grounds of Painestown House (Protected Structure Ref. No. B14-30). The works include the construction of a single and two storey extension circa 73 m^2, a detached single storey shed and carport, landscaping around the house, new treatment plant, percolation area and all associated ancillary works. Painestown House is also a recorded monument, NIAH No. KD010-034. No works proposed directly affect Painestown House. AASR carried out and no potential for significant negative environmental effects were identified.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects.

Planning ref.	Planning Authority	Project Description	Comment
223	Kildare County Council	Project involves alterations and extension to existing dormer style dwelling. The application will include the following: (a) Single storey extensions to the rear and side of the dwelling to provide new living room and utility room. (b) New entrance porch to the front of the dwelling. (c) Alterations to the elevational treatment of the dwelling, along with all associated site development and facilitating works including site landscaping. AASR carried out and no potential for significant negative environmental effects were identified.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects.
181214	Kildare County Council	Project involves retention permission for 4 no. existing booths (used for drying, shotblasting and painting) and ancillary storage rooms (476.9 m^2 combined), standalone office (21 m^2) along with the change of use of the cottage to office / storage unit (136 m^2). Planning permission is sought to: • Demolish domestic garage (25 m^2). • Construct an extension to the north side of the shot blasting booth in order to contain all dust associated with shotblasting (37 m^2) • Construct a new shed structure to the front of the existing workshop (414 m^2.) in order to protect trailers from the weather during shotblast / repainting process and also, critically, to prevent dust emissions. The shed will have a maximum ridge height of 6.38 m high and will be enclosed on 3 sides with the south elevation open to allow trailers to enter. It includes a new doorway connection to the existing cottage building. • Alter the access arrangements to provide single access to the business and family dwelling and significantly improve sightlines and safety (includes new gates and dwelling). • Create new ordered trailer parking area to the rear of the workshop (significantly smaller area than previous application – approximately one third the size) including a dedicated turning area. • Provide new lined car parking for staff and visitors (12 spaces) and dedicated HGV parking (12 spaces) • Decommission the existing on-site treatment system and percolation area	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects

Planning ref.	Planning Authority	Project Description	Comment
		and provide new high specification on-site foul treatment system at a location to the rear of the site. • Provide new surface water drainage infrastructure. • Provide new landscaping with significant screening planting along the front boundary with family dwelling. • Carry out all associated site works. Planning permission is granted.	
211814	Kildare County Council	Project involves the construction of an agricultural style building to be used for the storage of vintage cars for hobby purposes and all associated site works. AASR carried out and no potential for significant negative environmental effects were identified.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects
21846	Kildare County Council	Project involves extensions to the rear and side of 123 m^2. Retention of change of use from garage to habitable space of 23 m^2. Retention of removal of block archways to the front elevation and retention of new septic tank and percolation area to existing detached bungalow. AASR carried out and no potential for significant negative environmental effects were identified. Planning permission is granted.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap. Despite the vicinity of the project to the Proposed Development, there is no hydrological link to any European site and therefore no effects pathway and no potential for in-combination effects.
16636 / 22322	Kildare County Council	The proposed development consists of 60 house type EE, a two storey three bedroom semi-detached house of 121m2. 88 houses, type FF, a two storey four bedroom semi-detached house of 144m2. 31 houses, type GG, a two storey four bedroom detached house of 163m2. 3 houses, type G1, a three storey split level four bedroom detached house of 163m2. 3 houses, type G1, a three storey split level four bedroom detached house of 204m2. 7 houses, type G2, a two storey four bedroom detached house of 163m2. 1 house type G3, a two storey four bedroom detached house of 163m2. 3 houses, type G4, a three storey split level four bedroom detached house of 204m2. 18 houses, type JJ, a three storey four bedroom semi-detached house of 203m2. 8 houses, type HH, a three storey four bedroom semi- detached house of 203m2. 16 no. house type KK, a two storey three bedroom semi-	An AA screening report completed in 2016 for the planning application found no likely significant effects. There is no hydrological linkage to any European site, therefore no effect pathway and no potential for in-combination effects

Planning ref.	Planning Authority	Project Description	Comment
		detached house of 100m2. 8 houses, type LL, a two storey four bedroom semi-detached house of 119m2. Single storey crèche approximately 560m2. Along with all associated siteworks	
307258 / 20307258 and 23931	Kildare County Council/ABP	Randelswood Holdings Limited Strategic Housing Development, including 152 no. apartments, childcare facility and associated site works at the Devoy Quarter, Naas, County Kildare.	An AA screening report carried out by Openfield Ecological Services in 2020 for the planning application found no likely significant effects. There is no hydrological linkage to any European site, therefore no effect pathway and no potential for in-combination effects.
211728	Kildare County Council	Project includes the erection of a two storey office/laboratories building with reception entrance area, staff toilets, shower room with goods-in delivery area and storage on ground floor with managers office and staff canteen facilities and staff toilets on first floor. The installation of new foul sewer and surface water sewer and connection into the existing Millennium Park drainage system and connection into the existing water mains. The addition of 27 surface car parking spaces including 4 E-Car charging points, 20 covered cycle parking spaces, delivery area and turning area on south-east elevation and all site drainage/site development works	No AA screening report was found during the planning search. However, due to the scale and location of the project and that there is no hydrological linkage to any European site, there is therefore no effect pathway and no potential for in-combination effects.
23794	Kildare County Council	Construct a single story extension on the Eastern and Southern sides of the existing Garage/Workshop building and to construct a new canteen in part of the existing store at mezzanine floor level with a new externally cladded fire escape stairs on the Northern (rear) Elevation in the existing building located on the Northern corner of the site and all associated site works and services	Considering the nature, scale and location of this project, there is potential for in-combination effects impacts if Construction Phases were to overlap. This project is approximately 7.2m from Rye Water and 60.2 m from Royal Canal, which have hydrologically link to the Rye Valley/Carton SAC.
212217	Meath County Council	The application site comprises an area of c. 3.8 hectares, for the construction of a workshop/maintenance building, extension to the outdoor concrete pad to allow for an additional composting area, construction of an extension to the composting building to include one additional in-vessel composting tunnel, and the construction of a roof over the existing biofilter. This will facilitate the increase in intake of waste materials at the facility from 50,000 tonnes to 68,500 tonnes per annum. This application relates to development for the	Considering the nature, scale and location of this project, there is potential for in-combination effects impacts if Construction Phases were to overlap. This project is approximately 7.1m from the watercourse WB09, 976 m from Rye Water_020 and 1km from Jenkinstown Stream_010, which are all hydrological linked with Rye Valley/Carton SAC.

Planning ref.	Planning Authority	Project Description	Comment
		purposes of an activity requiring a licence under the Industrial Emissions Directive. An Environmental Impact Assessment Report (EIAR) will be submitted to the Planning Authority with the application	
221508	Meath County Council	Development with a total site area of 171.34ha, to include solar panels mounted on steel support structures, associated cabling and ducting, 47 No. MV Power Stations, 3 No. Client Substations, 3 No. Temporary Construction Compounds, tracks, boundary security fencing and security gates, CCTV, landscaping and ancillary works, with a 40-year operational period. A Natura Impact Statement (NIS) has been submitted to the Planning Authority with the Application. Significant further information/revised plans submitted on this application	Considering the nature, scale and location of this project, there is potential for in-combination effects impacts if Construction Phases were to overlap. This project is close to the Dunboyne_Stream_010. However, this watercourse is not hydrologically linked with the Rye Valley/Carton SAC. Therefore, there is no potential for in-combination effects.
23286	Kildare County Council	Project involves the addition of four floodlighting masts to the existing playing pitch, along with skills wall 28.5 m long and 5 m tall, and the associated development and facilitation works.	Considering the nature, scale and location of this project, there is potential for in-combination effects impacts if Construction Phases were to overlap. This project is close to the Dunboyne_Stream_010. However, this watercourse is not hydrologically linked to the Rye Valley/Carton SAC. Therefore, there is no potential for in-combination effects.
221197	Kildare County Council	Project includes the sub-division of existing domestic site, the construction of additional rooms and a new vehicle entrance	Considering the nature, scale and location of this project, and that there is no hydrological connection to the any European site, there is no potential for construction effects from pollution if the project and the Proposed Development were constructed concurrently..
23320	Kildare County Council	Project includes the construction of four agricultural polytunnels.	Considering the nature, scale and location of this development, there is no potential for in-combination effects impacts if Construction Phases were to overlap, and that there is no hydrological connection to any European site so there is no potential for construction effects from pollution if the project and the Proposed Development were constructed concurrently.

Planning ref.	Planning Authority	Project Description	Comment
23627	Kildare County Council	Project includes the construction of a single storey accommodation and all associated ancillary site works.	Considering the nature, scale and location of this development, and that there is no hydrologically connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
23131	Kildare County Council	Project includes the development comprising a change of use of the existing building from residential to office use ancillary to the Killashee House Hotel. The proposed development also comprises a minor internal alteration. The proposal includes all site services, drainage works and ancillary site development works. There are no works proposed to the existing Protected Structure within the grounds of Killashee House Hotel as part of this planning application	No potential for in combination effects given the scale of the project and that there is no hydrological connection to any European site so there is no potential for construction effects from pollution if the project and the Proposed Development were constructed concurrently
22633	Kildare County Council	Project includes the development at Bluebell Farmhouse, Kilcullen Rd, Naas, Co. Kildare. The development consists of: works being carried out at Bluebell Farmhouse, Kilcullen Road (a protected structure RPS Ref. NS19-115). The construction of a single storey extension to Bluebell Farmhouse which shall comprise the demolition of an existing, non-original single storey extension to the north east side of Bluebell Farmhouse (34m^2); the construction of a single storey extension (150m^2) on the north east comprising of living/kitchen/dining room; the connection to existing services and all ancillary site works.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
23838	Kildare County Council	Project includes the retention of Change of Use of commercial premises to an Education Facility.	Considering the nature, scale and location of this development, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
2360126	Kildare County Council	Project includes the extension of existing public car park, the relocation of the existing entrance and pedestrian entrance, the reconfiguration of existing car park design, the provision of 7 electric car charging, the provision of public lighting	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.

Planning ref.	Planning Authority	Project Description	Comment
23387	Kildare County Council	Project includes the installation of new 2.4m high fencing with 2.6m high ball stopping net installed on top for a total height of 5m around soccer pitch with pedestrian gates provided at the north-west and north-east corners of the pitch, a larger maintenance gate is to be provided at the east end of the pitch and associated site works	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap. .
22713	Kildare County Council	Project includes the construction of a dwelling house with new entrance and the connection to the main sewer, mains water and surface water sewer with all ancillary site works	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
22567	Kildare County Council	Project includes the construction of a dwelling house with new entrance and the connection to the main sewer, mains water and surface water sewer with all ancillary site works	Considering the nature, scale and location of this Project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
22596	Kildare County Council	Project includes the construction a single storey dwelling, detached garage, connection to mains water, new wastewater treatment system and percolation area, new entrance and all associated site works	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
22108	Kildare County Council	Project includes the erection of 3 external signs affixed to the façade of the existing building.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
221505	Kildare County Council	Project includes the change of use of existing ground floor of "Firmount House" from current commercial use, as granted planning permission under Pl. Reg. File Ref. No. 15/1145 to residential use. Firmount House is a Proposed Protected Structure	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
22841	Kildare County Council	Project includes the demolition of an existing habitable bungalow type dwelling and the construction of a replacement two storey type dwelling on the same footprint in lieu, along with the de-commissioning and the removal of an existing septic tank system and the installation of a new effluent treatment system in lieu. And the	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.

Planning ref.	Planning Authority	Project Description	Comment
		construction of a detached domestic garage, and all associated ancillary site works.	
22580	Kildare County Council	Project includes the extension and improvement to the existing single storey dwelling, the construction of a detached garage, the installation of a proprietary wastewater treatment system with polishing filter, and all ancillary site works.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
211700	Kildare County Council	Project includes the erection of a double-sided ball wall with flood lights, adjacent to the existing Astro Turf pitches. The ball wall will be 5 metres high and 15 metres wide, with a 5m high perimeter fence. There will be four flood light poles including lights, each pole being no more than 13 metres high.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
221103	Kildare County Council	Project includes the provision of an off-licence sales area as part of an existing shop premises including all associated works.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
2360067	Kildare County Council	Project includes the construction of a single-storey dwelling, recessed vehicular entrance, detached domestic garage, effluent treatment system and all associated ancillary site works	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
23183	Kildare County Council	Project includes the to renovate, alter and extend existing dwelling and construct a new domestic garage and new wastewater treatment system, and the demolition of a porch.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
2360216	Kildare County Council	Project includes the extension for a single storey, side to side and rear of two storey detached dwelling together with associated siteworks	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for in-combination effects impacts if Construction Phases were to overlap.
306826 / 20306826, 23759 and 23760	Kildare County Council/ABP	Rycroft Homes Limited Strategic Housing Development, including 345 no. residential units (69 no. duplex units, 182 no.	Considering the nature, scale and location of this project, and that there is no hydrological connectivity to any European site, there is no potential for

Planning ref.	Planning Authority	Project Description	Comment
		houses and 94 no. apartments), creche and associated site works at Kilcock, County Kildare.	in-combination effects impacts if Construction Phases were to overlap.
305701 / 19305701	ABP / KCC	Cairn Homes Properties Limited Strategic Housing Development, including the demolition of 1 no. agricultural building, construction of 314 no. residential units (208 no. houses and 106 no. apartments), childcare facilities and associated site works to the east and west of Devoy Link Road, Naas, County Kildare.	Considering the nature, scale and location of this project, there is no potential for in-combination effects if Construction Phases were to overlap with the Proposed Development.
312817	ABP	Rathasker Homes Limited For the demolition of 2 existing habitable dwellings and the construction of 39 residential houses at Rathasker Road, Naas, County Kildare.	Considering the nature, scale and location of this project, and that there are no hydrological linkages to any European site, there is no potential for in-combination effects if Construction Phases were to overlap.
310841 / 21608	ABP / KCC	Strategic Power Projects Limited Construction of enclosed battery energy storage system compound and all associated site works at Dunnstown, County Kildare.	Considering the nature, scale and location of this project, and no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
19784	KCC	Electricity Supply Board Proposed to alter the existing J125 - Blessington 38kV line at Bluebell, Kilcullen Road, Naas and will involve undergrounding sections of the above mentioned overhead 38kV line to facilitate the development of a previously permitted housing development.	Considering the nature, scale and location of this project, and no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
191288	KCC	White Tide Developments Ltd A mixed-use development at Corscadden's Hotel and grounds, at Church Street, Kilcock, County Kildare. Provision of 65 residential dwellings, a café and ancillary works in 6 blocks.	Considering the nature, scale and location of this project, there is potential for in-combination effects impacts if Construction Phases were to overlap. This project is approximately 74 m from Royal Canal which is hydrologically linked to the Rye Valley/Carton SAC.
191296	KCC	Alexander Georgakis Development on site area of 0.445ha, located at Church Street and Bridge Street, Kilcock, County Kildare and includes built-to-rent shared accommodation with 9 bedrooms and 39 studio apartments, in 4 blocks.	Considering the nature, scale and location of this project, there is potential for in-combination effects if Construction Phases were to overlap. This project is approximately 49.4 m from Royal Canal which is hydrologically link to the Rye Valley/Carton SAC.

Planning ref.	Planning Authority	Project Description	Comment
21547	KCC	Quattuor Developments Limited Construction of 20 No. dwellings in a row of 11 No. 3-storey houses, 1 No. single storey house and a 4 storey block of 8 No. apartments on Limerick Road, Naas, County Kildare.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
221016	KCC	Island Stability Services Ltd. Develop a synchronous condenser grid support facility, which will connect to the adjoining ESB Dunstown Electricity Substation in the townland of Dunnstown, Brannockstown, Naas, Co. Kildare.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
22221502 /23942	KCC	Westar Homes Limited Large-Scale Residential Development including the construction of 134 No. apartments in three blocks within the townland of Naas West, 'Finlay Park', Naas, County Kildare	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
23567	KCC	Delamain Solar Farm Ltd. Solar farm with a total area of circa 246 hectares to consist of solar photovoltaic panels with a surface area of 1,130,000m2 on ground mounted frames, 40 no. single storey electrical inverter/transformer stations, 4 no. single storey spare parts containers, 19 no. Ring Main Units, 9 no. weather stations underground electrical ducting and cabling within the development site, private lands and within the L6063, L2032, L6071, R448, L6072, R412, L6074, L6047 and R413 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 5 no. stream and drain deck crossings, temporary construction compounds, landscaping and all associated ancillary development and drainage works in County Kildare.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
21365	KCC	Ken Fennell Construction of a residential development of 66 no. houses (24 no. 3 bedroom and 42 no. 4 bedroom) and all associated site development works including internal roads and open space at Oughteranny Village, Kilcock, County Kildare.	Considering the nature, scale and location of this project, there is potential for in-combination effects if Construction Phases were to overlap. This project is approximately 800m from Royal Canal, and 88m from a watercourse hydrologically linked to the Royal Canal. The Royal Canal has hydrologically linkage to the Rye Valley/Carton SAC.

Planning ref.	Planning Authority	Project Description	Comment
P82022.01	KCC	Sallins Amenity Lands (Part 8 application) Development of amenity and recreational facilities on 16.8 ha of land adjacent to the Sallins Bypass. The southern lands will consist of a main entrance from the Sallins link road and car parking, pedestrian and cycle entrances, 2 natural grass GAA pitches, 2 natural grass soccer pitches, an All-Weather pitch, Playground, Tennis and Basketball Courts, Teen Play area, Wetland area with associated Boardwalk and Bird Watching Tower, Community & Sports Hall building, Restoration of the old stone farm buildings. The northern portion of land will consist of an entrance off the Sallins Link Road with associated overflow car parking area, a path network, enhancement of the existing attenuation area, enlargement of the existing wetland area, platform area with access for canoes to the river Liffey. There will also be associated planting and landscaping with the features and works proposed.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
18303023	KCC	Ardstone Homes Ltd. Strategic Housing Development including 125 no. new residential units comprising of houses and a four-storey apartment block, 251 car parking spaces and all ancillary works at Kilcullen Road, Naas, County Kildare.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
N/A	N/A	MCC R156 Jenkinstown Road Improvement Scheme. Road safety scheme for Mullagh Cross and Environs.	There is no available information for this project. However, there is the possibility that the project will be in the vicinity of Jerkinstown watercourse which has hydrological linkage with Rye Valley/ Carton SAC. There is therefore potential for in-combination effects.
N/A	N/A	TII Grand Canal – Sallins Bridge to Clonkeen (Offaly Border) Greenway, 11km in length.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.
N/A	N/A	TII Grand Canal Greenway – Alymer Bridge to Sallins, 11km in length.	Considering the nature, scale and location of this project, and that there is no hydrological linkage to any European site, there is no effect

Planning ref.	Planning Authority	Project Description	Comment
			pathway and no potential for in-combination effects.
N/A	N/A	NTA Leinster Orbital Route comprises an orbital road proposal extending from Drogheda to the Naas/Newbridge area with intermediate links to Navan and other towns.	There is no available information on this project so an assessment cannot currently be carried out. As such in the absence of information it is assumed that there is potential for in-combination effects from pollution.
N/A	N/A	NTA Emergency Diversion Routes (M50). Road link between the N3 and N4 national roads, which could provide critical infrastructure resilience in the event of incidents arising on the M50 between Junctions 6 and 7, in addition to providing potential orbital public transport corridor. Exact distance is not known at this stage as there is no defined route for this other project.	There is no available information on this project so an assessment cannot currently be carried out. As such in the absence of information it is assumed that there is potential for in-combination effects from pollution.
N/A	N/A	Microsoft Jigginstown Data Centre, which is proposed on a campus located at Jigginstown, Naas, County Kildare. This investment by Microsoft will involve a number of elements, including: • The data centre campus • Landscape improvements • Recreational facilities for the public • An electrical sub-station • A new access road • Additional infrastructure that will link the data centre to its electrical supply. The project is 380m from the proposed cable route planning application boundary. Timeline for other development unknown. Potential for Construction Phases to overlap. Operational Phases will coincide.	Considering the nature, scale and location of this development, there is potential for in-combination impacts if Construction Phases were to overlap.
N/A	N/A	Osberstown Data Centre. A 37 hectare plot on the Caragh Road in Naas has been zoned for a data centre development in the Naas Local Area Plan 2021-2027. The project is 760m from the proposed cable route planning application boundary. Land zoned for data centre development in the Naas Local Area Plan. However, there is no design progressed at this stage and no known timeline for the	The is no hydrological link between the project and the Grand Canal and therefore no potential for an in-combination effect with the Proposed Development.

Planning ref.	Planning Authority	Project Description	Comment
		development to complete an assessment at this stage.	
N/A	ABP	Water Supply Project Drinking water transfer pipeline from Ardnacrusha on the River Shannon to Peamount in South County Dublin, including a Water Treatment Plant at Peamount. The Water Supply Project will cross under the proposed cable route in the vicinity of Joint Bay 30. Construction of the Water Supply Project is currently scheduled to commence in mid-2026 and will take approximately 4.5 years to construct. There is therefore potential for Construction Phases to overlap, and Operational Phases will coincide.	Considering the nature, scale and location of this development, and no hydrological linkage to any European site, there is no effect pathway and no potential for in-combination effects.

6.1 Conclusions of in-combination effects

There is potential for in-combination effects from the Meath County Development Plan, Kildare County Development Plan and EirGrid Grid Implementation Plan. For projects there is potential for in-combination effects from: CP1021 Eirgrid, 22314564, 23794, 212217, 191288, 191296, 21365, R156 MCC Jenkinstown Road Improvement Scheme, NTA Leinster Orbital Route, NTA Emergency Diversion Route (M50) and Microsoft Jigginstown Data Centre. Since screening does not include mitigation, it is concluded that there is potential for and in-combination effects several plan and projects and the Proposed Development.

7. Screening statement and Conclusion

The Proposed Development is not connected with, or necessary to, the management of any European site(s).

This Appropriate Assessment Screening report presents the objective scientific information required to inform An Bord Pleanála' s screening assessment of the potential impacts of the Proposed Development on European sites.

The conclusion of the Screening for Appropriate Assessment is that in the absence of mitigation measures it cannot be excluded, on the basis of objective scientific evidence, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on the Rye Water Valley / Carton SAC.

It is therefore recommended that the Proposed Development is progressed to Stage 2 Appropriate Assessment which will comprise a detailed examination of effects on the integrity of this European site. Detailed information to inform the AA for the Proposed Development will be presented in an NIS which will be submitted to enable the Competent Authority to undertake an AA in respect of the Proposed Development.

8. References

Boland, H. and Crowe, O. (2008). An Assessment of the Distribution and Range of Greylag (Icelandic-Breeding and Feral Populations) in Ireland. Report to the National Parks and Wildlife Service and the Northern Ireland Environment Agency. BirdWatch Ireland, Newtown Mountkennedy.

CAAS (2017). Natura Impact Report for the Kildare County Development Plan 2017-2023.

Chartered Institute of Ecology and Environmental Management (CIEEM) (2021). Good Practice Guidance for Habitats and Species.

Chartered Institute of Ecology and Environmental Management (CIEEM). (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

Chartered Institute of Ecology and Environmental Management (CIEEM). (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Department of Environment, Heritage and Local Government (DoEHLG) (2010). Appropriate Assessment of Plans and Proposed Schemes in Ireland. Guidance for Planning Authorities.

Department of Housing, Local Government and Heritage (DHLGH) (Accessed December 2023). National Planning Application Map Database (NPAD) and Map Viewer. Available at www.myplan.ie.

Environmental Protection Agency (2004). IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities.

European Commission (2018). Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC'

European Commission (EC) (2021a). Assessment of Plans and Proposed Schemes Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC

European Commission (EC) (2021b). Guidance document on the strict protection of animal species of Community interest under the Habitats Directive.

European Commission (EC) (2000). Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg.

European Commission (EC) (2007). Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.

European Commission (EC) (2018). Managing Natura 2000 sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC.

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. The Heritage Council.

Gilroy, G., Dunne, F, Ryan, J., O'Connor, A., Daly, D., Craig, M., Coxon, C., Johnston, P. and Moe, H. (2008). A Framework for the Assessment of Groundwater Dependent Terrestrial Ecosystems under the Water Framework Directive. Environmental Research Centre Report for the Environmental Protection Agency.

Jacobs (2024, in preparation). Environmental Impact Assessment Report, Kildare to Meath. Capita Project 966.

Kildare County Council (KCC). (2017). Kildare County Development Plan 2017-2027.

Kildare County Council (KCC). (2023). Kildare County Development Plan 2023-2029.

Long, M.P., and Brophy, J.T (2019). Monitoring sites and habitats for three Annex II species of whorl snail (*Vertigo*). *Irish Wildlife Manuals*, No 104. National Parks and Wildlife Department Service, Department of Culture, Heritage and the Gaeltacht, Ireland

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

National Parks and Wildlife Service (NPWS) (2012). Marine Natura Impact Statements in Irish Special Areas of Conservation - A Working Document. National Parks & Wildlife Service of the Department of Arts, Heritage & the Gaeltacht.

National Parks and Wildlife Service (NPWS) (2015a). Conservation Objectives: Ballynafagh Bog SAC 000391. Version 1.

National Parks and Wildlife Service (NPWS) (2015b). Conservation objectives: Mouds Bog SAC 002331. Version 1.

National Parks and Wildlife Service (NPWS) (2018). Conservation objectives for River Boyne and River Blackwater SAC (002299). Generic Version 6. Department of Culture, Heritage and the Gaeltacht.

National Parks and Wildlife Service (NPWS) (2019a). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

National Parks and Wildlife Service (NPWS) (2019b). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

National Parks and Wildlife Service (NPWS) (2019c). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.

National Parks and Wildlife Service (NPWS) (2021a). Conservation Objectives: Ballynafagh Lake SAC 001387. Version 1.

National Parks and Wildlife Service (NPWS) (2021b). Conservation Objectives: Rye Water Valley/ Carton SAC 001398. Version 1.

National Parks and Wildlife Service (NPWS) (2022a). Conservation objective for Poulaphouca Reservoir SPA [004063]. Generic Version 9.0.

National Parks and Wildlife Service (NPWS) (2022b). Conservation Objectives: Pollardstown Fen SAC 000396. Version 1.

National Roads Authority (NRA) (2009). Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes.

National Roads Authority (NRA) (2010). Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads.

Office of the Planning Regulator (OPR) (2021). Appropriate Assessment Screening for Development Management. OPR Practice Note PN01.

Royal Society of Biology (undated). https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/kingfisher/breeding-feeding-

territory/#:~:text=The%20size%20of%20the%20territory,extend%20over%203%2F5%20km.(accessed January 2023)

Scott Cawley (2020). Natura Impact Statement. Provision of information for Appropriate Assessment for Proposed Development at Boycetown, Kilcock, Co Kildare, W23 EHY

Scott Cawley. (2021). Natura Impact Report for the Meath County Development Plan 2021-2027.

Scottish Environmental Protection Agency (SEPA). (2017). Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems. Land Use Planning System SEPA Guidance Note 31.

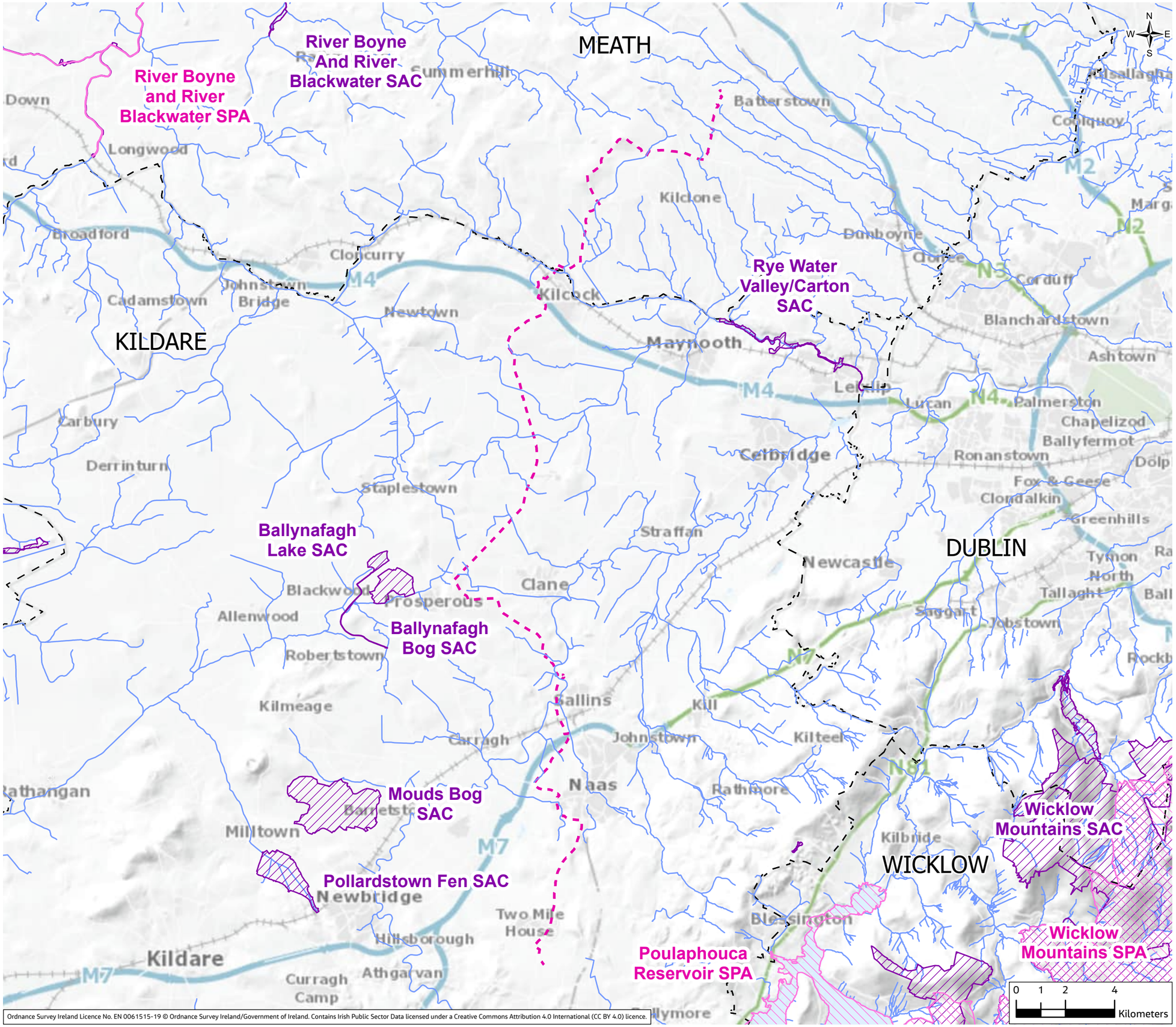
Scottish Natural Heritage (2016). Assessing Connectivity with Special Protected Areas (SPAs). Guidance. Version 3.

Transport Infrastructure Ireland (TII) (2020a) The Management of Invasive Alien Plant Species on National Roads – Standard.

Transport Infrastructure Ireland (TII) (2020b) The Management of Invasive Alien Plant Species on National Roads - Technical Guidance.

Zimmerman, K., Zdenec, F. and Jiskra, P., 2011. Mark-recapture on large spatial scale reveals long distance dispersal in the Marsh Fritillary. Ecological Entomology, 36, pp.499-510.

Appendix A. Figure 1 (321084AH-JAC-ZZ-XX-DR-K-3000). Cable route and nearest European sites



Appendix A; Figure 1

Legend

- Proposed Cable Route
- County Boundary
- Watercourses

European sites

- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

Drawing Title: Proposed cable route and nearby European Sites

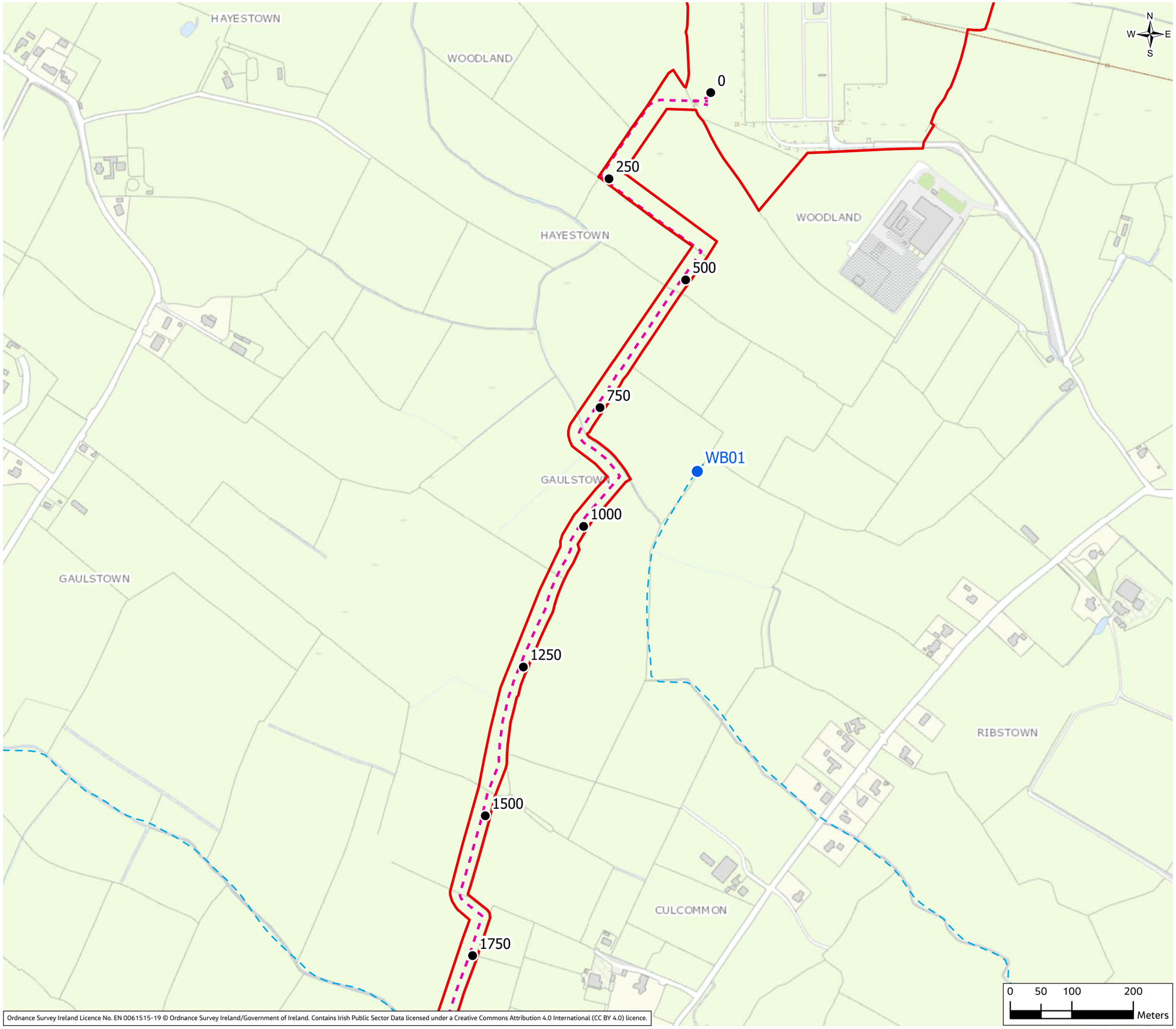
Drawing Status: Final

Scale @ A3	1:150,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

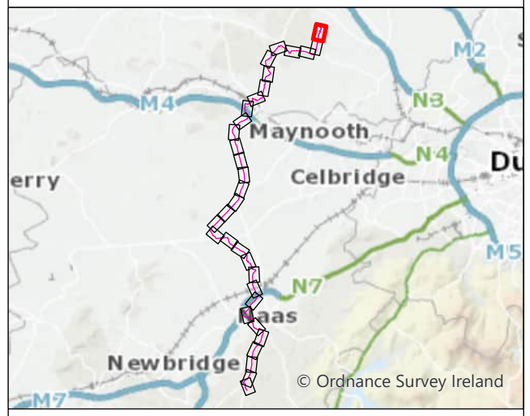
Drawing No.: 321084AH-JAC-ZZ-XX-DR-K-3000

Appendix B. Figure 2 (321084AH-JAC-ZZ-XX-DR-K-3001 to 3034). Detailed cable route, with chainage and Waterbody numbering

Appendix C. Figure 3 (321084AH-JAC-ZZ-XX-DR-K-3035). Water Framework Directive status of watercourses in the vicinity of the Proposed Development



Appendix B; Figure 2.1



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

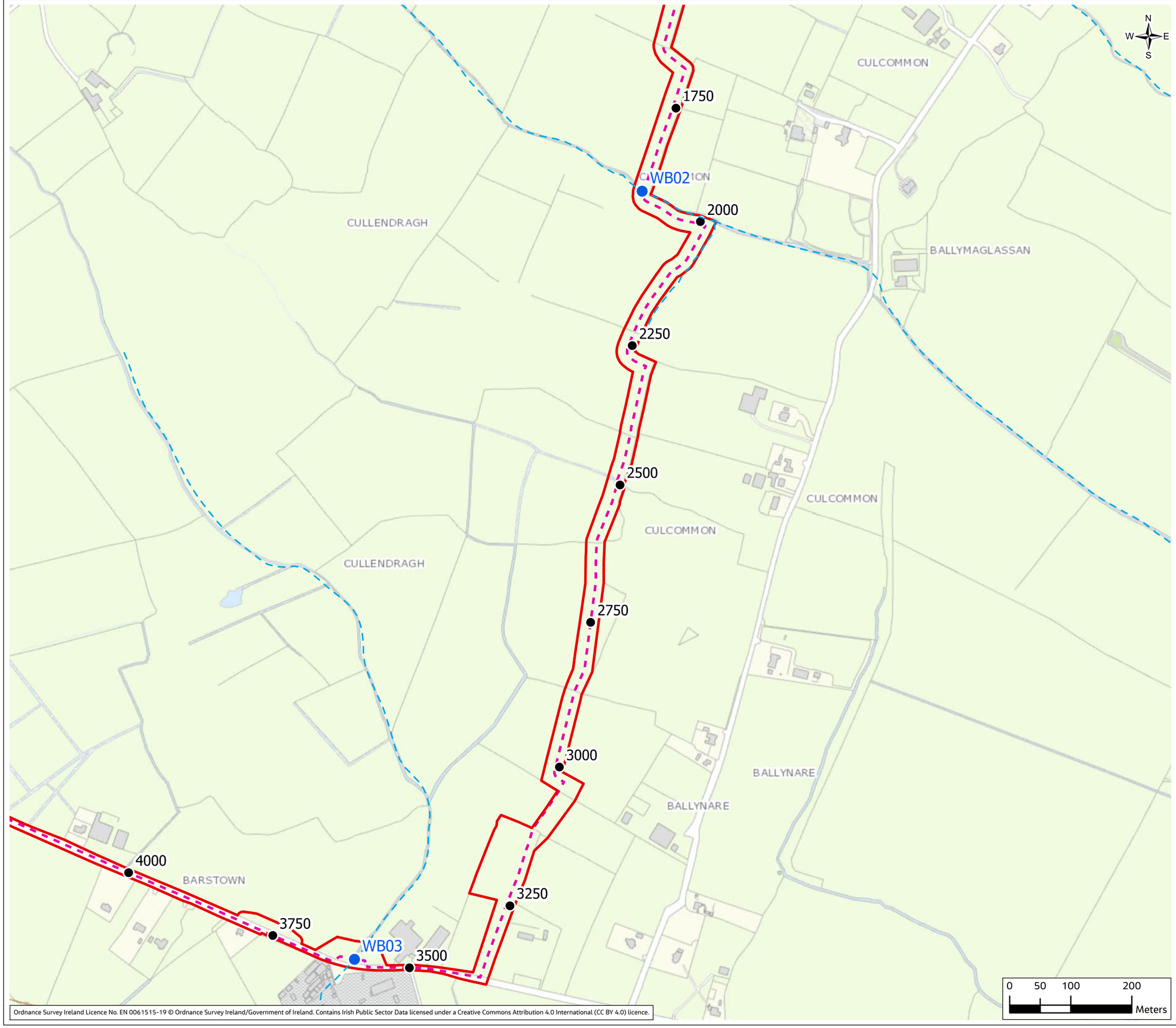
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

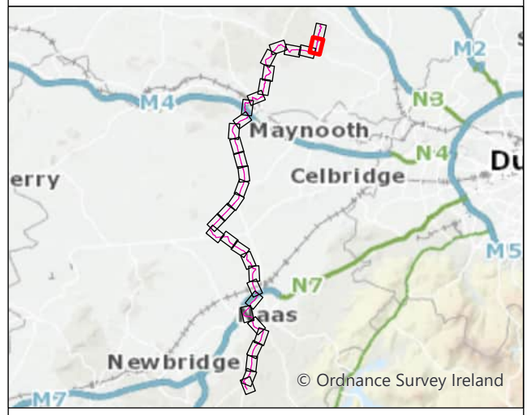
Sheet 1 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3001	



Appendix B; Figure 2.2



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 2 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3002

WOODCOCKSTOWN

WARRENSTOWN

CULLENDRAGH

BARSTOWN

5000

4750

4500

4250

4000

3750

WB03

3500

3250

3000

2750

2500

N

W

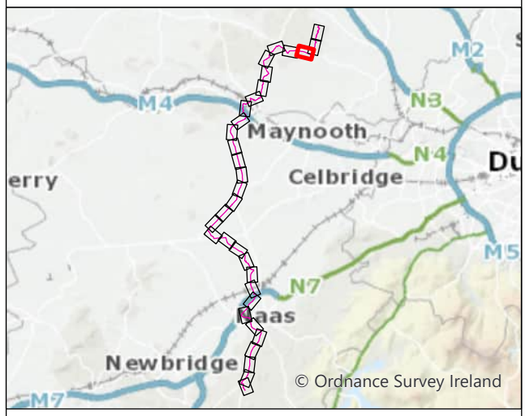
E

S

0 50 100 200

Meters

Appendix B; Figure 2.3



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

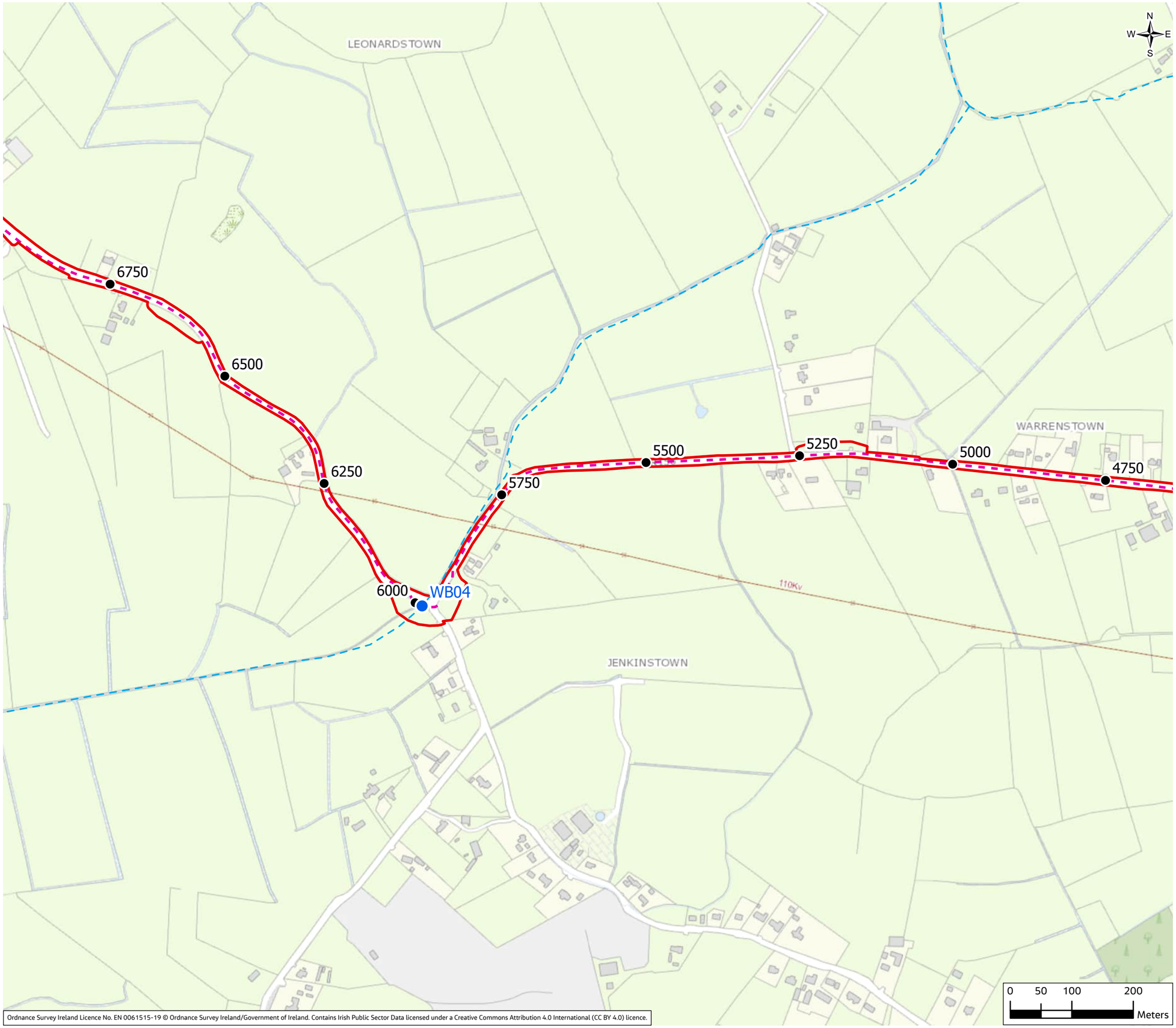
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

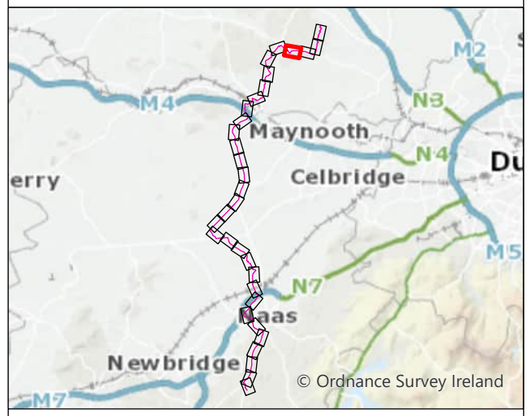
Sheet 3 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3003	



Appendix B; Figure 2.4



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

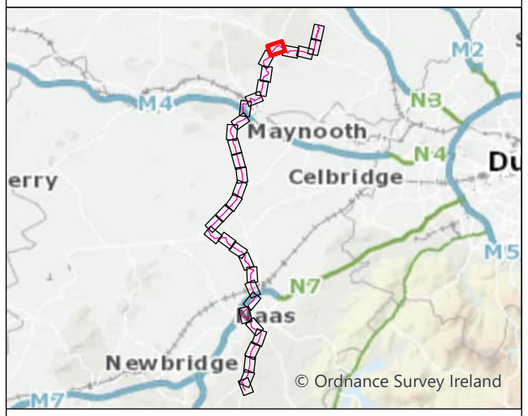
Sheet 4 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3004

Appendix B; Figure 2.5



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

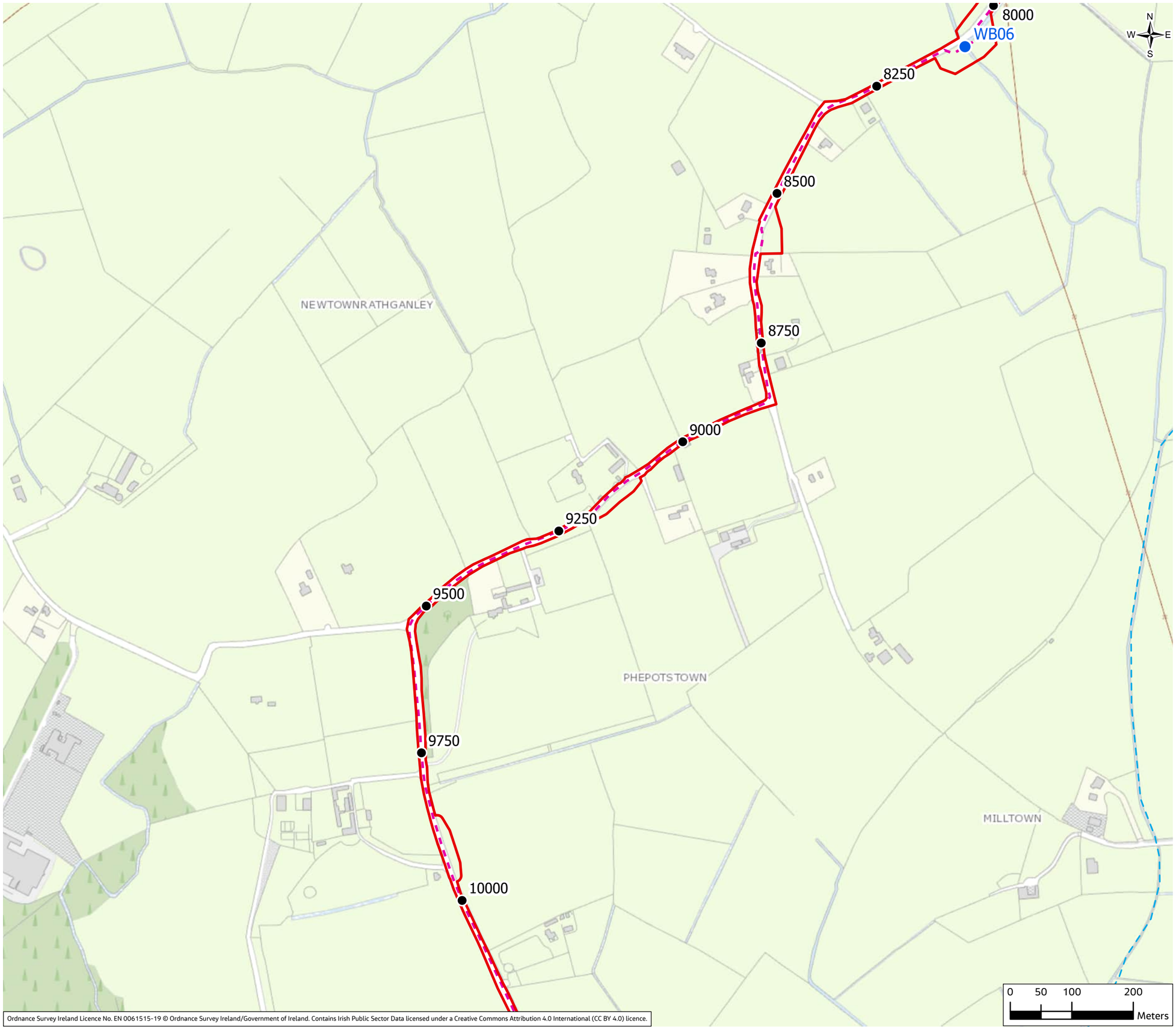
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 5 of 33

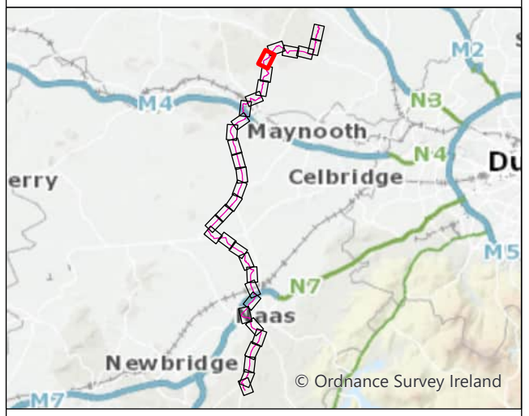
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3005



Appendix B; Figure 2.6



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

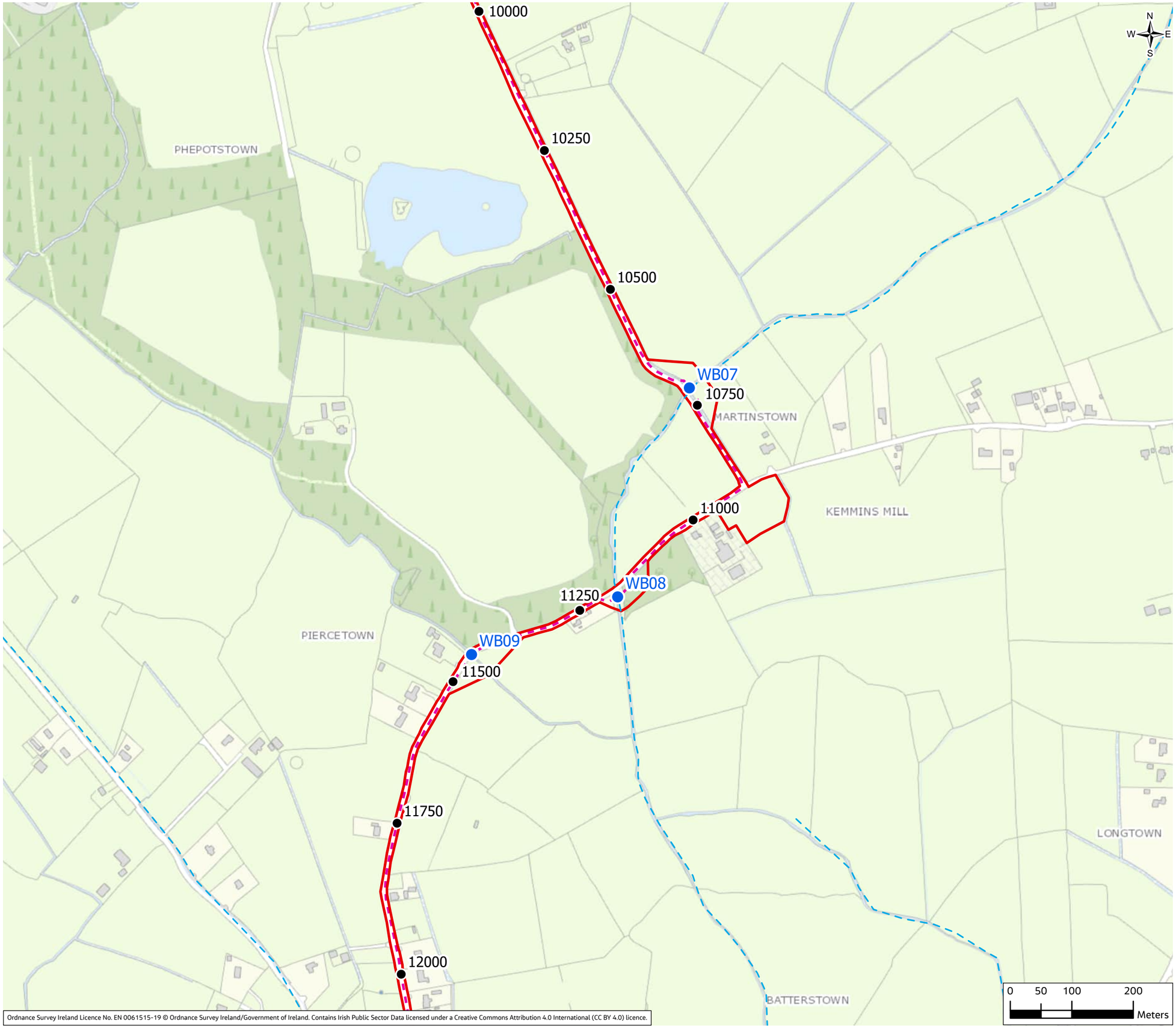
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 6 of 33

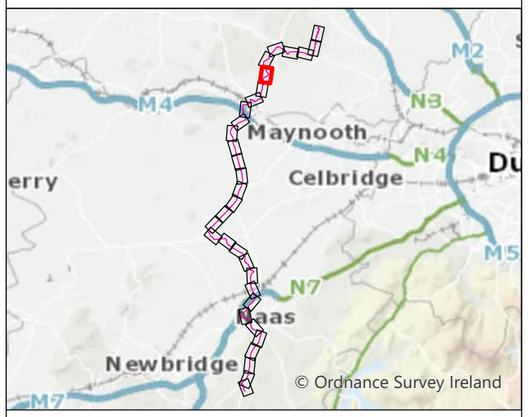
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3006



Appendix B; Figure 2.7



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

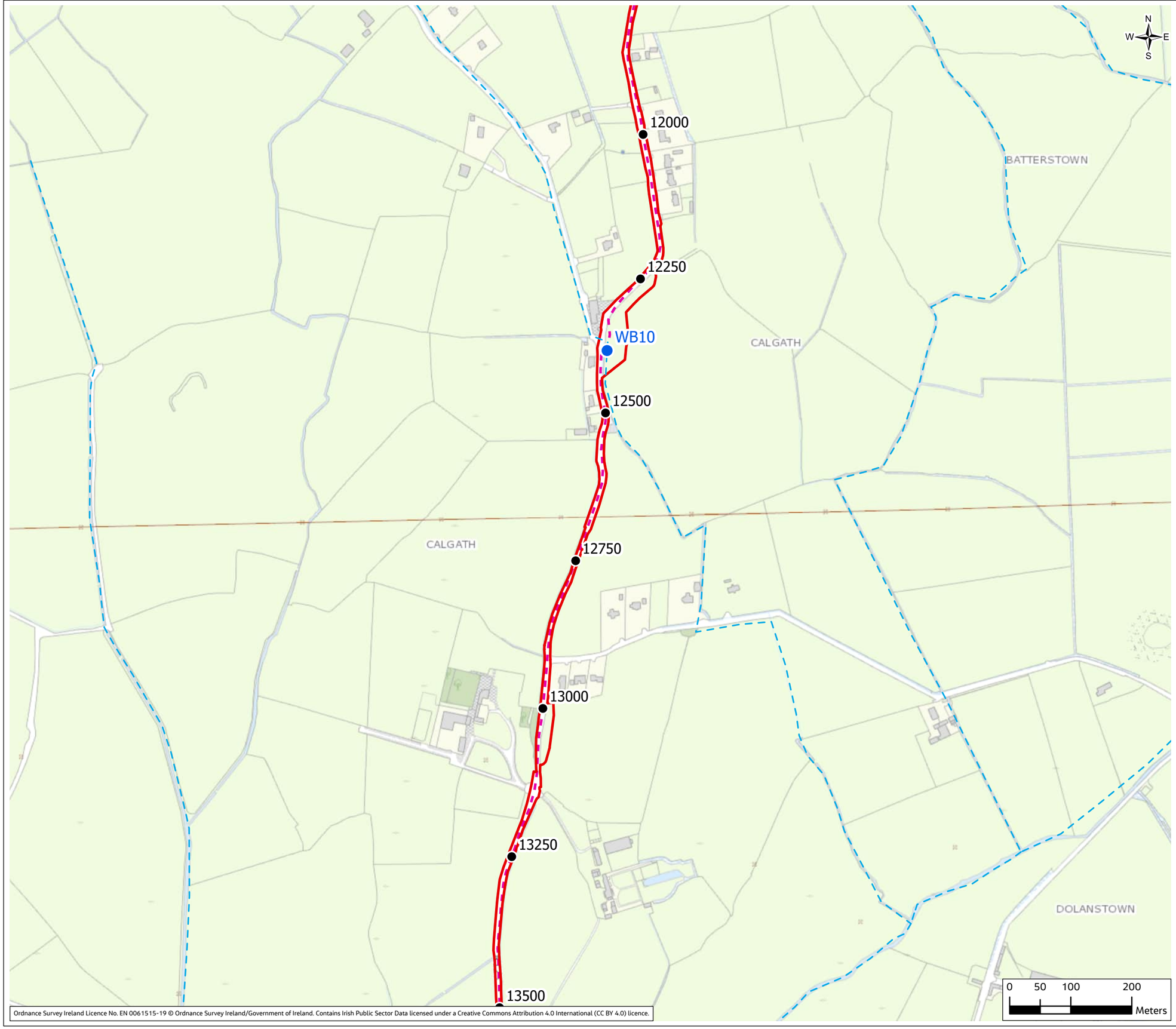
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 7 of 33

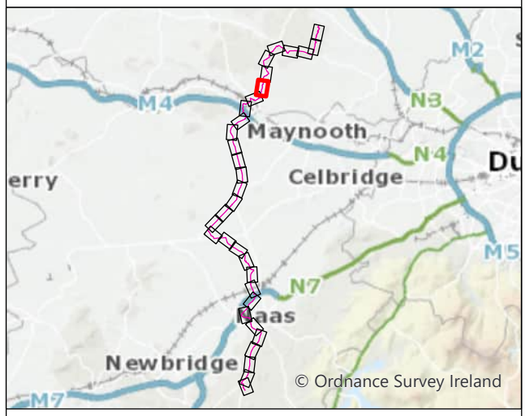
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3007



Appendix B; Figure 2.8



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

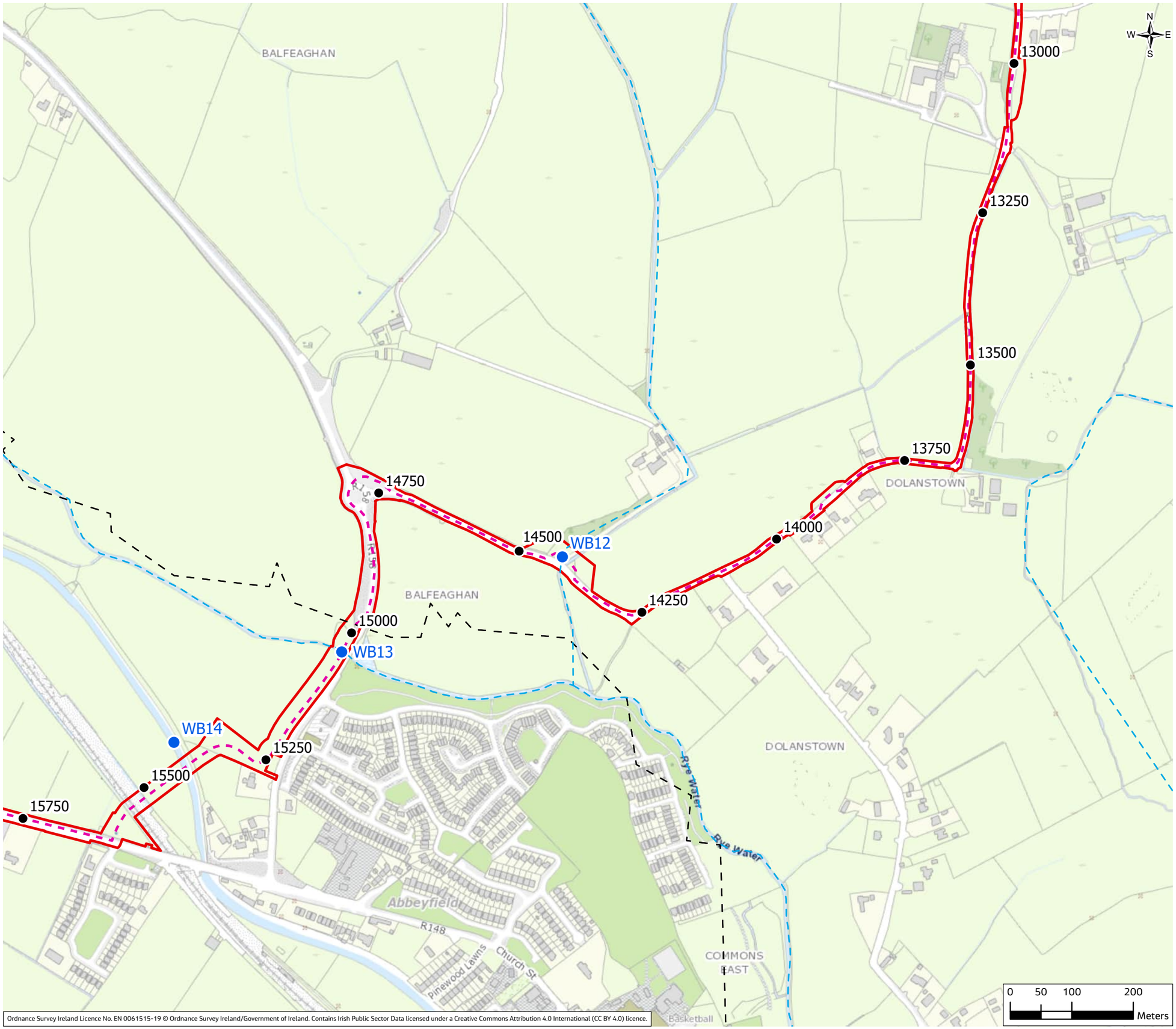
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 8 of 33

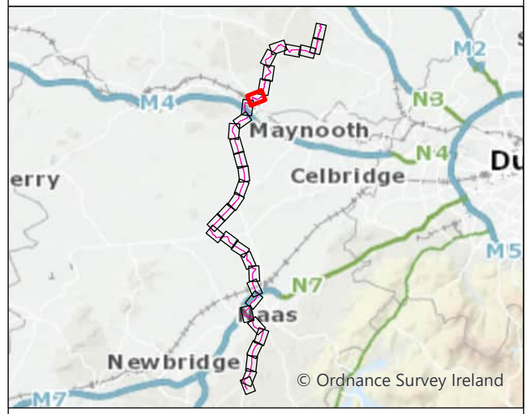
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No.: 321084AH-JAC-ZZ-XX-DR-K-3008



Appendix B; Figure 2.9



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

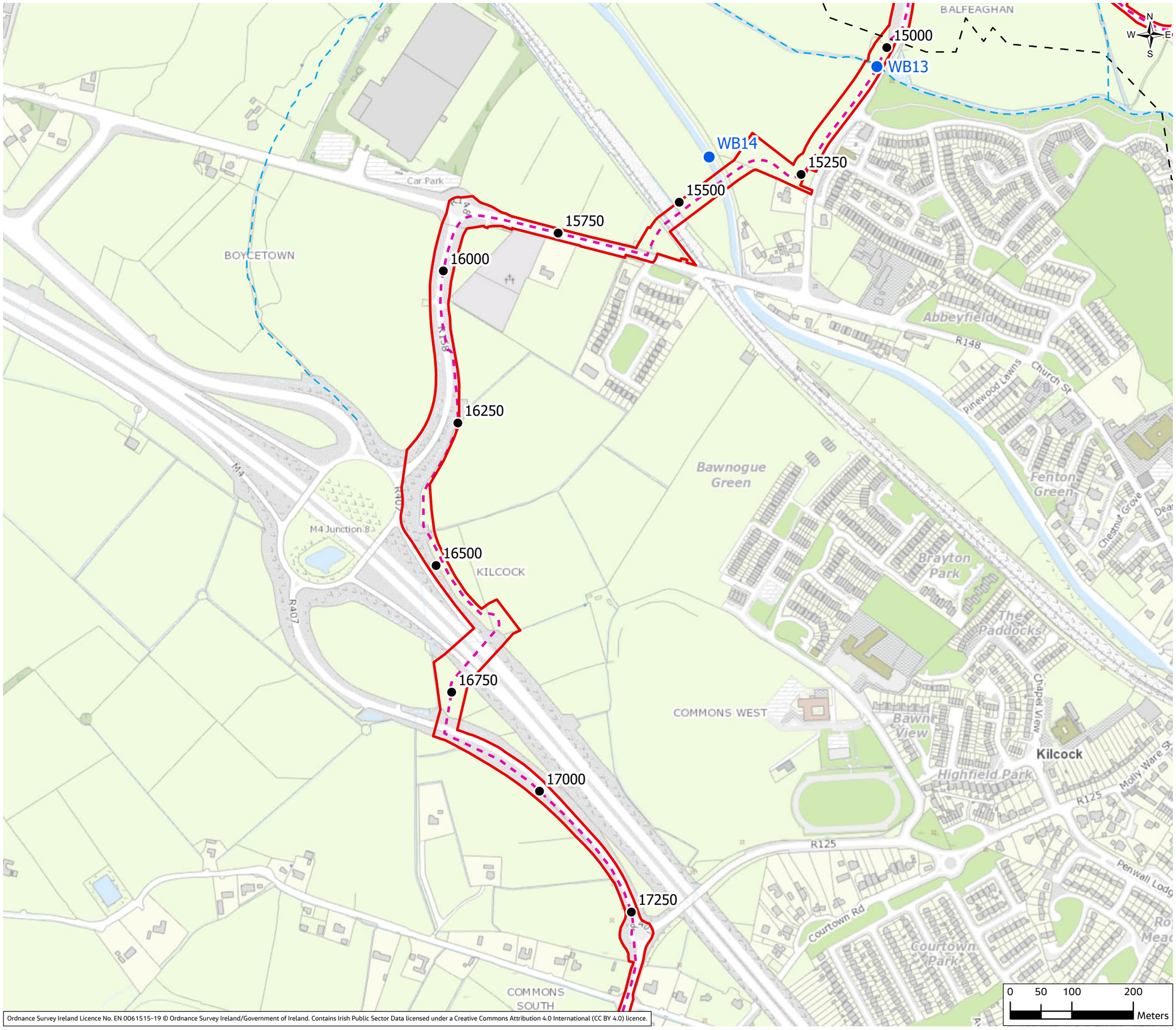
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

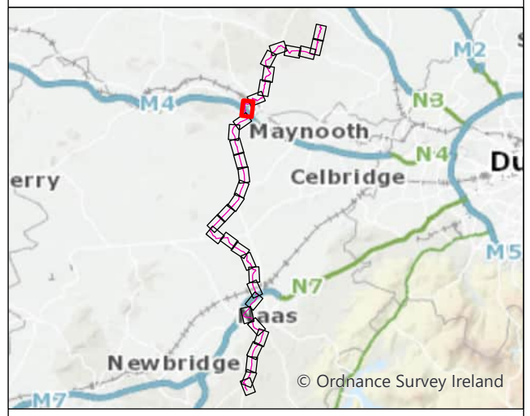
Sheet 9 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3009	



Appendix B; Figure 2.10



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

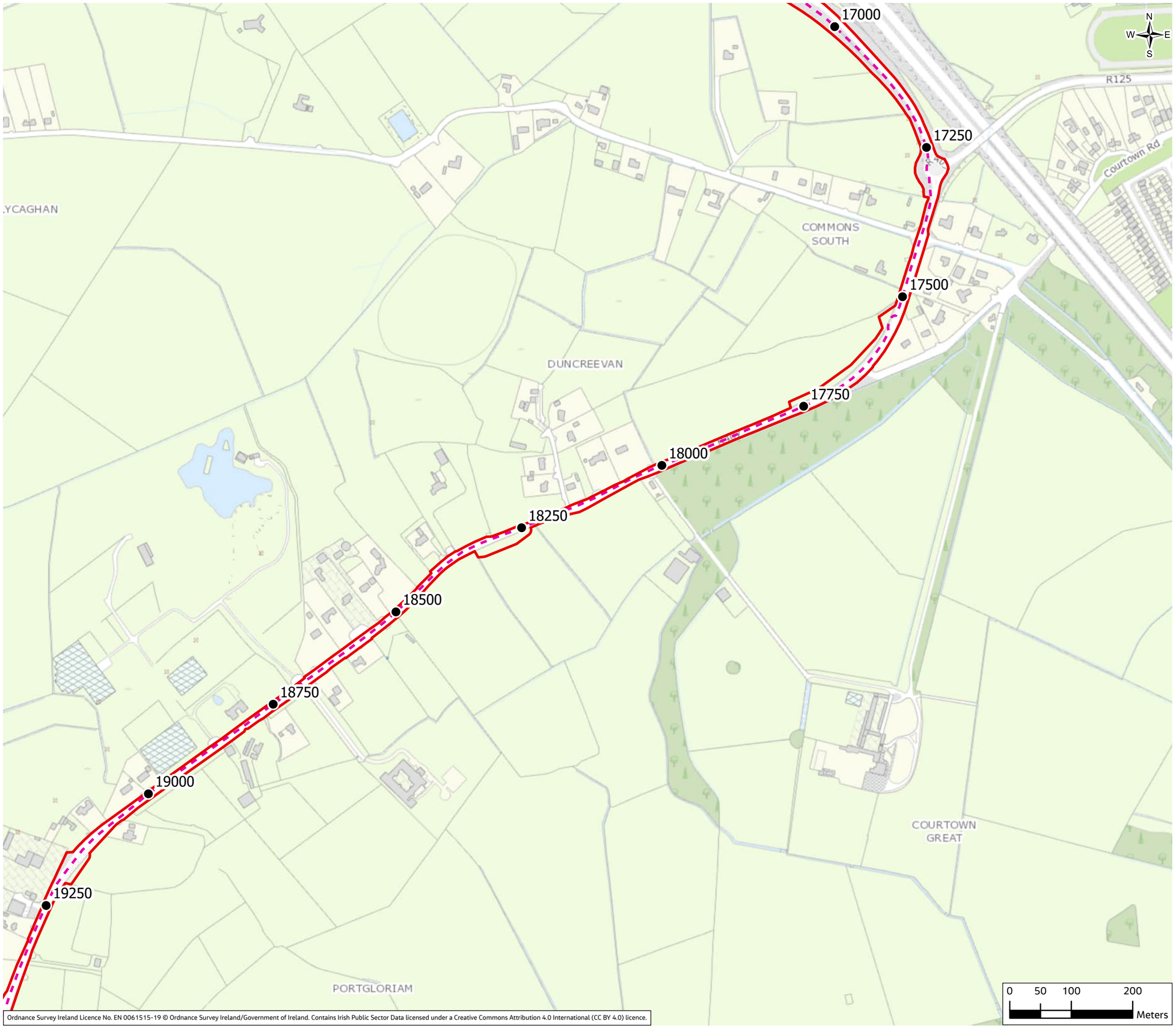
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 10 of 33

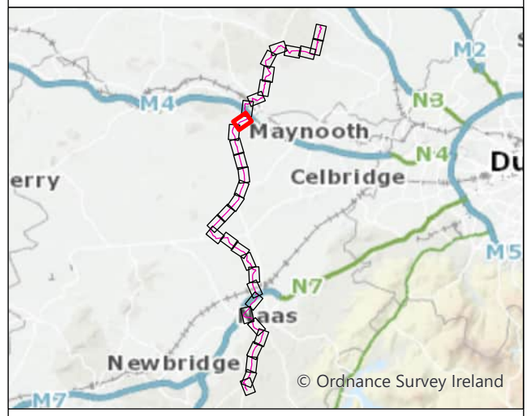
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3010



Appendix B; Figure 2.11



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

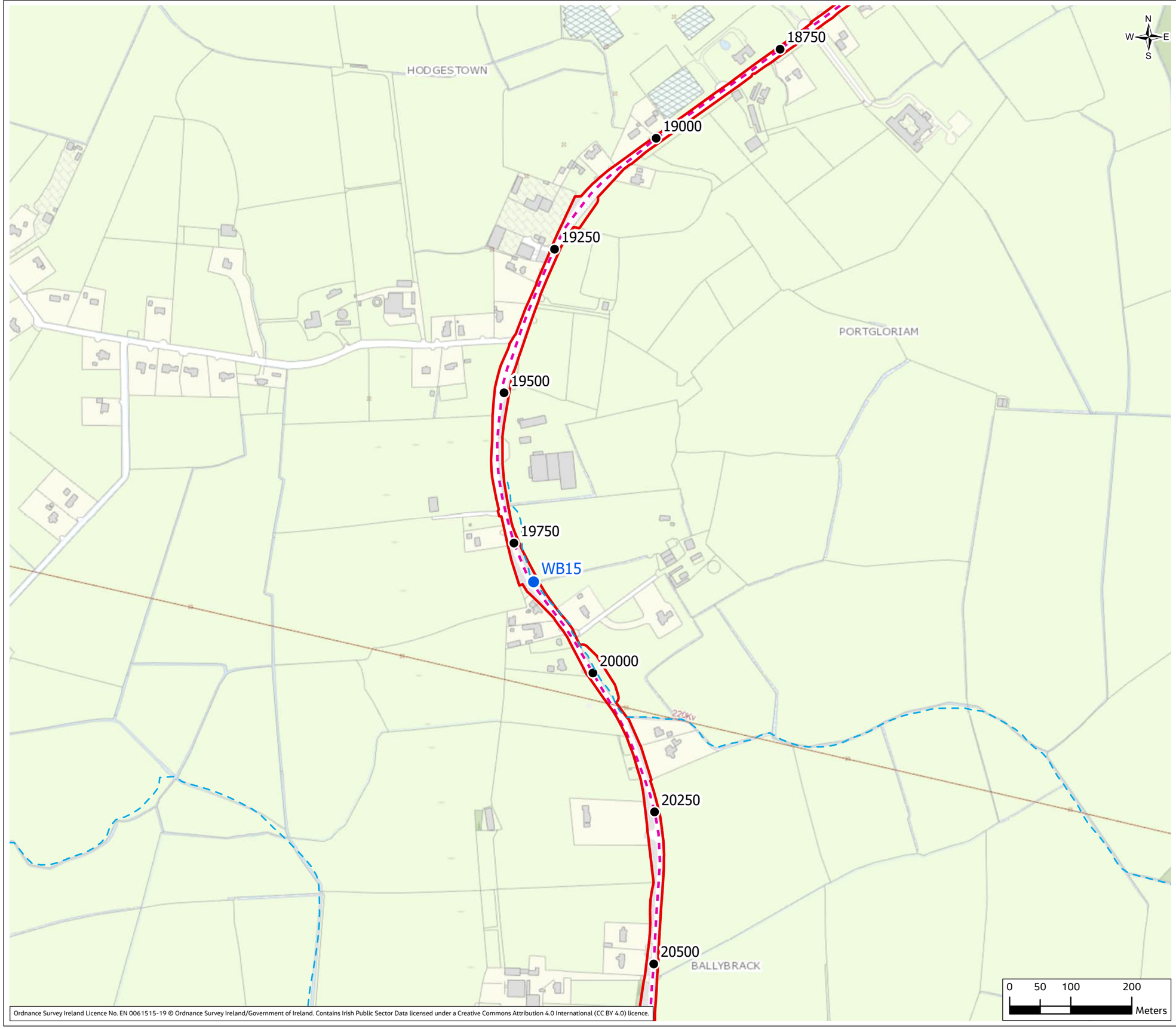
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

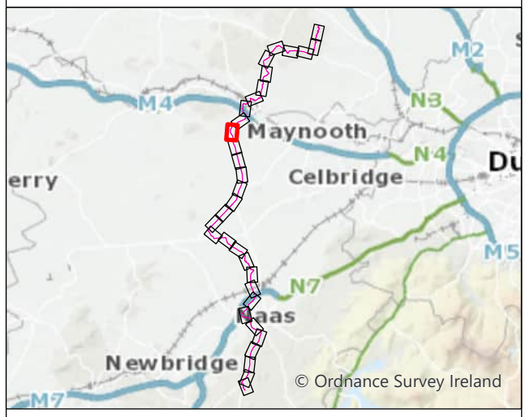
Sheet 11 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3011	



Appendix B; Figure 2.12



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

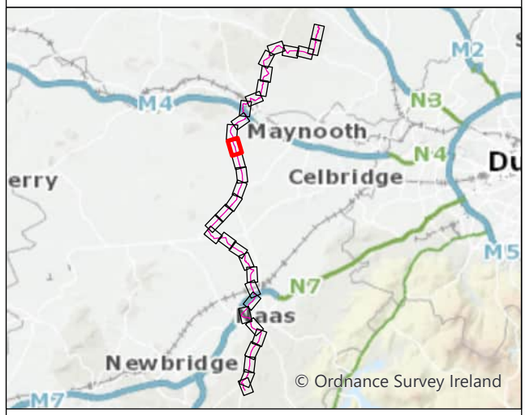
Sheet 12 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3012

Appendix B; Figure 2.13



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

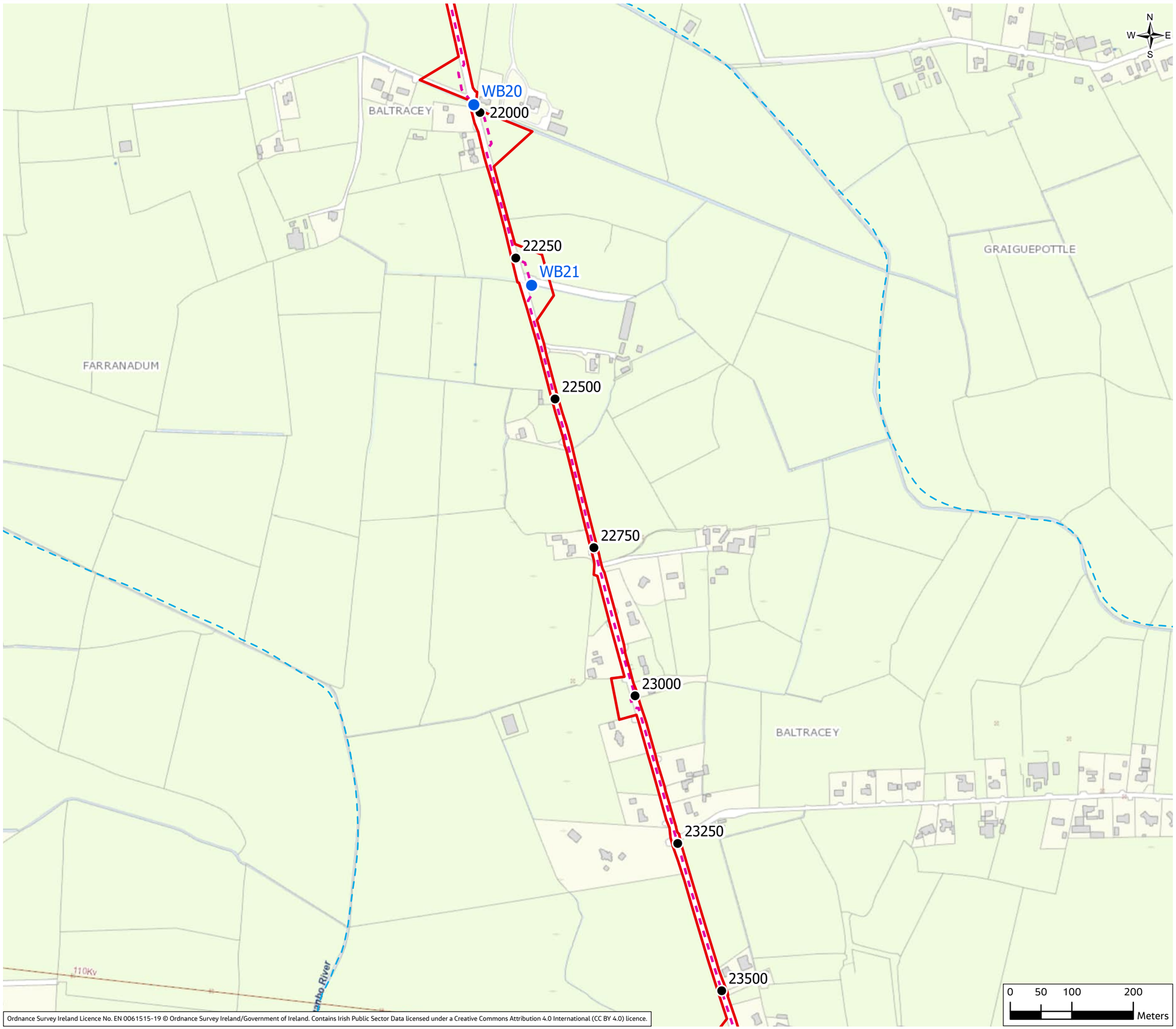
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 13 of 33

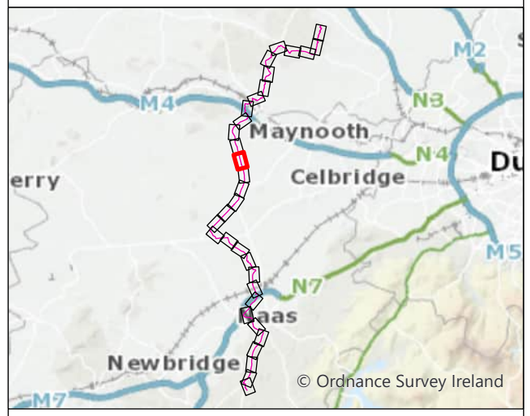
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3013



Appendix B; Figure 2.14



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

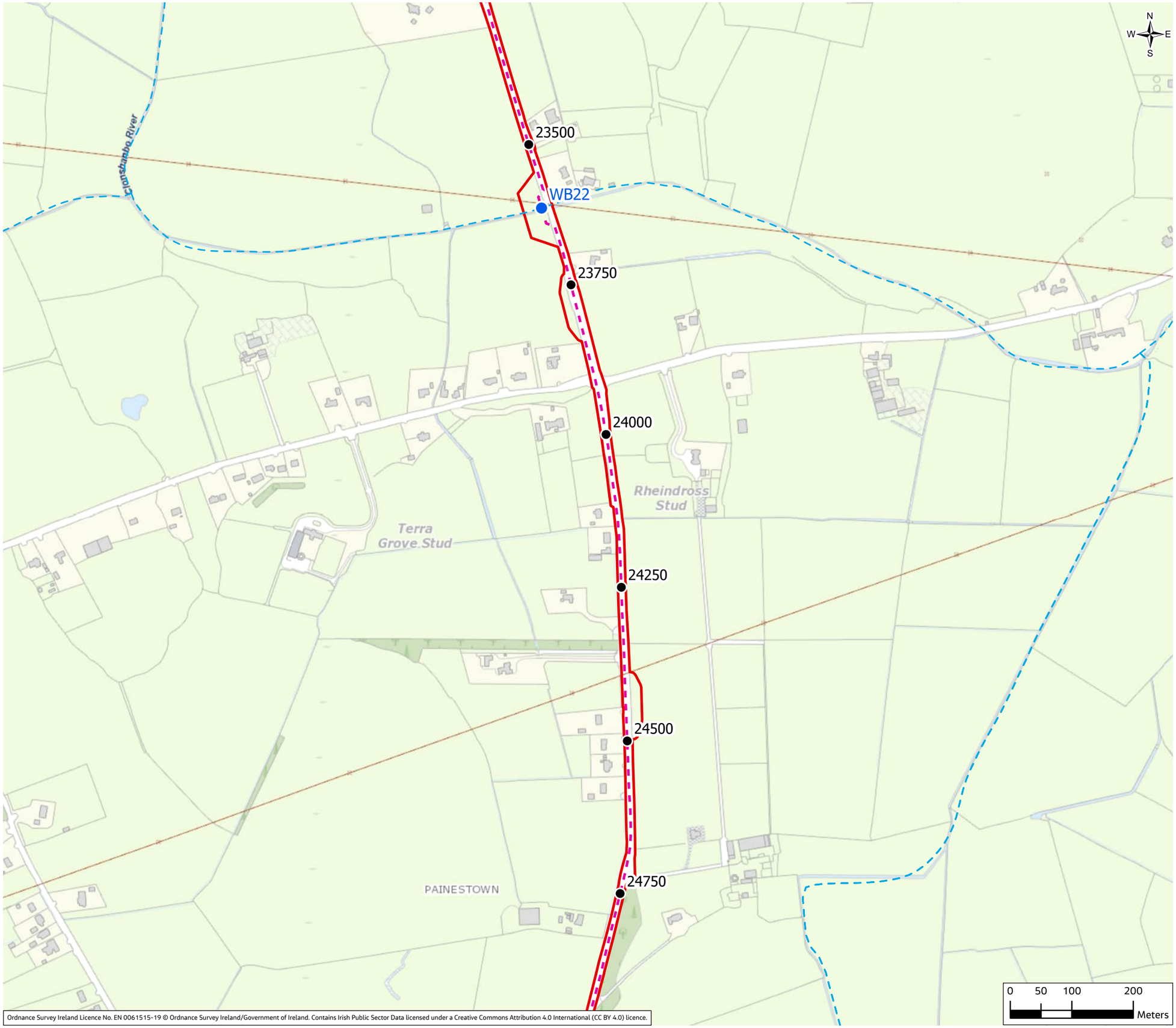
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

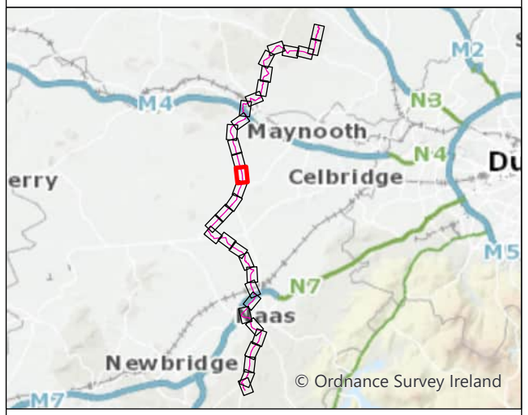
Sheet 14 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3014	



Appendix B; Figure 2.15



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

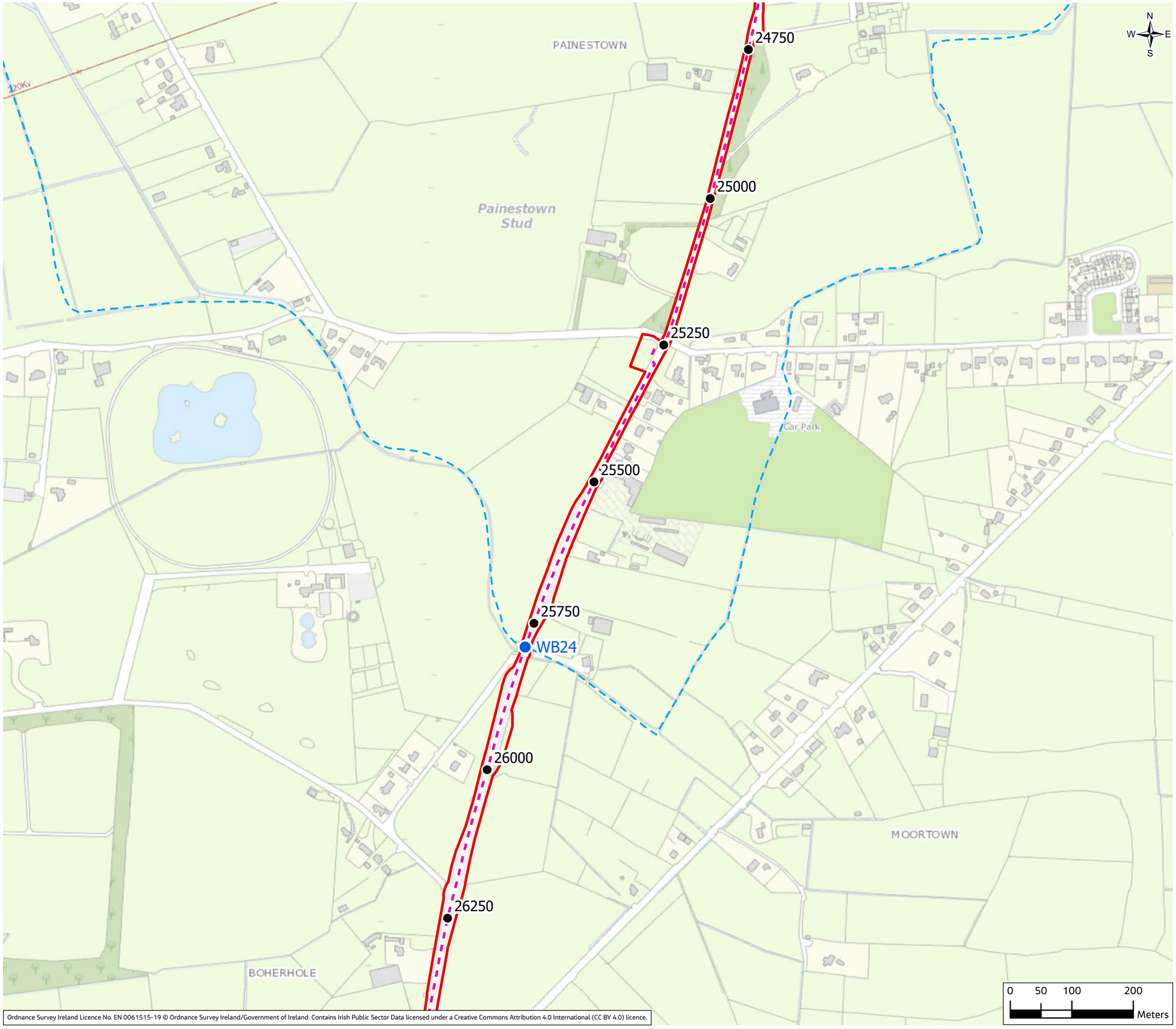
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 15 of 33

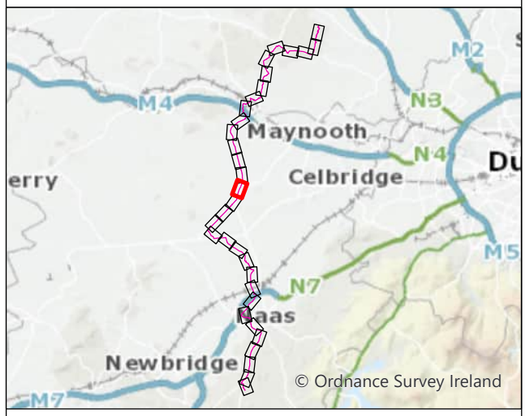
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3015



Appendix B; Figure 2.16



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

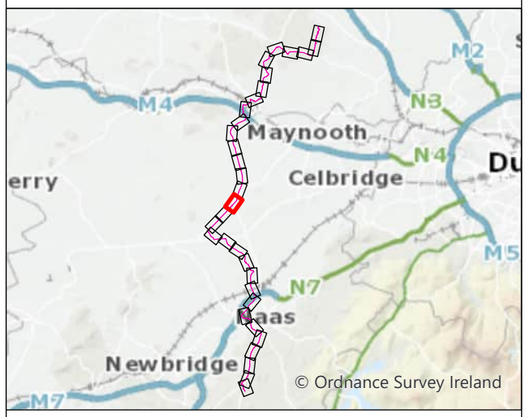
Sheet 16 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3016

Appendix B; Figure 2.17



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

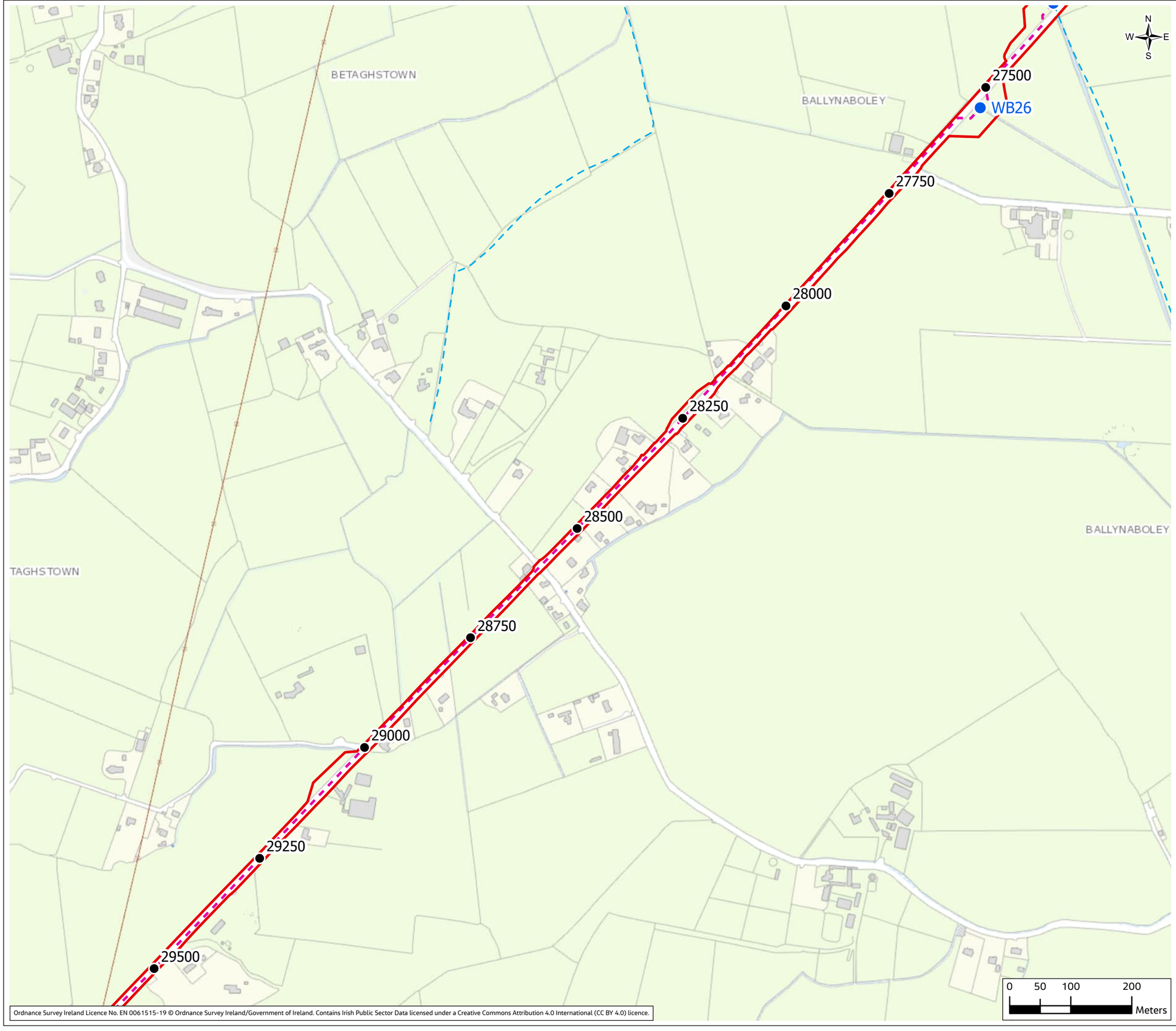
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 17 of 33

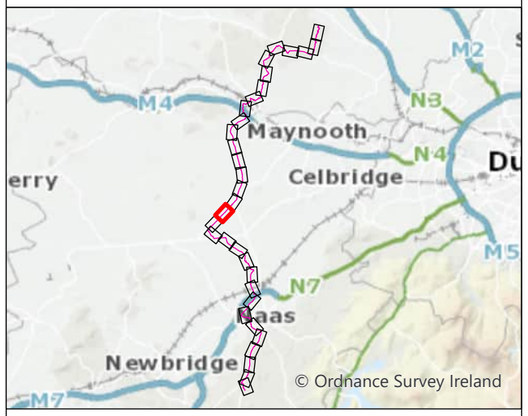
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3017



Appendix B; Figure 2.18



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

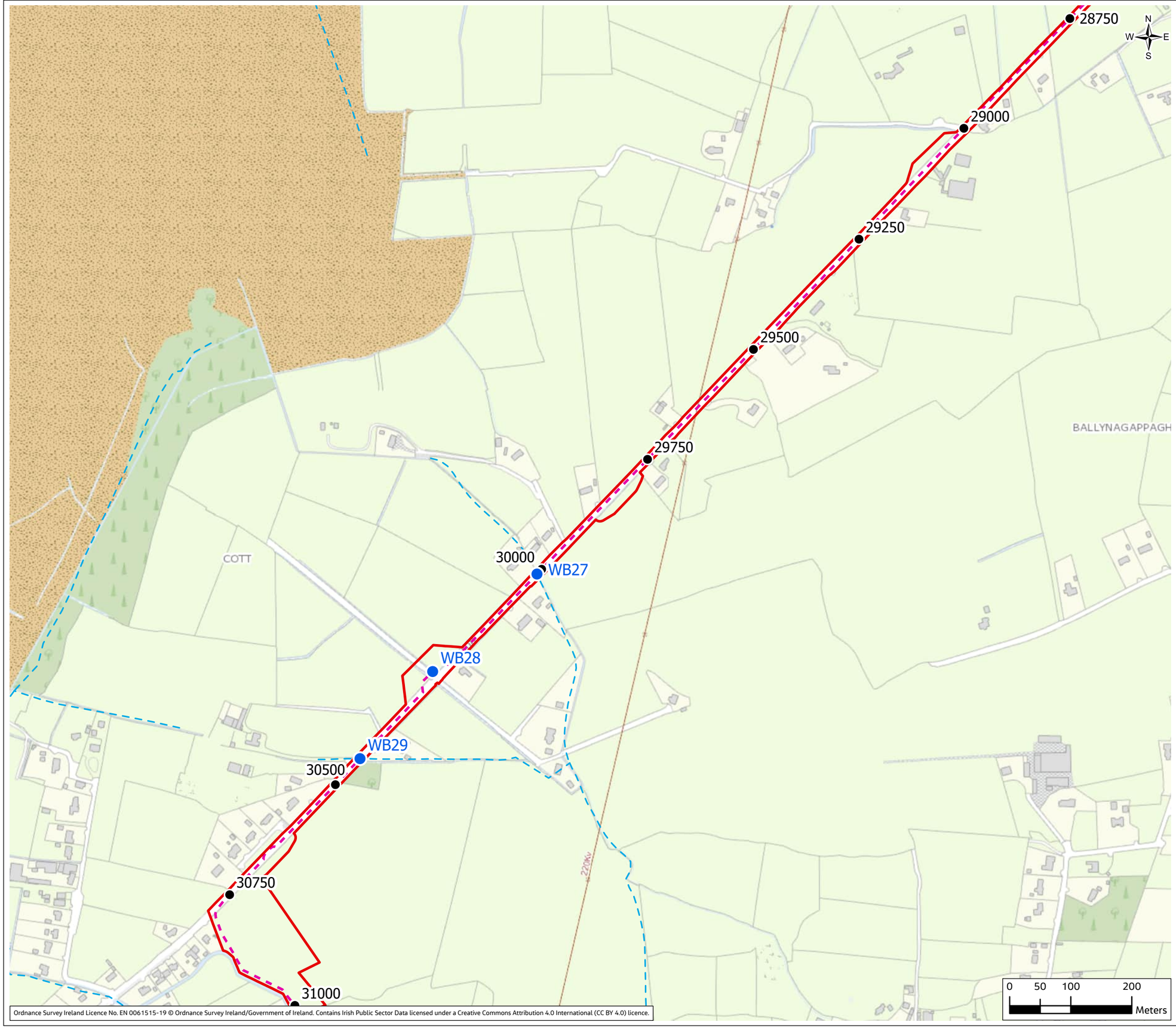
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 18 of 33

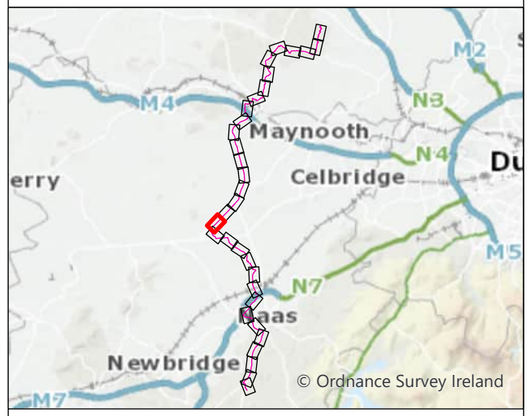
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No.: 321084AH-JAC-ZZ-XX-DR-K-3018



Appendix B; Figure 2.19



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

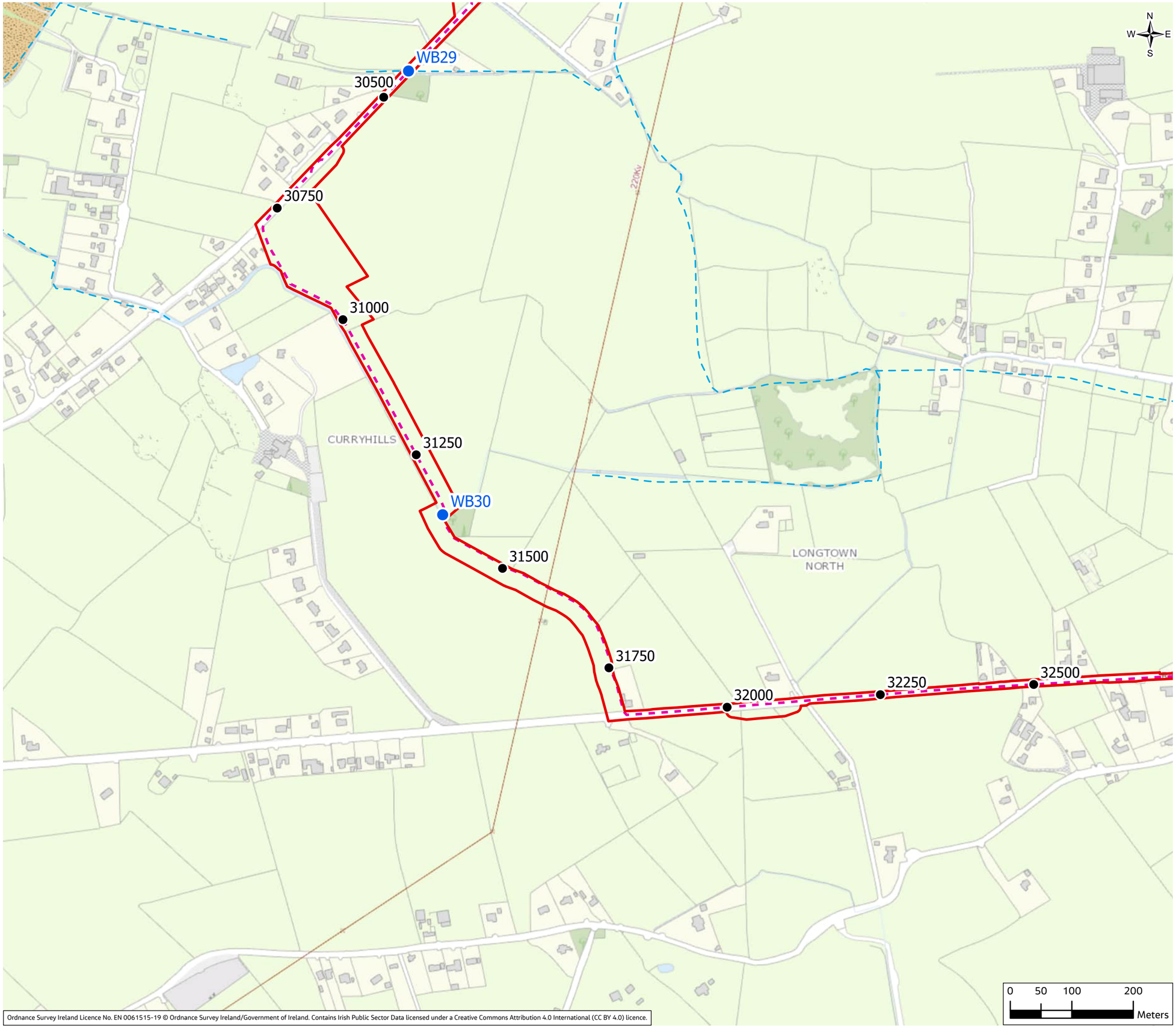
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 19 of 33

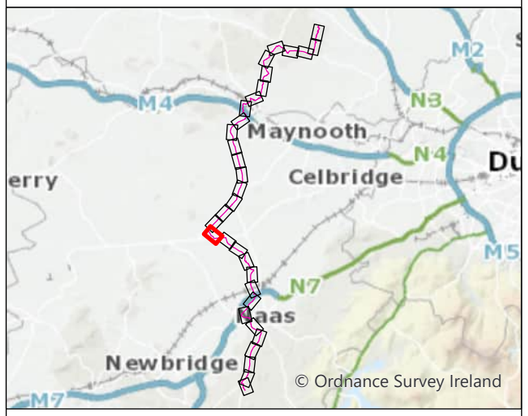
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3019



Appendix B; Figure 2.20



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

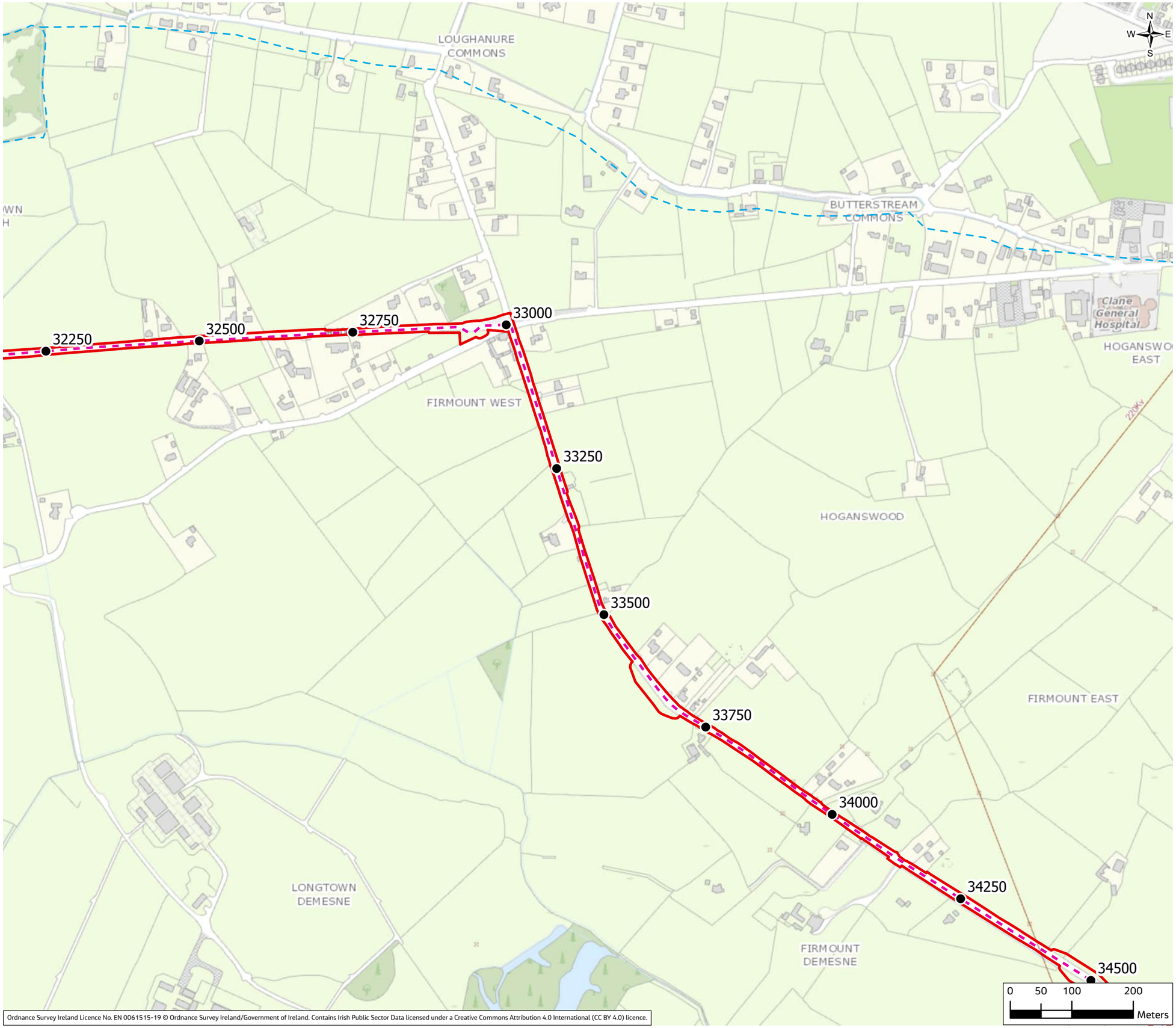
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

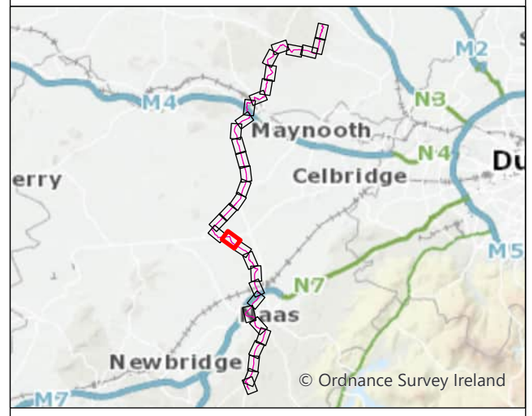
Sheet 20 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3020	



Appendix B; Figure 2.21



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

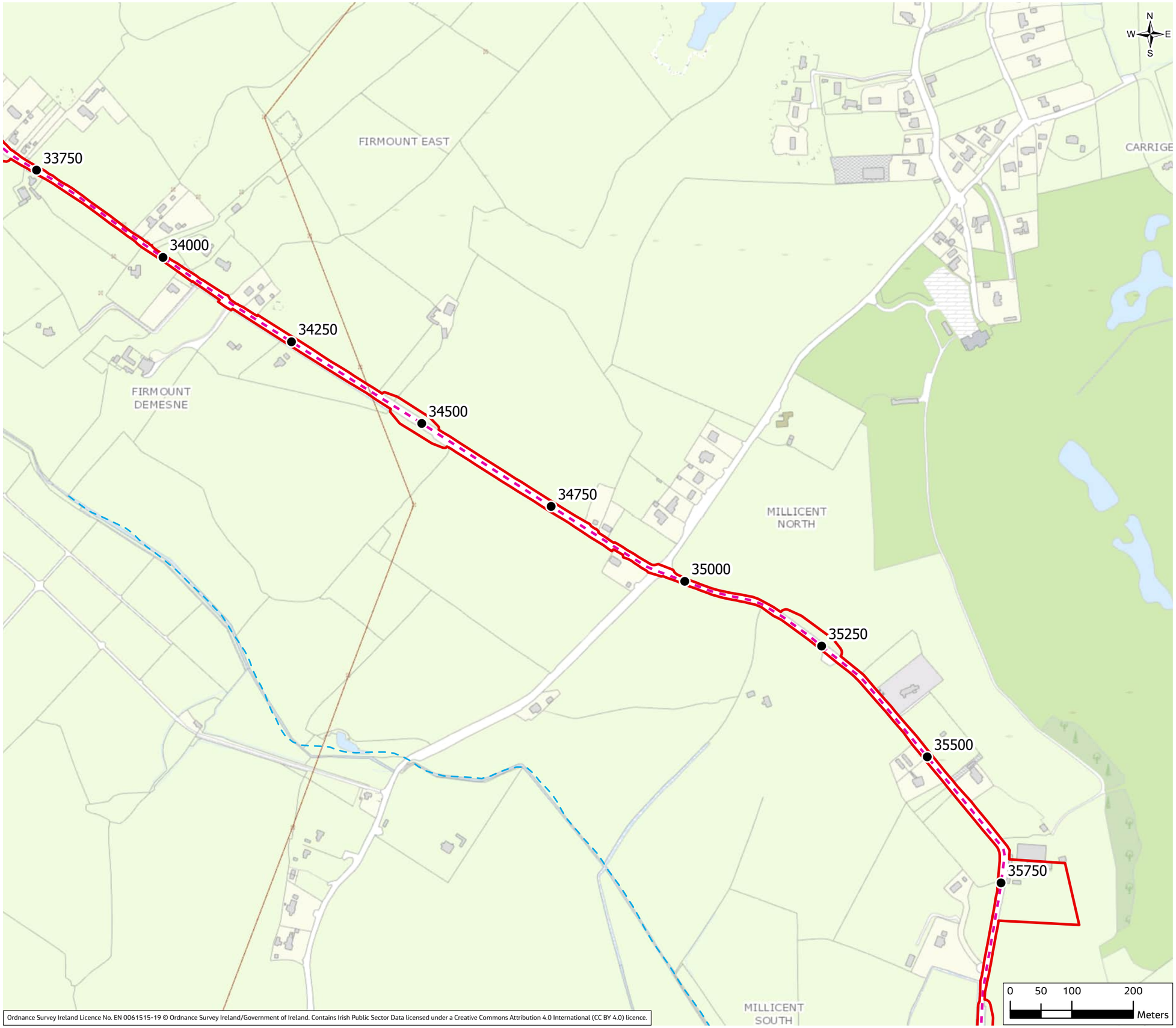
Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

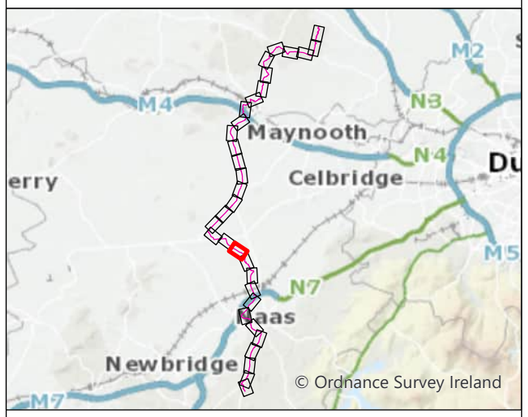
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 21 of 33

Drawing Status	Final
Scale @ A3	1:6,000 DO NOT SCALE
Jacobs No.	321084AH
Client No.	CP966
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3021



Appendix B; Figure 2.22



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

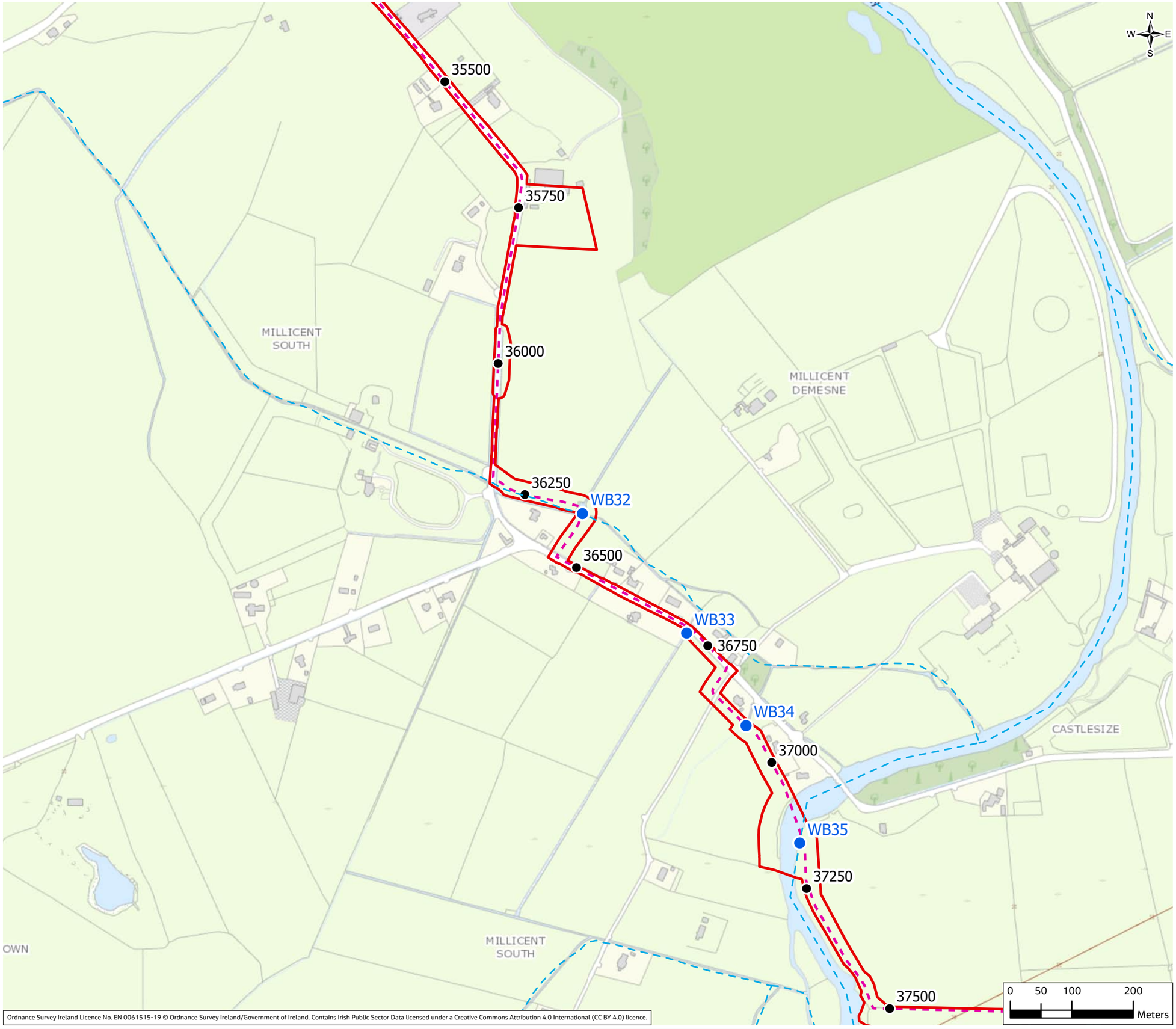
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 22 of 33

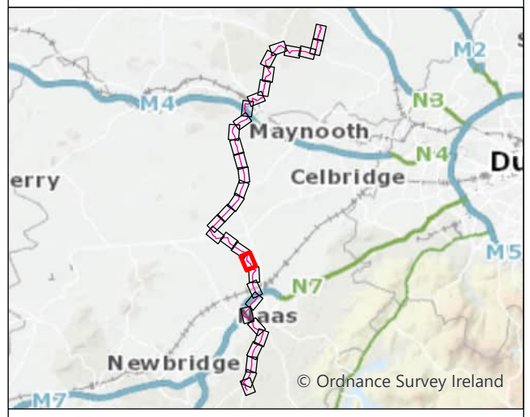
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3022



Appendix B; Figure 2.23



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

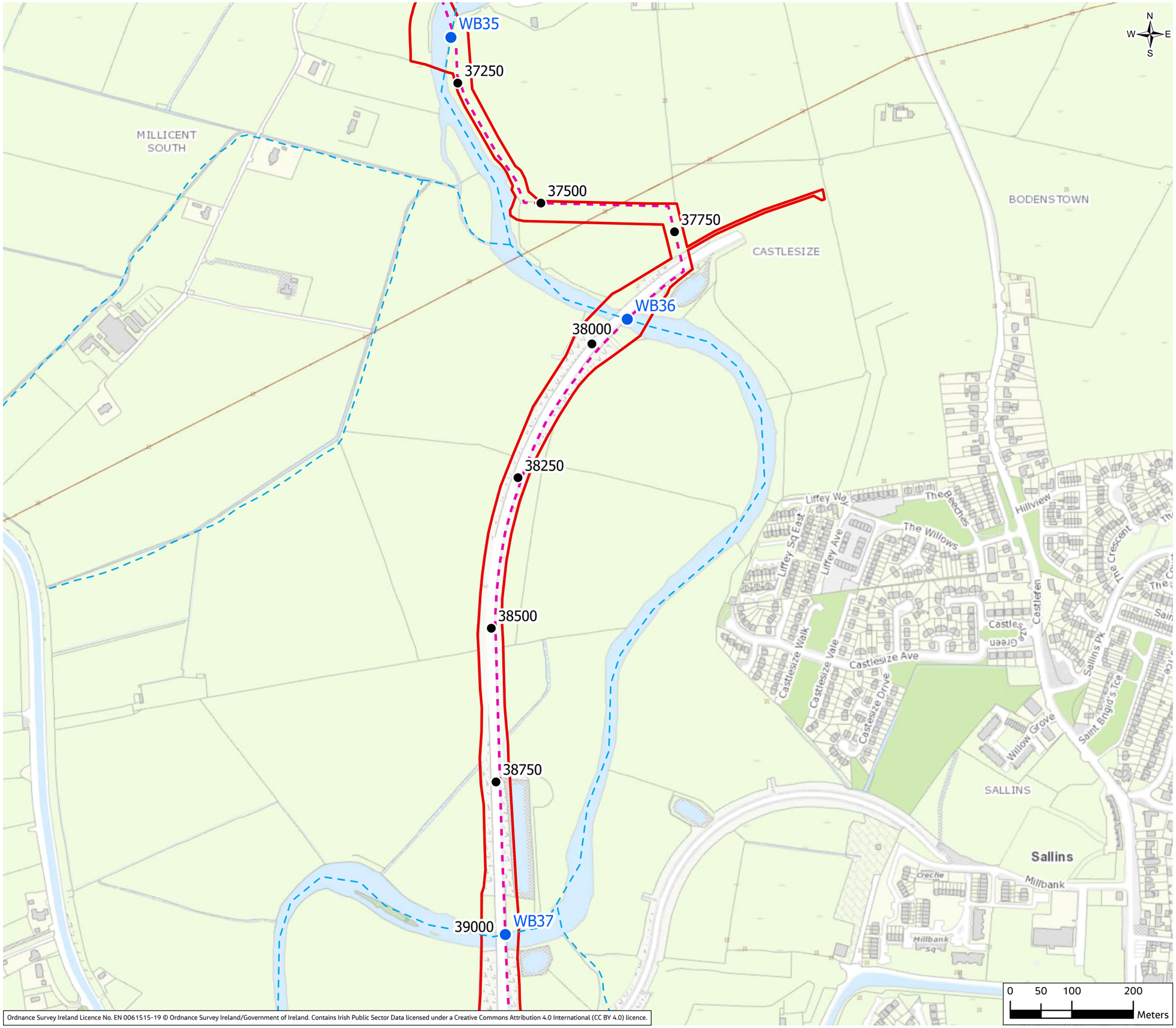
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 23 of 33

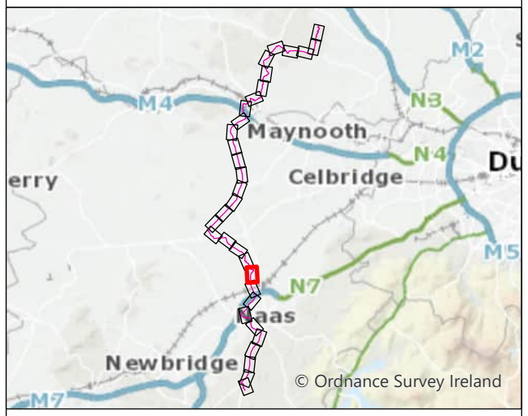
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No.: 321084AH-JAC-ZZ-XX-DR-K-3023



Appendix B; Figure 2.24



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

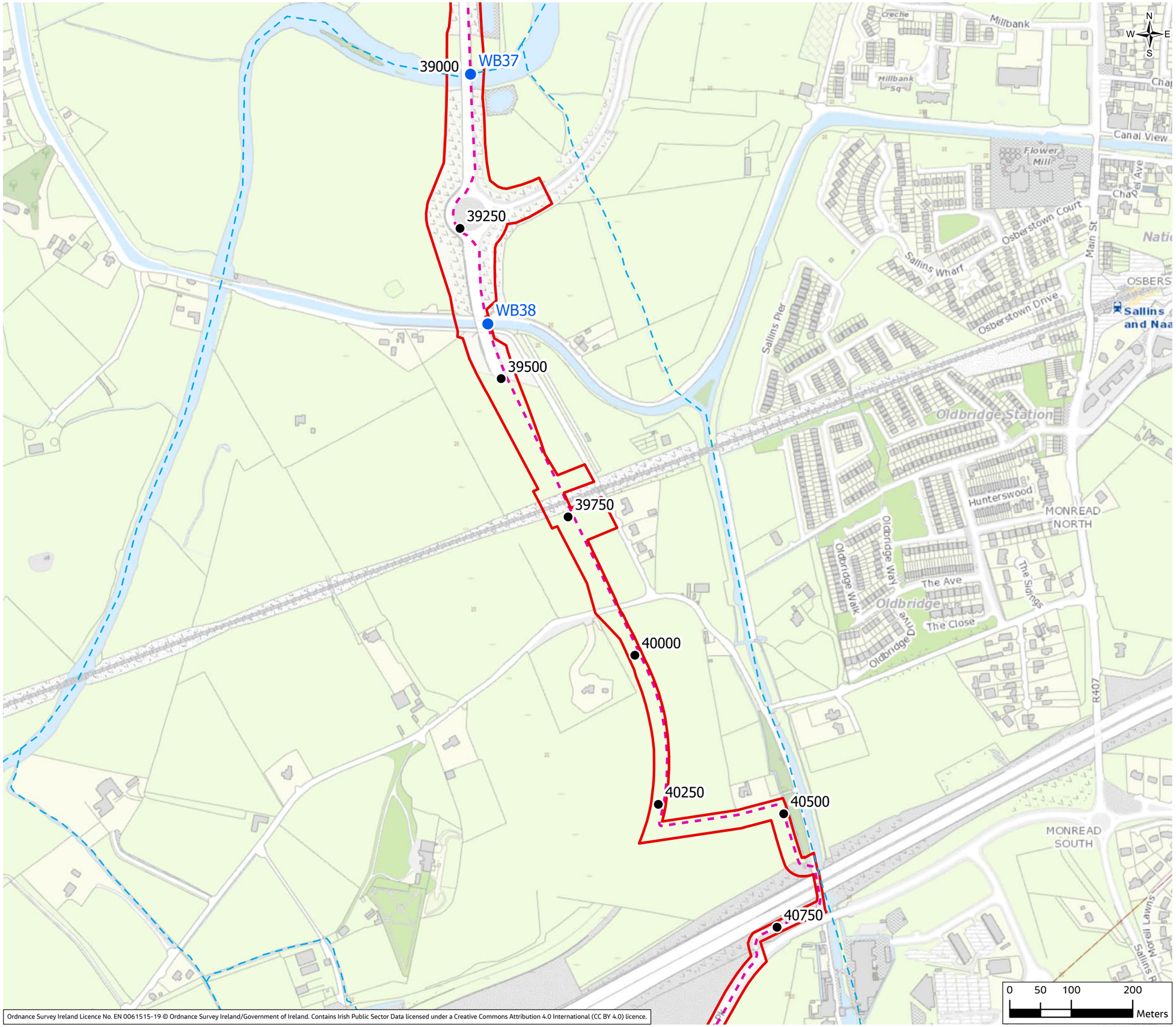
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

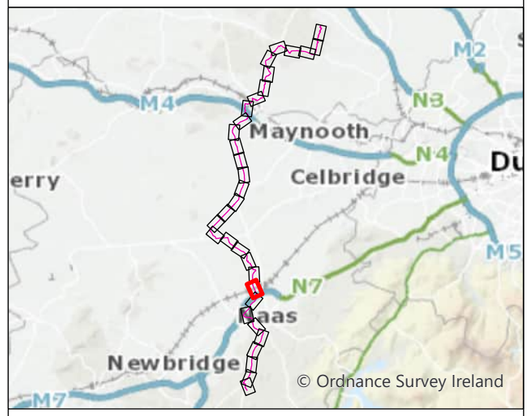
Sheet 24 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3024	



Appendix B; Figure 2.25



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

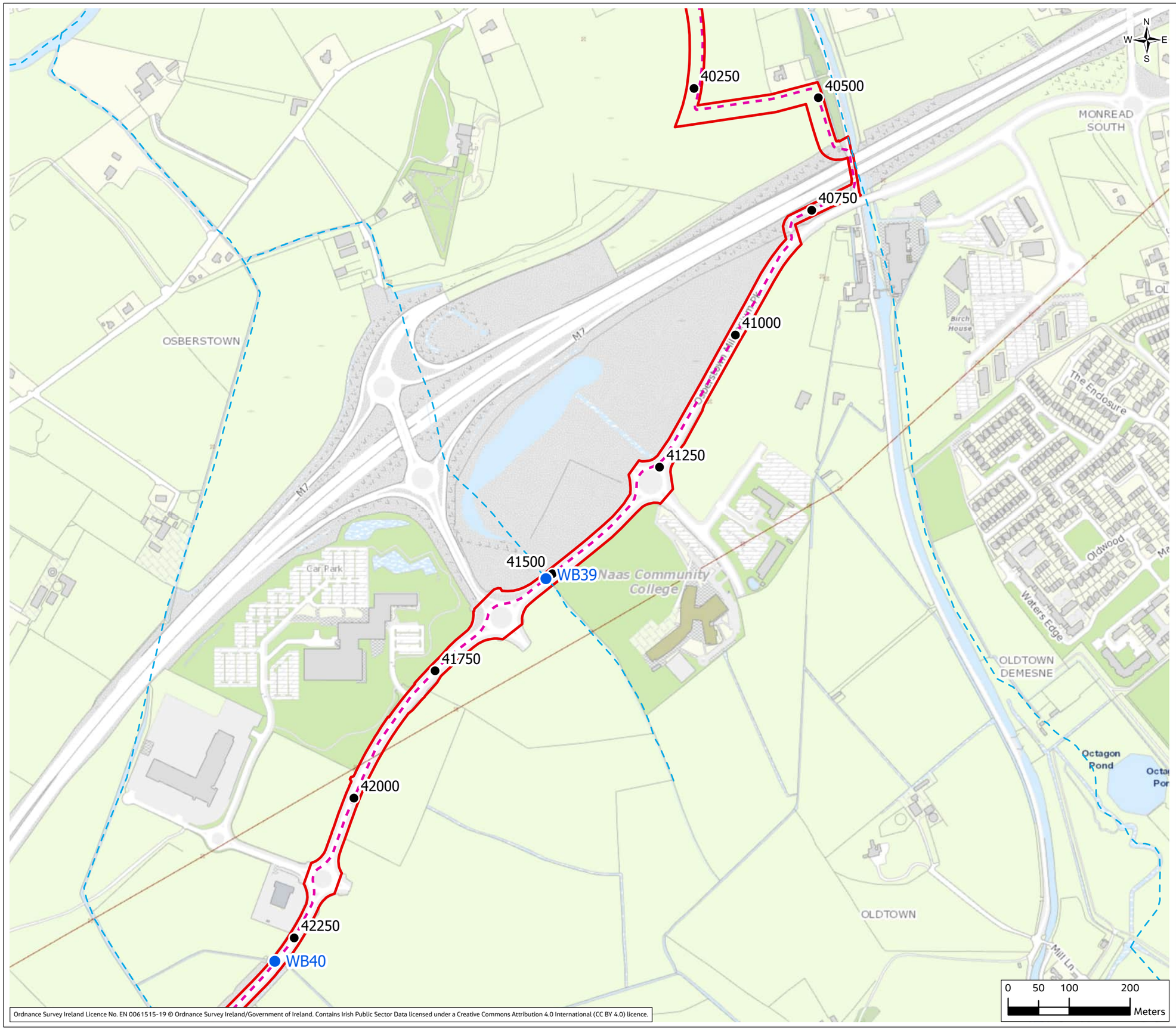
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

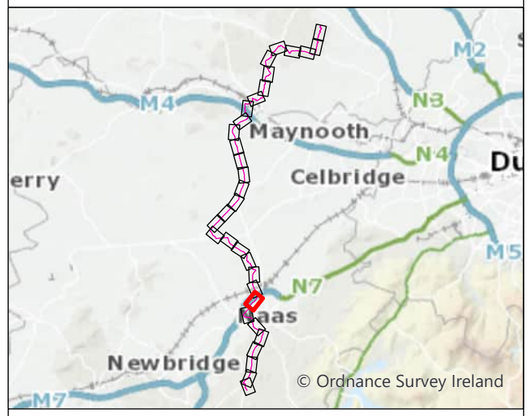
Sheet 25 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3025	



Appendix B; Figure 2.26



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

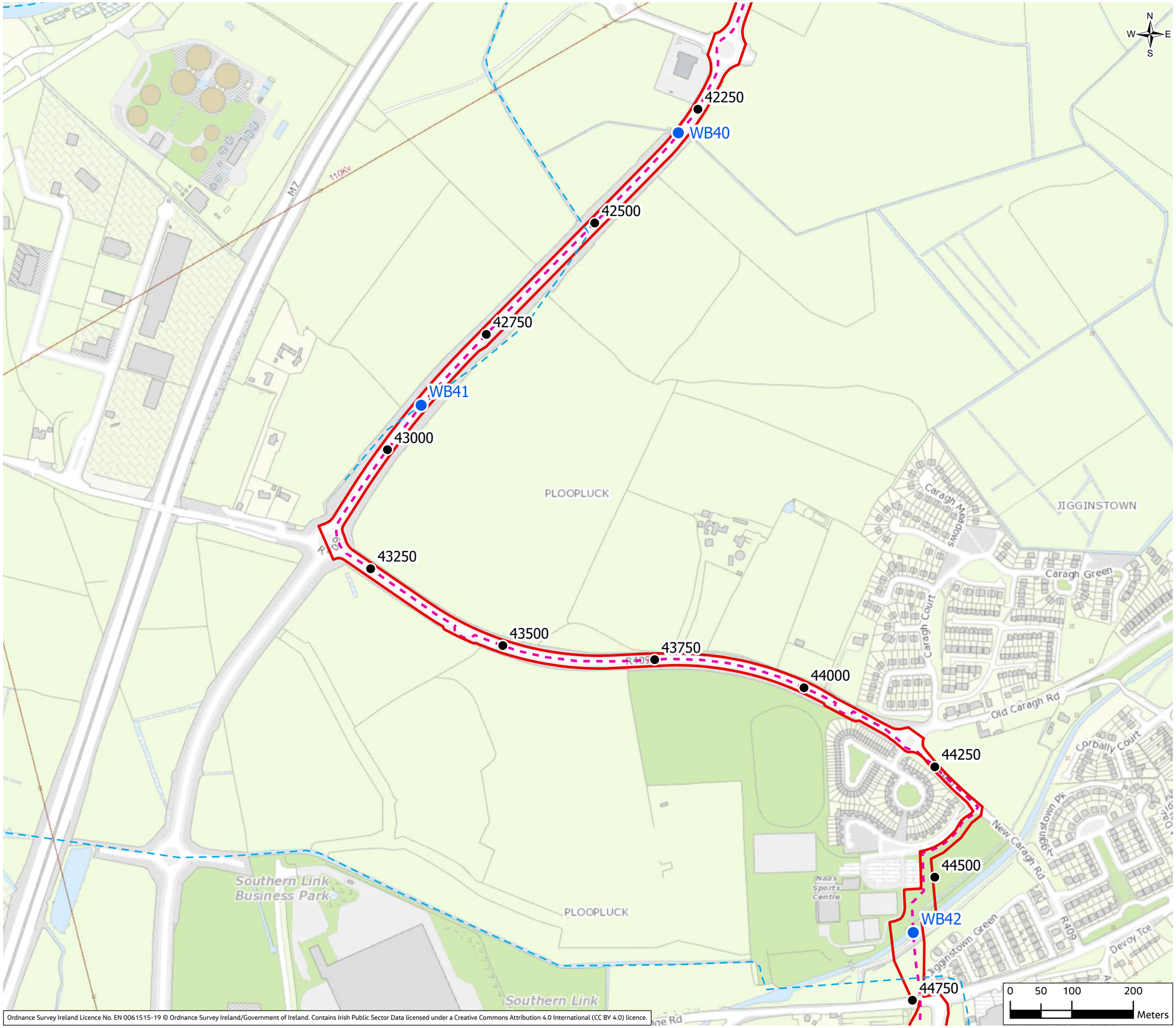
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 26 of 33

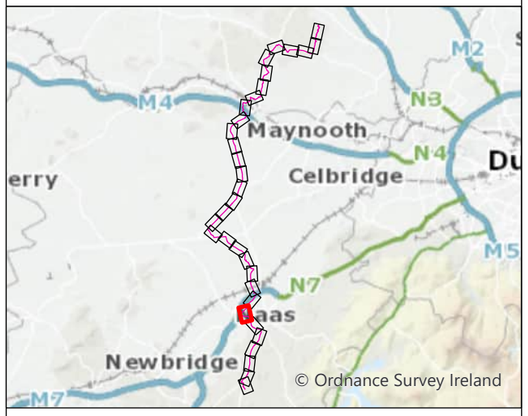
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3026



Appendix B; Figure 2.27



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- 2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

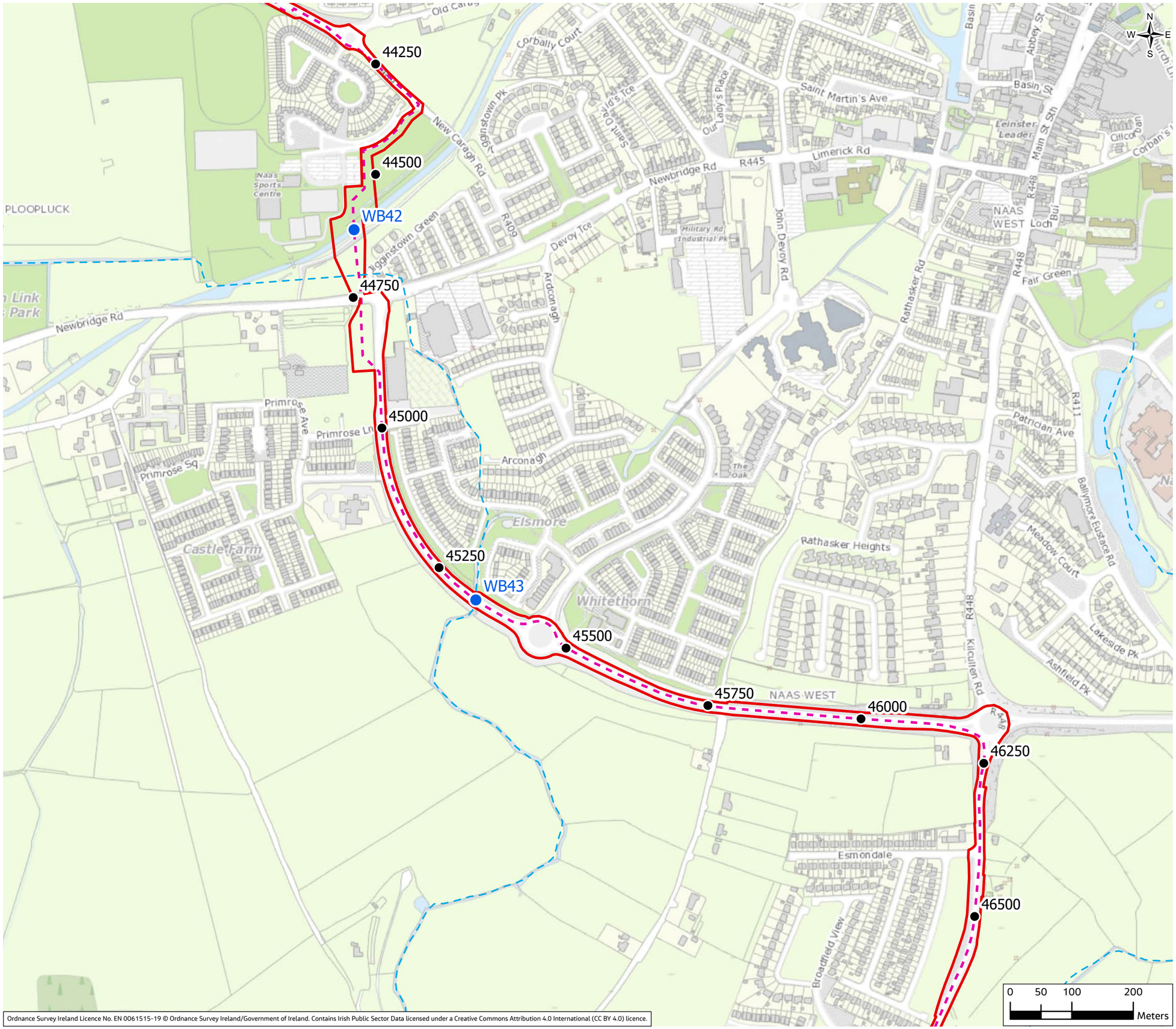
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 27 of 33

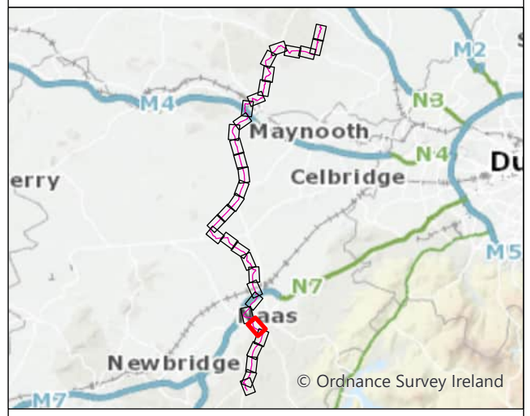
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3027



Appendix B; Figure 2.28



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

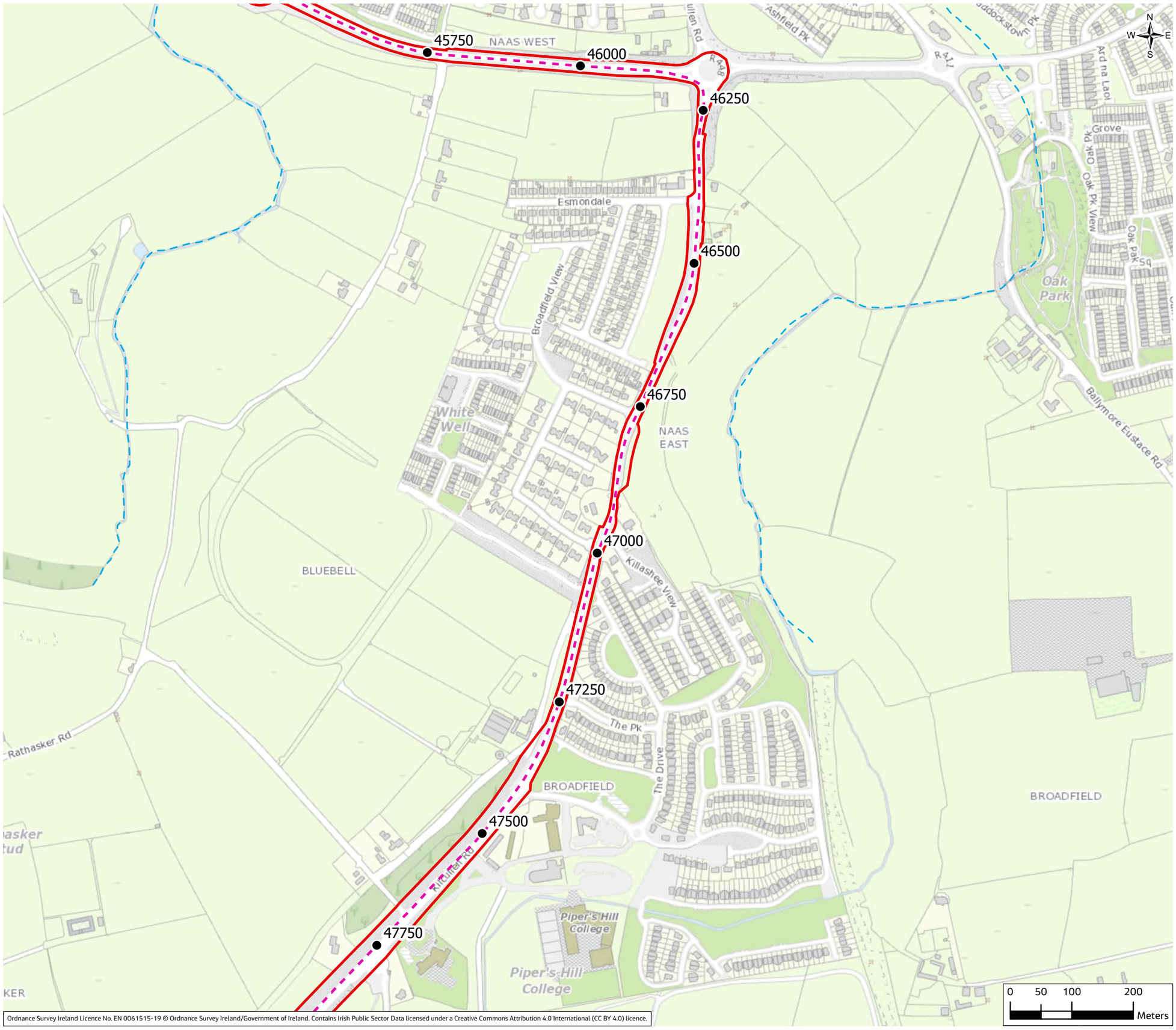
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 28 of 33

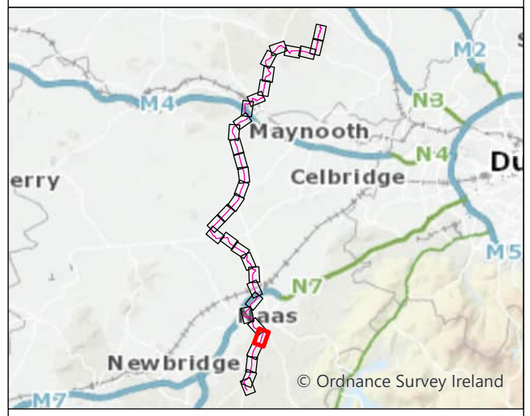
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3028



Appendix B; Figure 2.29



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

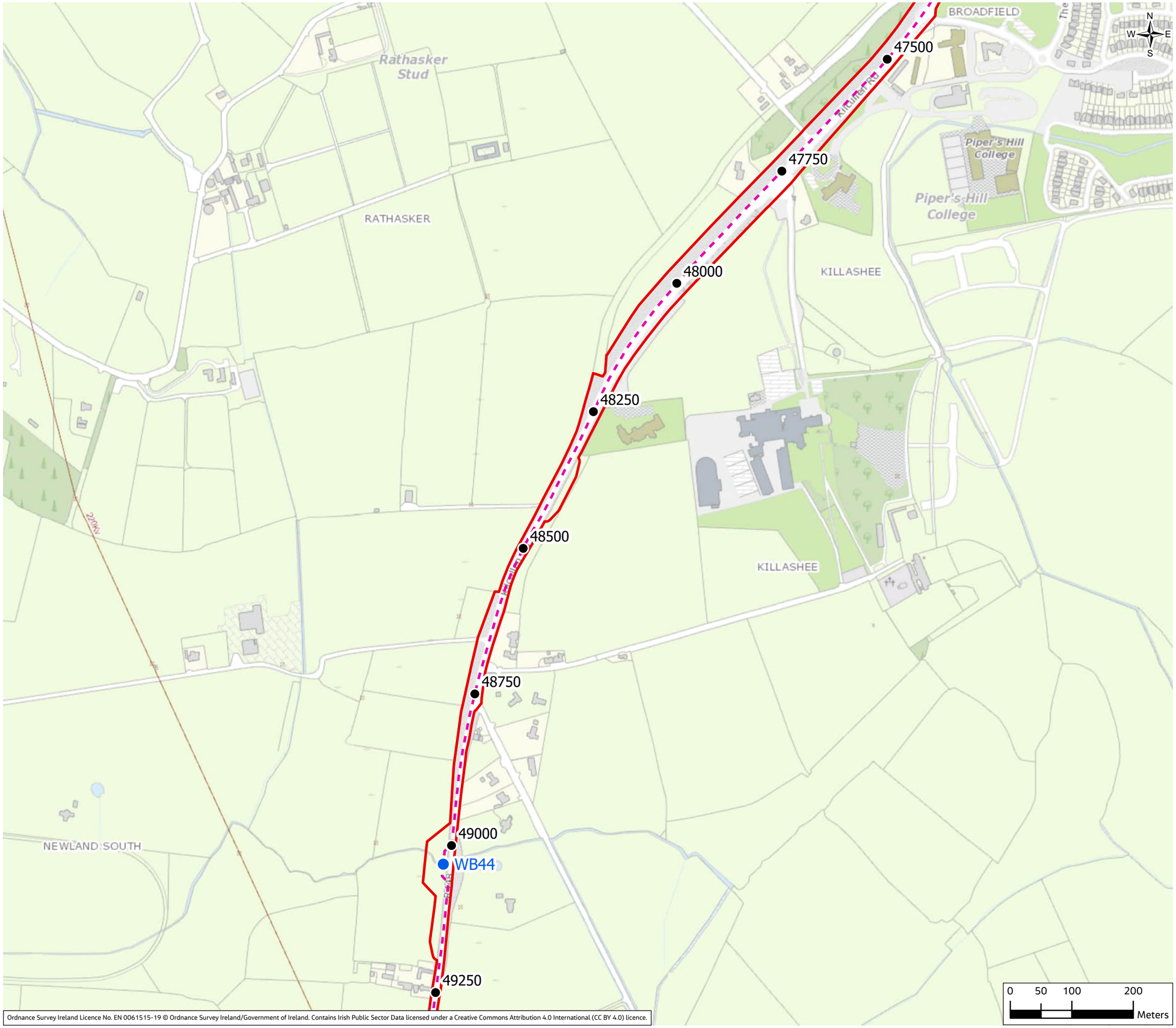
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

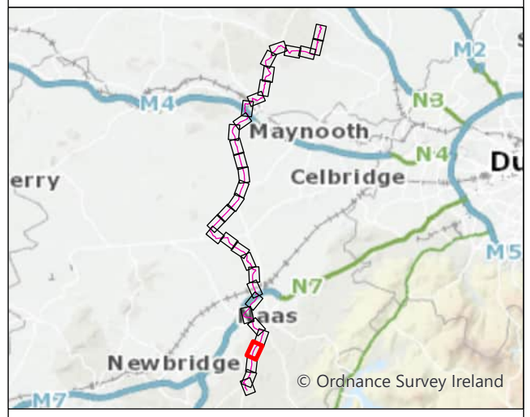
Sheet 29 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3029	



Appendix B; Figure 2.30



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

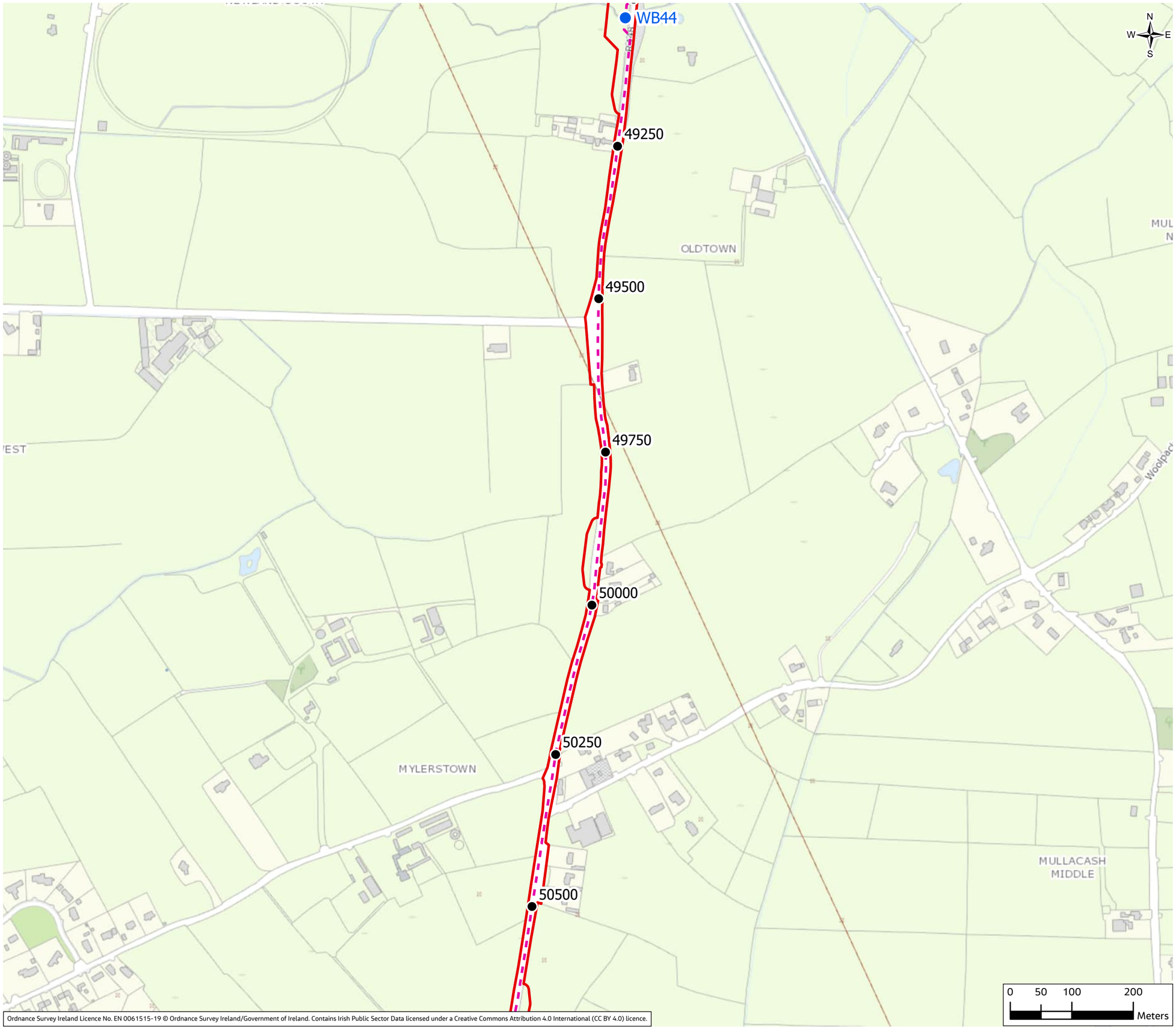
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 30 of 33

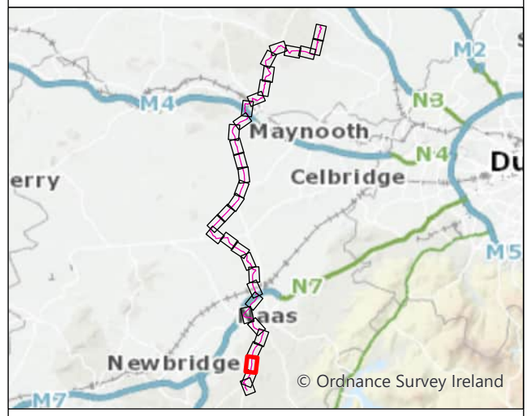
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3030



Appendix B; Figure 2.31



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

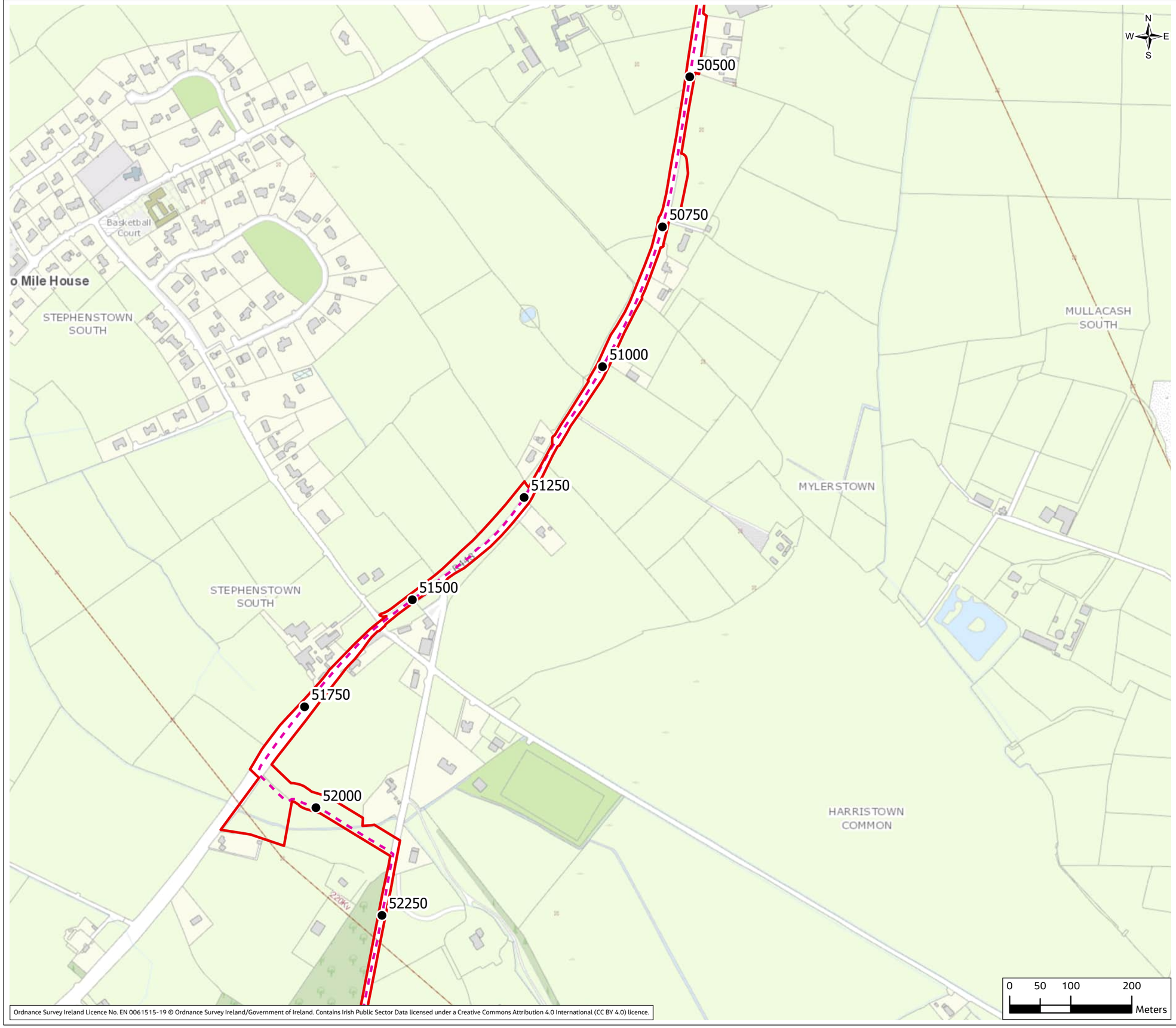
Project: Kildare-Meath Grid Upgrade

Drawing Title: Cable route, with chainage and waterbody numbers

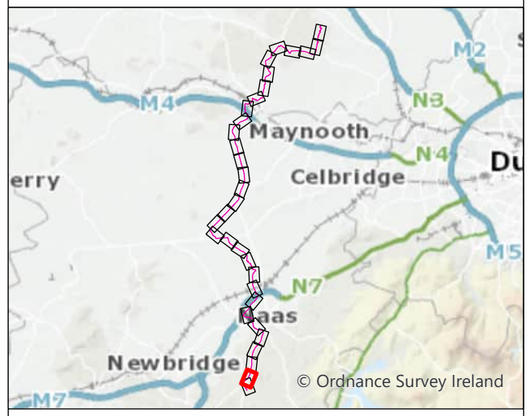
Sheet 31 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3031	



Appendix B; Figure 2.32



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

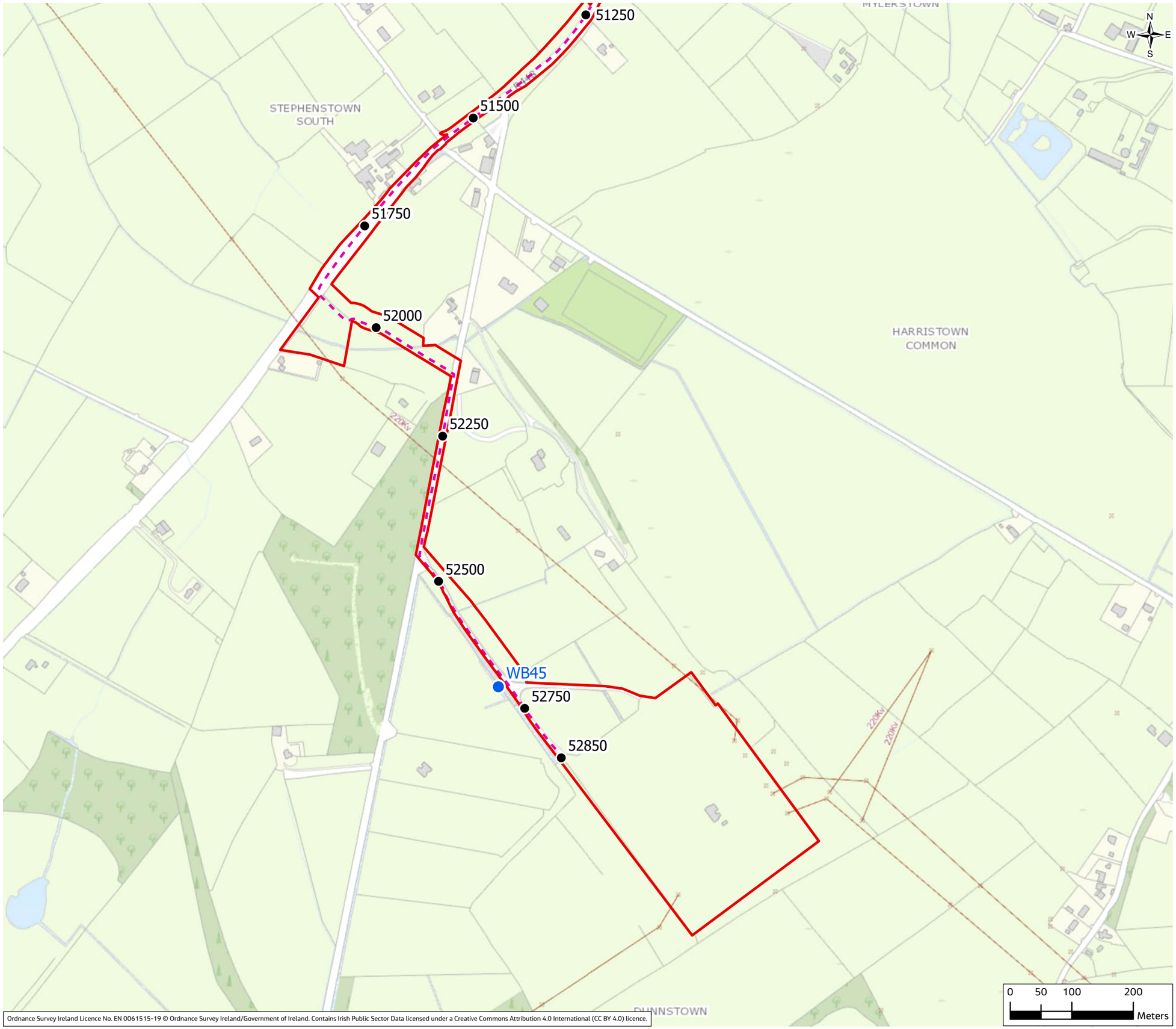
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 32 of 33

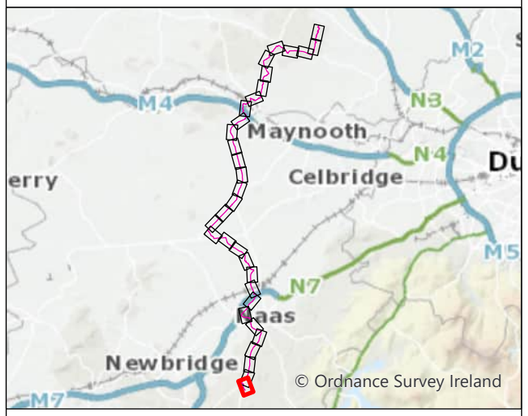
Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3032



Appendix B; Figure 2.33



Legend

- Proposed Cable Route
- Planning Application Boundary
- Watercourses
- Waterbody (WB) number
- ●2250 Chainage Number

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

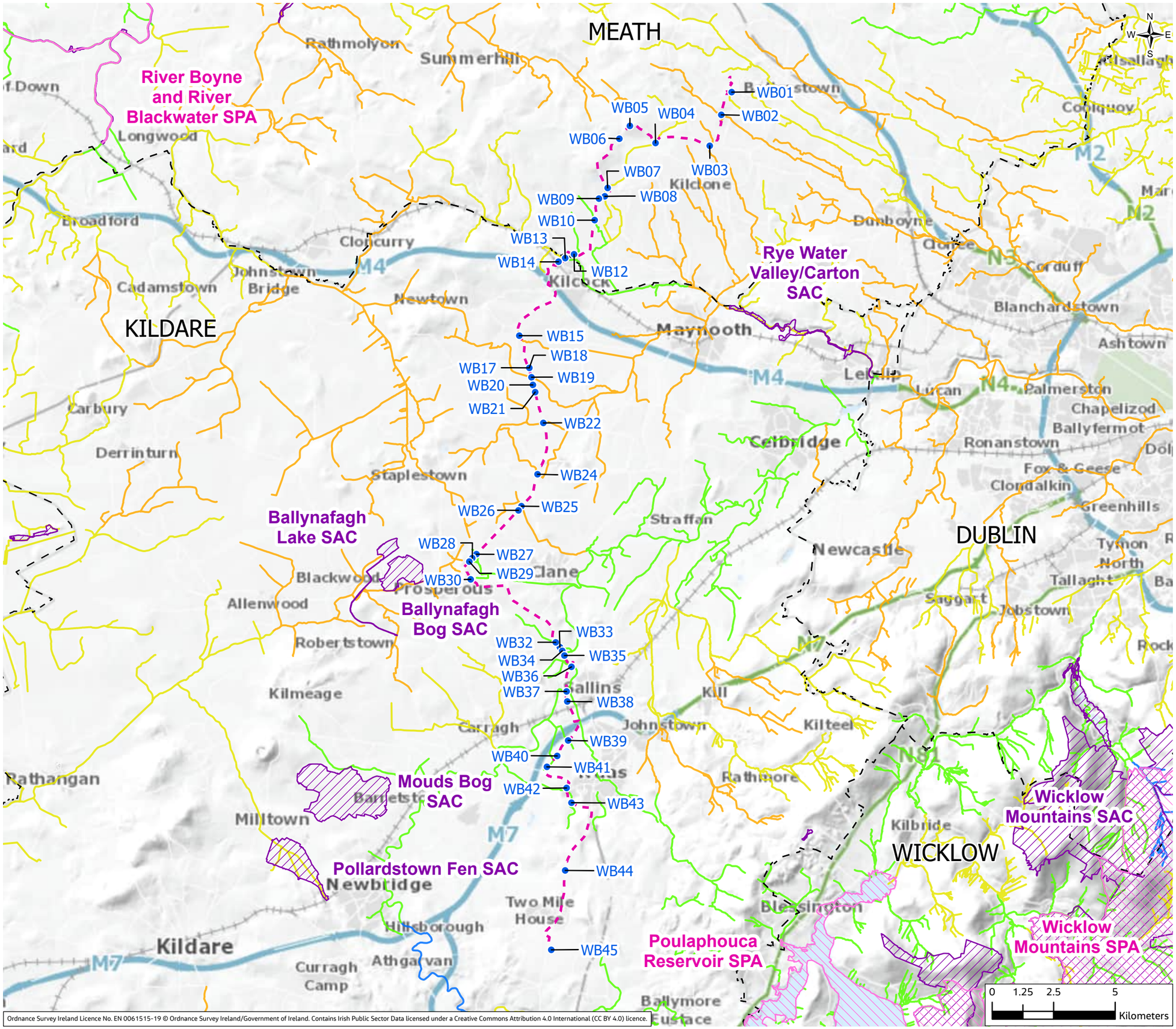
Drawing Title: Cable route, with chainage and waterbody numbers

Sheet 33 of 33

Drawing Status: Final

Scale @ A3	1:6,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	

Drawing No. 321084AH-JAC-ZZ-XX-DR-K-3033



Ordnance Survey Ireland Licence No. EN 0061515-19 © Ordnance Survey Ireland/Government of Ireland. Contains Irish Public Sector Data licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

Appendix C; Figure 3

Legend

- Proposed Cable Route Alignment
- County Boundary
- Waterbody (WB) number

WFD River Waterbody Status (2016-2021)

- High
- Good
- Moderate
- Poor

European sites

- Special Protection Area (SPA)
- Special Area of Conservation (SAC)

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
01	Apr 2023	Final	PM	SJ	FL	FB

Client: EirGrid

Jacobs
Merrion House, Merrion Road, Dublin, D04 R2C5, Ireland.
www.jacobs.com

Project: Kildare-Meath Grid Upgrade

Drawing Title: Water Framework Direct category of waterbodies in vicinity of proposed cable route

Drawing Status: Final

Scale @ A3	1:150,000	DO NOT SCALE
Jacobs No.	321084AH	
Client No.	CP966	
Drawing No.	321084AH-JAC-ZZ-XX-DR-K-3035	