APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

UPGRADE/INSTALLATION OF BROADBAND NETWORK

AT

DA069, Portlaoise

ON BEHALF OF

National Broadband Ireland

Prepared by
Enviroguide Consulting

Dublin
3D Core C, Block 71, The Plaza,
Park West, Dublin 12

Kerry
19 Henry Street
Kenmare, Co. Kerry

Wexford
Unit 11 Floor B
Westpoint Business Park
Clonard Road, Wexford

www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730

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1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by National Broadband Ireland (NBI) to carry out an Appropriate Assessment Screening Report in relation to the upgrade/installation of broadband services to buildings in the Portlaoise area. This Appropriate Assessment Screening Report (the "Screening Report") considers whether the Proposed Project is likely to have a significant effect on a European Site and whether a Stage 2 Appropriate Assessment is required. The Proposed Project entails the upgrade and installation of telecommunications infrastructure to buildings in Portlaoise and the surrounding area, in County Laois, covering an approximate area of 376 km^2. The purpose of this report is to provide information to assist the relevant competent authority to carry out a screening for Appropriate Assessment.

1.2 Relevant Legislation

1.2.1 Legislative Background

Member States are required to designate Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) under the EU Habitats and Birds Directives, respectively. SACs and SPAs are collectively known as European Sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a European Site (without the application of mitigation measures to avoid or reduce significant effects to a European Site), in view of its conservation objectives.

If likely significant effects are identified or cannot be ruled out, an 'Appropriate Assessment' (AA) is required to determine whether the significant effects of the project, either alone or in combination with other plans and projects, would have an adverse effect on the integrity of the European Sites, having regard to their conservation objectives and best scientific knowledge.

This AA Screening has been undertaken to determine the potential for significant effects on relevant European Sites.

1.2.2 Legislative Context

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of SACs and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of SPAs. It is the responsibility of each Member State to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community.

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a European Site, paragraph 3 states that:

"*6(3) 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."

These obligations in relation to Appropriate Assessment have been implemented in Ireland under Part XAB of the Planning and Development Act 2000, as amended ("the 2000 Act") and the Birds and Natural Habitat Regulations 2011, as amended.

1.2.3 Stages of AA

The AA process is a four-stage process, with issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

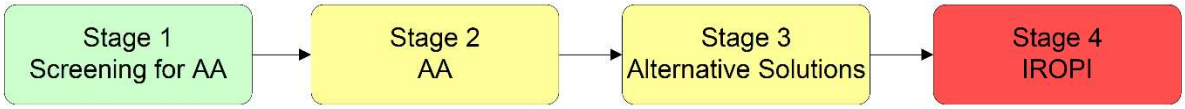

FIGURE 1. THE FOUR STAGES OF THE APPROPRIATE ASSESSMENT PROCESS (DEHLG, 2010).

The four stages of an AA, can be summarised as follows:

- Stage 1: *Screening*. The first stage of the AA process is to determine the likelihood of significant impacts of the project or plan.
- Stage 2: *Natura Impact Statement (NIS)*. The second stage of the AA process assesses the impact of the project or plan (either alone or in combination with other projects or plans) on the integrity of the European Site, with respect to the conservation objectives of the site and its ecological structure and function. A Natura Impact Statement containing a professional scientific examination of the project or plan is required and includes any mitigation measures to avoid, reduce or offset negative impacts.
- Stage 3: *Assessment of alternative solutions*. If the outcome of Stage 2 is negative i.e., adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.
- Stage 4: *Assessment where no alternative solutions exist and where adverse impacts remain.* The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European Site, where no less damaging solution exists.

The Competent Authority must determine that an NIS is required where the project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European Site.

2 APPROPRIATE ASSESSMENT – STAGE 1 SCREENING

2.1 Guidance

This AA Screening Report has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision).
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10.
- *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* (European Commission, 2001).
- *Communication from the Commission on the precautionary principle* (European Commission, 2000).
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019).
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021.*

2.2 Screening Steps

Screening for AA involves the following steps:

- Establish whether the project is directly connected with or necessary for the management of a European Site.
- Description of the project and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the European Site.
- Identification of European Sites potentially affected.
- Identification and description of potential effects on the European Site(s).
- Assessment of the likely significance of the impacts identified on the European Site; and

Determination on whether it can be objectively concluded that there will be no significant effects, (without the application of mitigation measures to avoid or reduce significant effects to a European Site).

2.3 Management of European Sites

The development and operation of the plan by National Broadband Ireland (NBI) to install/upgrade the broadband services in the area of Portlaoise, Co. Laois (the Project) is not directly connected with or necessary to the management of European Sites in the area or elsewhere.

2.4 Description of the Project

2.4.1 Project Overview

The National Broadband Plan (NBP) is the largest telecommunications project undertaken by the Irish State. It aims to transform the country's broadband landscape through the delivery of high-speed broadband to all parts of Ireland where such services are not available commercially.

The network will be designed, built and operated by National Broadband Ireland, using a combination of State subsidy and commercial investment. NBI will make its services available to the entire rollout area, which accounts for 23% of the population in approximately 537,000 homes, farms, schools and businesses.

In summary NBI will provide:

- A world-class, high-speed broadband network.
- The largest telecommunications project ever undertaken by the Government of Ireland.
- Around 146,000 kilometres of fibre to connect over half a million homes, covering 96% of Irelands land mass.
- Up to 1,800 people will be working on the project at its peak.
- High speed broadband to approximately 115,000 farms, schools and businesses in the first two years, with an additional 70,000-100,000 per year after that.
- Before the fibre can be laid, the rollout area will be surveyed completely so that all existing infrastructure can be taken into account.
- In year one, NBI will also deliver approximately 300 Broadband Connection Points (BCPs) offering high-speed broadband access across every county in the nation.
- A range of wholesale services for broadband providers in the residential and business markets.
- Services to all broadband service providers.

To deliver on the commitments outlined above NBI has broken the country down into 227 separate project locations known as Deployment Areas or DAs.

2.4.2 Brief Description of Installation Activities

Where possible, existing infrastructure such as utility poles, cable ducts and underground chambers will be utilised for the installation of new broadband infrastructure.

Where this is not possible, the main installation activities include:

- Erection of new poles
    - Proposed installation locations are safety checked for underground services and a temporary works area around the installation location is barriered off for reasons of safety.
    - A hole of sufficient diameter to accommodate each pole is due to a typical depth of 1.5 – 1.7m below ground level.

- The hole is dug using a utility truck mounted auger as shown in Figure 2 and Figure 3.
- Approximately 115kgs (1-2 wheelbarrows) of soil is dug by the auger for the installation of each pole.
- The pole is lowered into place using lifting equipment. If required, cable stays will be installed to support the pole.
- The void around the newly installed pole is backfilled with excavated material, all surplus material is placed into suitable containers and removed from site by truck for compliant waste management (maximum 115kgs per pole).
- The installation of a single pole typically takes 20 – 30 minutes to complete.

FIGURE 2. UTILITY TRUCK CARRYING UTILITY POLES AND TRUCK MOUNTED AUGER

FIGURE 3. (A) UTILITY TRUCK MOUNTED AUGER EXCAVATING HOLE FOR UTILITY POLE, (B) AND (C) NEWLY INSTALLED UTILITY POLES.

- Installation of new underground chambers and fibre ducts
  - Proposed installation locations are safety checked for underground services and a temporary works area around the installation location is barriered off for reasons of safety.

- A tracked mini-excavator or a wheeled back-hoe such as a JCB will excavate to the design depths required, a trench for the installation of ducting, or a hole for the installation of a chamber at the infrastructure installation location(s).
- All excavation activities will be undertaken in accordance with the project specific risk assessment and method statement.
- Once the infrastructure has been installed the open excavation will be back-filled with the previously excavated spoil and the ground made good.
- The quantity of excavated material is dependent on the length and depth of the required excavations.
- All surplus material is placed into suitable containers and removed from site by truck for compliant waste management.

FIGURE 4. NEWLY INSTALLED CHAMBER.

All new and existing infrastructure within the Deployment Area (DA) is outlined in Table 1.

2.4.3 Contractor Compounds

Regarding installation activities in DA069 there will be no requirement for temporary compounds including temporary office accommodation and welfare facilities, within the DA, for the storage of plant, equipment, and materials.

2.4.4 Routine Operational Measures

The environmental commitments of the Proposed Project will be managed through the Environmental Management System (EMS). The implementation of the proposed operational protocols, monitoring and follow-up arrangements and management of impacts, will be managed through the Environmental Management Plan. The routine operational measures to be implemented are, by their very nature routine; none of the routine operational measures to be implemented are being implemented to avoid likely significant effects on any European Site.

Design standards for the compounds will be in compliance with NBI's EMS. NBI have developed Standard Operating Procedures for the completion of the specific elements of the

project, referred to as Workmanship Standards, and must be considered along with the Design, Design Risk Assessments (DRAs). The Workmanship standards applicable to the deployment of telecommunications infrastructure in each DA are provided to the Project Supervisor Construction Stage (PSCS) in the DA Build Pack (project information). Workmanship Standards do not contain any specific measures targeted at avoiding likely significant effects on a European Site.

2.4.5 Project Specific Description

This screening report is based on the proposal by NBI to install/upgrade broadband services to buildings in Portlaoise and the surrounding area, in County Laois (DA069). The area under assessment is approximately 376 km^2 of both urban and rural environments.

As noted previously, existing infrastructure (poles, underground ducting, and chambers) will be used for the installation of cable providing broadband service to buildings in the Project area. There is a requirement to supplement existing infrastructure with new additional infrastructure. Table 1 identifies the existing telecoms infrastructure in the project area and the new additional infrastructure to be installed as part of the Proposed Project.

TABLE 1. EXISTING AND PROPOSED ADDITIONAL TELECOMS INFRASTRUCTURE

Infrastructure description	Existing Infrastructure	Additional Proposed Infrastructure
Above ground / overhead cable	403.3 km	38.3 km
Underground cable and ducting	77.3 km	31.1 km
Network Utility Poles	8607	763
Underground chambers	1108	27
Co-Locations/Cabinets	Yes	0

The vast majority of the additional network equipment identified in Table 1 will be installed in the roadside verges, hedgerows and under existing footways and carriageways.

The installation of the infrastructure will not require water course crossing, or instream works.

New overhead cables will be slung between newly installed poles.

Underground ducting will follow the existing road network.

Table 2 identifies the installation location type and total length of underground ducting to be installed in each location type.

It is expected that the rollout of the infrastructure will commence 04th May 2022 with a completion date of the 04th August 2022.

TABLE 2 NEW UNDERGROUND DUCTING INSTALLATION LOCATION TYPE AND LENGTH

Type of install location	Total Length km
Installation in roadside verge	26.6 km
Installation under existing footway	0.6 km
Installation under existing carriageway	3.8 km

2.4.6 Operation, maintenance and decommission project phases.

During the operation of the network, reactive maintenance of the new infrastructure will occur once an issue has been reported/detected e.g., pole broken, pole leaning, underground cable cut etc. Replacement of damaged underground cable will use existing ducting. During the operational phase, poles will be stored in established contractor's storage areas, in compliance with current legislation. Poles which are being replaced by NBI during the operational phase will be removed and disposed of by the appropriate means.

All operational maintenance, repair, replacement and upgrade of network equipment will be undertaken in strict compliance with the Workmanship Standards.

2.4.7 Existing Environment

The Project is located within an area that is a mainly rural (grazing/agricultural/forestry). The project route also contains the urban centre of Portlaoise.

A number of lake waterbodies, river waterbodies and groundwater bodies, are located within the project area and environs, which are shown in Figure 5.

Slieve Bloom Mountains SAC, River Barrow and River Nore SAC and *Slieve Bloom Mountains SPA* are located within the project route at various points, see figure 6 below for details.

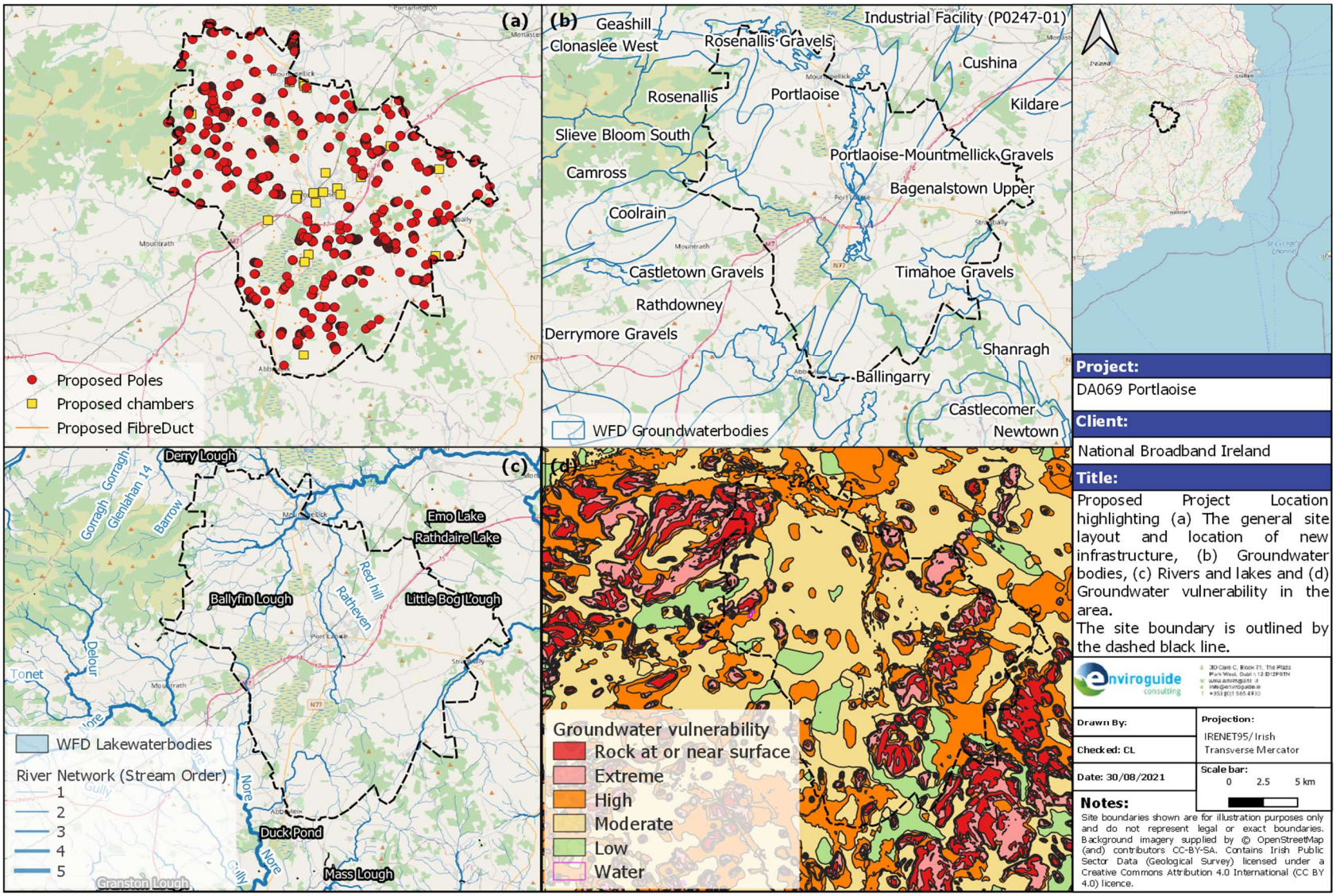

FIGURE 5. PROPOSED PROJECT LOCATION SHOWING THE LOCATION OF NEW INFRASTRUCTURE AND VARIOUS ENVIRONMENTAL FEATURES

2.5 Methodology

2.5.1 Desk Study

A desktop study was carried out in August 2021 and reviewed in March 2022, to collate and review available information, datasets, and documentation sources relevant for the completion of the Screening Report. The desktop study relied upon the following sources:

- National Parks and Wildlife Service (NPWS) datasets.
- Geological Survey Ireland (GSI) online datasets and mapping.
- Environmental Protection Agency (EPA) mapping and datasets.
- OSI aerial imagery and Discovery Series mapping.
- Satellite imagery from various sources and dates (Google, Digital Globe, Bing).
- The Status of EU Protected Habitats in Ireland (NPWS).
- Office of Public Works (OPW) Flood Plans (https://www.floodinfo.ie/map/floodplans/).
- Department of Agriculture, Food and the Marine Forestry Licence Viewer https://forestry-maps.apps.rhos.agriculture.gov.ie/

For a complete list of the specific documents consulted as part of this assessment, see *Section 4 References*.

2.5.2 Field Survey

Eric Dempsey (expert ornithologist) conducted vantage point surveys on 7th September 2021 on poles which were identified during desk studies to pose a potential collision risk to Hen Harrier within Slievebloom Mountains SPA.

2.5.3 Assessment of Impacts

Once the potential impacts that may arise from the Proposed Project are identified, the significance of these is assessed through the use of key indicators:

- Habitat loss or alteration.
- Habitat/species fragmentation.
- Disturbance and/or displacement of species.
- Changes in population density; and
- Changes in water quality and resource.

In line with the EPA Guidelines (EPA, 2017), the following terms are defined when quantifying duration:

TABLE 3. DEFINITION OF DURATIONS (EPA, 2017).

Description of Duration	Corresponding Time Frame
Momentary Effects	Effects lasting from seconds to minutes
Brief Effects	Effects lasting less than a day
Temporary Effects	Effects lasting less than a year

Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years
Permanent Effects	Effects lasting over sixty years
Reversible Effects	Effects that can be undone, for example through remediation or restoration
Frequency of Effects	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

The criteria for confidence levels of the predicted likely impacts are given below in Table 4. The impact significance criteria follow EPA guidance (EPA, 2017).

TABLE 4. IMPACT SIGNIFICANCE CRITERIA (EPA, 2017).

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

2.5.4 Identification of Relevant European Sites

In order to identify the European Sites that potentially lie within the Zone of Influence (ZOI) of the Proposed Development, a Source-Path-Receptor method (S-P-R) was adopted, as described in 'OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021), a practice note produced by the Office of the Planning Regulator, Dublin. This note was published to provide guidance on screening for appropriate assessment (AA) during the planning process, and although it focuses on the approach a planning authority should take in screening for AA, the methodology is also readily applied in the preparation of Appropriate Assessment Screening Reports such as this.

The guidance document published by the Department of Housing, Planning and Local Government (then DEHLG) 'Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities' (2009) recommends an arbitrary distance of 15km as the

precautionary ZOI for a plan or project being assessed for likely significant effects on European Sites, stating however that this should be evaluated on a case-by-case basis.

As such, the 15km ZOI is used in this report as an initial starting point for collating European Sites for AA screening.

The methodology used to identify relevant European Sites comprised the following:

- Use of up-to-date GIS spatial datasets for European designated sites and water catchments – downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) to identify European Sites which could potentially be affected by the Proposed Project;
- The catchment data were used to establish or discount potential hydrological connectivity between the Project and any European Sites. The hydrological catchments are shown in Figure 6.
- Where relevant, the presence of a substantial marine buffer was used to discount potential marine hydrological connectivity between the Project Boundary and any European Sites.
- All European Sites within 15km of the Proposed Project were identified and included in the precautionary Zone of Influence (ZOI) of the Proposed Project (Figure 6 and Table 5). In addition, the potential for connectivity with European Sites at distances of greater than 15km from the Proposed Project was also considered in this initial assessment. In this case, there is no potential connectivity between the Proposed Project site and European Sites located at a distance greater than 15km.
- Table 5 provides details of all relevant European Sites as identified in the preceding steps which are within the precautionary ZOI of the Proposed Project. The potential for pathways between European Sites and the Proposed Development Site was assessed on a case-by-case basis using the Source-Pathway-Receptor framework as per the OPR Practice Note PN01 (March 2021). Where significant effects are ruled out, a rationale is provided. Pathways considered included:
    a. Direct pathways (e.g., proximity (i.e., location within the European Site), water bodies, air (for both air emissions and noise impacts).
    b. Indirect pathways (e.g., disruption to migratory paths, 'Sightlines' where noisy or intrusive activities may result in disturbance to shy species.
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report.

There is absolutely no reliance placed in this Appropriate Assessment Screening Report on measures intended to avoid/reduce harmful effects on the European Sites.

2.5.5 Identification of Infrastructure Installation activities within/adjacent to European Sites

To assess whether installation activities were proposed adjacent to European Sites, proposed installation activities within 30m or less of European Sites were assessed.

To identify these items of infrastructure, the following process was undertaken:

- Using a Geographic Information System (GIS) the locations of all new proposed items of infrastructure were overlayed onto the locations of all European Sites in Ireland and Northern Ireland.
- Analysis was performed using GIS which identified any individual feature proposed to be installed within 30m or less of a European Site.

If individual features are identified, they are recorded and presented on a drawing or series of drawings as required.

2.5.6 Assessment of the Impact of Infrastructure Installation activities within, adjacent to or upstream of European Sites

The following process is undertaken to assess whether the installation of individual items of new infrastructure within, adjacent to or upstream of a European Site may give rise to significant effects upon a European Site:

- The survey data for each proposed location is reviewed along with available aerial imagery of the location.
- If the proposed infrastructure locations lie along the public road network, Google street-view imagery of the location is reviewed, if available.
- The context of the proposed infrastructure is also considered; for example, the new infrastructure is assessed to determine if it will be filling in gaps in an existing run of poles, or if it will be an entirely new string of poles.
- The QI/SCI species and Conservation Objectives of the European Site are considered when reaching a conclusion as to whether or not the infrastructure has the potential to give rise to a significant effect.
- All items of infrastructure within 30 metres of relevant EPA waterbody GIS layers (e.g., river, lakes, transitional and coastal waterbodies) were assessed to determine potential hydrological linkages with European Sites. A distance of 30m was chosen to account for differences in river width and potential mapping errors.
- If the location of the proposed infrastructure is validated as being correct, and the site where the installation activities are proposed cannot be adequately assessed using aerial and other available imagery, the location of the proposed infrastructure will be assessed by way of a field survey to identify potential likely significant effects on the European Site.

2.6 European Sites within the Zone of Influence

Nine SACs and two SPAs are located within the precautionary ZOI of the Proposed Project site.

Installation work within European Sites will be limited to a total of 40 new items of infrastructure (28 poles, and 12 lengths of ducting) as outlined above, which will be installed exclusively within *Slievebloom Mountains SAC and Slievebloom Mountains SPA* (Figure 9 and Figure 10). The impact of the installation of each item of equipment inside the aforementioned European Site is further assessed in Section 2.9.

Proposed new items of infrastructure within 30m of European Sites are identified in Figure 7 and Figure 8. A total of 27 items of infrastructure (12 poles and 15 lengths of FibreDuct) are proposed to be installed within 30m of European Sites.

Finally, a total of 40 poles and 41 lengths of ducting are proposed to be placed within 30m of watercourses which may ultimately flow into European Sites within the precautionary ZOI of the Project.

A desk study was sufficient for the above listed infrastructure as the proposed location of the infrastructure was located adjacent to the existing public/private road network and could be readily assessed using Google Street View, aerial imagery and up-to-date GIS data available from the NPWS[1]. The habitat at these roadside locations typically consisted of made ground, grassy verges and/or hedging and was not a QI habitat for any European Site or important habitat for any QI/SCI species.

The results of the assessment methodology detailed in section 2.5.6 of this report regarding installation work within European Sites are presented in Table 8.

[1] https://www.npws.ie/maps-and-data/habitat-and-species-data

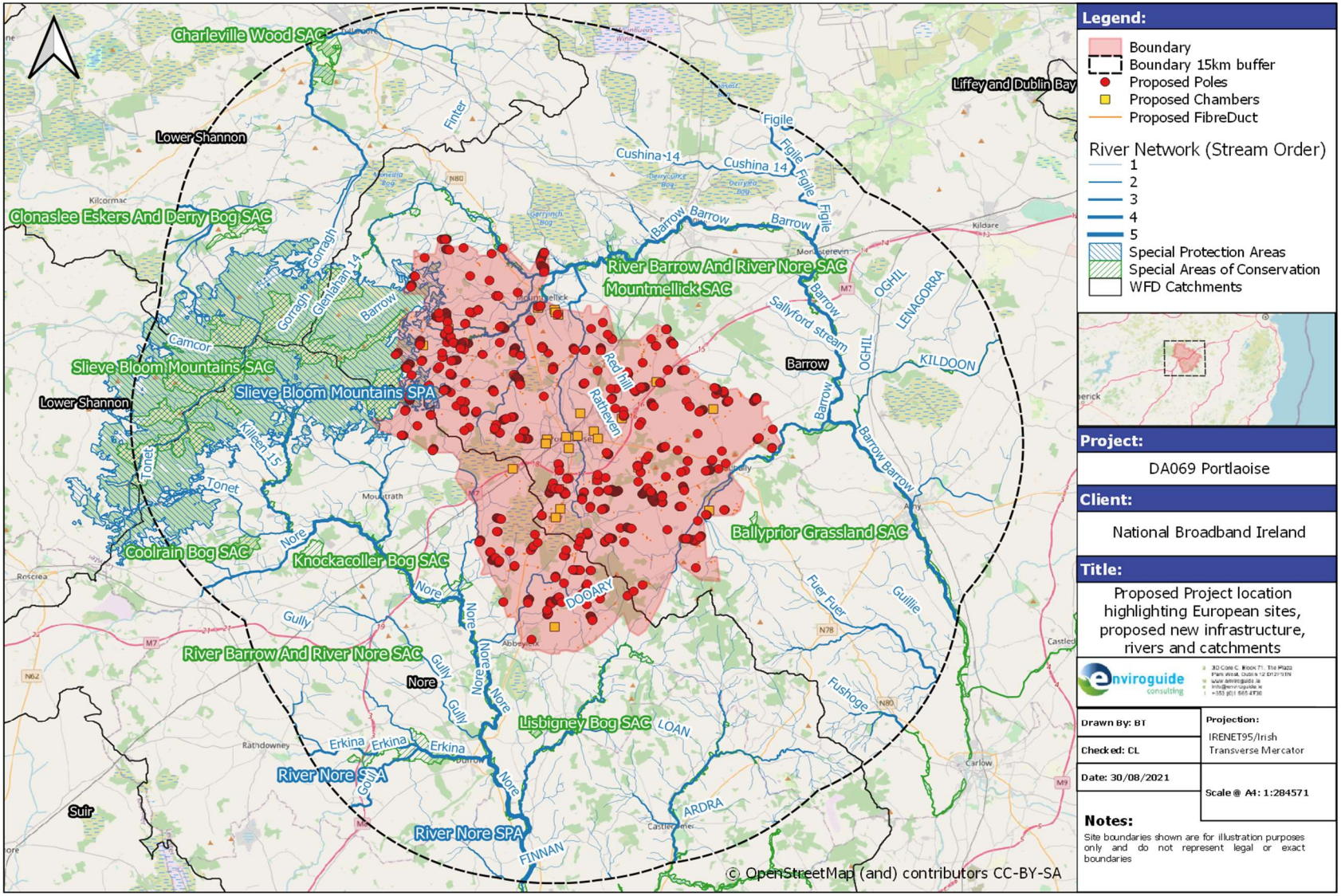

FIGURE 6 PROPOSED PROJECT LOCATION

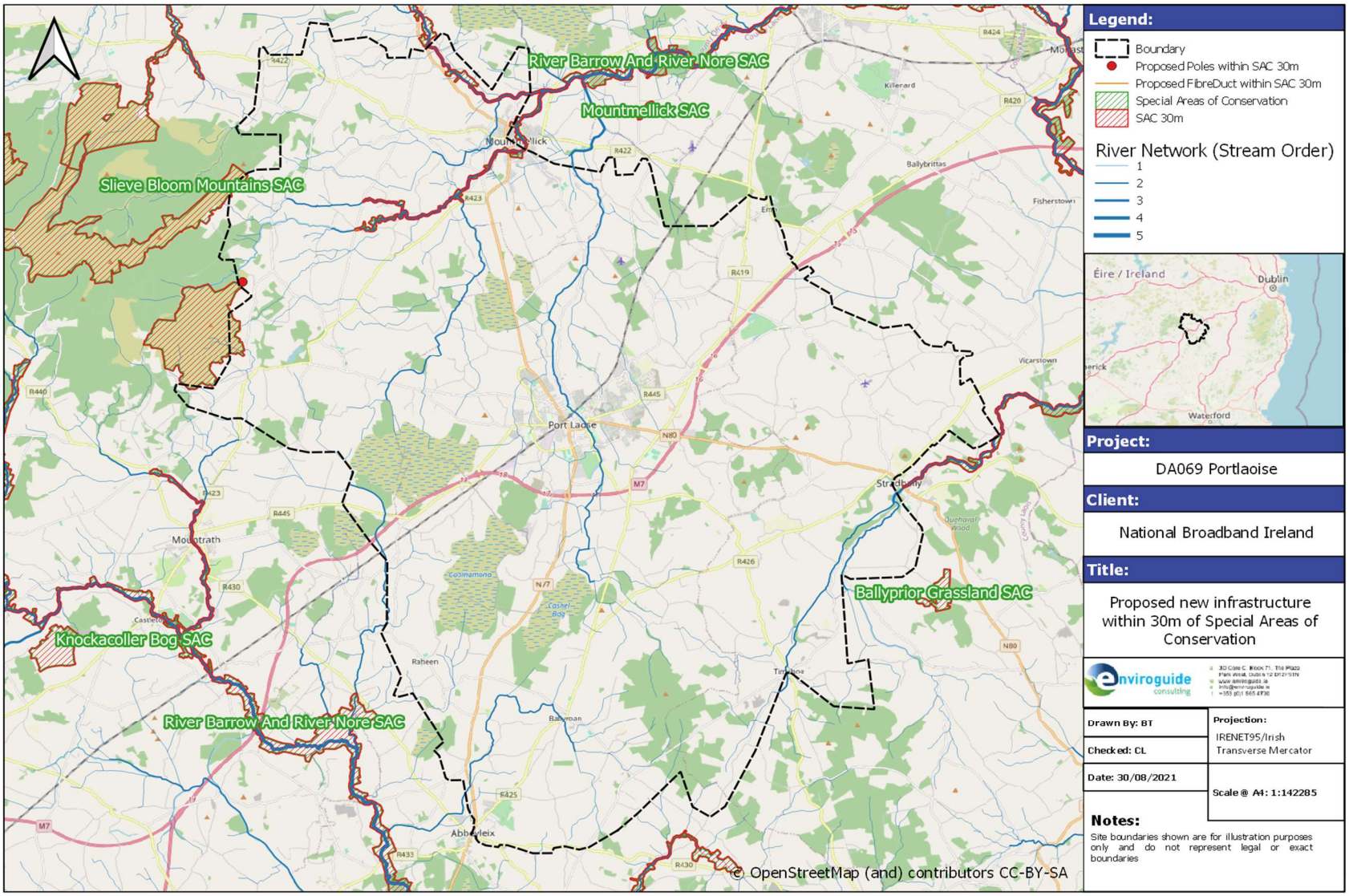

FIGURE 7 NEW ITEMS OF INFRASTRUCTURE LYING WITHIN 30M OF SAC SITES.

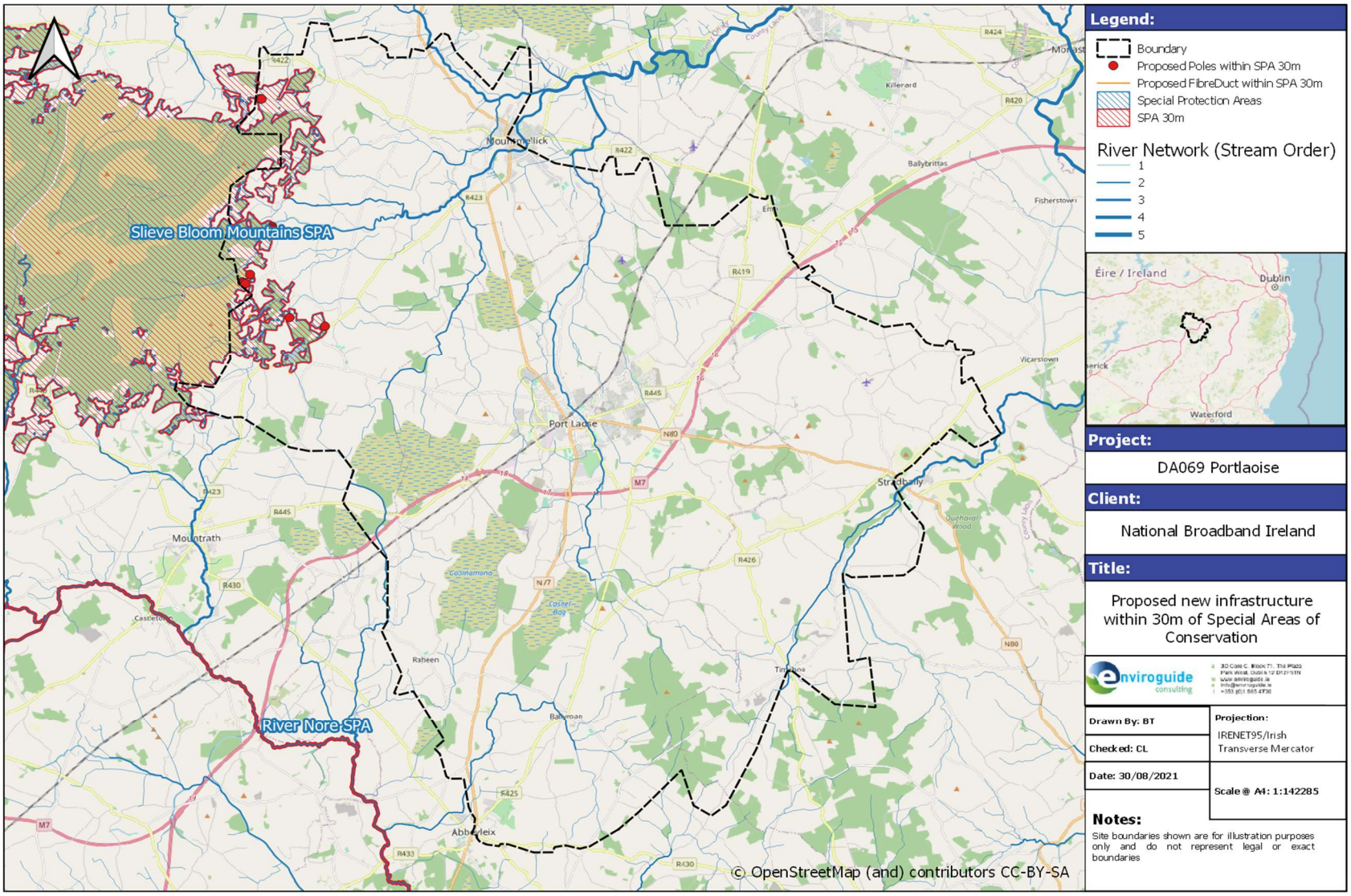

FIGURE 8 NEW ITEMS OF INFRASTRUCTURE LYING WITHIN 30M OF SPA SITES

TABLE 5 EUROPEAN SITES WITHIN THE PRECAUTIONARY ZONE OF INFLUENCE OF THE PROPOSED PROJECT SITE, THE DISTANCE BETWEEN EACH EUROPEAN SITE AND THE PROJECT BOUNDARY AND THE POTENTIAL PATHWAYS BETWEEN THEM, AND POTENTIAL DIRECT AND INDIRECT EFFECTS ON EACH EUROPEAN SITE AS A RESULT OF THE PROPOSED PROJECT. WHERE NO SIGNIFICANT EFFECTS ARE ENVISAGED, A RATIONALE IS PROVIDED.

Site Name & Code	Qualifying Interests	Distance to Project Route	Pathway	Potential Direct Effects	Potential Indirect Effects	Rationale for exclusion
Special Areas of Conservation (SAC)						
Slieve Bloom Mountains SAC (000412) https://www.npws.ie/protected-sites/sac/000412	**Conservation Objectives Version 1.0 (NPWS, 2016a)** - Northern Atlantic wet heaths with *Erica tetralix* [4010] - Blanket bogs (* if active bog) [7130] - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]	Within Project Route	Land	Loss / alteration of habitat along project route, which passes within SAC due to erection of poles and Fibre duct	None envisaged	
River Barrow and River Nore SAC (002162) https://www.npws.ie/protected-sites/sac/002162	**Conservation Objectives Version 1.0 (NPWS, 2011)** - Estuaries [1130] - Mudflats and sandflats not covered by seawater at low tide [1140] - Reefs [1170] - *Salicornia* and other annuals colonising mud and sand [1310] - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] - Mediterranean salt meadows (*Juncetalia maritimi*) [1410] - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]	Within Project Route	Land/ Hydrological	Loss / alteration of habitat along project route, which passes within SAC due to erection of poles and Fibre duct	Pollution of watercourse from potential sediment / pollutants entering SAC due to erection of poles within 30m of waterbodies which flow into SAC. Potential disturbance to QI species, particularly, *Lutra lutra* (Otter) during the construction phase	

Site Name & Code	Qualifying Interests	Distance to Project Route	Pathway	Potential Direct Effects	Potential Indirect Effects	Rationale for exclusion
	- European dry heaths [4030] - *Hydrophilous* tall herb fringe communities of plains and of the montane to alpine levels [6430] - Petrifying springs with tufa formation (*Cratoneurion*) [7220] - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] - *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016] - *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] - *Austropotamobius pallipes* (White-clawed Crayfish) [1092] - *Petromyzon marinus* (Sea Lamprey) [1095] - *Lampetra planeri* (Brook Lamprey) [1096] - *Lampetra fluviatilis* (River Lamprey) [1099] - *Alosa fallax fallax* (Twaite Shad) [1103] - *Salmo salar* (Salmon) [1106] - *Lutra lutra* (Otter) [1355] - *Trichomanes speciosum* (Killarney Fern) [1421] - *Margaritifera durrovensis* (Nore Pearl Mussel) [1990]					

Site Name & Code	Qualifying Interests	Distance to Project Route	Pathway	Potential Direct Effects	Potential Indirect Effects	Rationale for exclusion
Ballyprior Grassland SAC (002256) https://www.npws.ie/protected-sites/sac/002256	**Conservation Objectives Version 1.0 (NPWS, 2021d)** - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]	0.8 km	None	None envisaged	None envisaged	No potential direct or indirect effects as no proposed activities occur within the SAC or immediately adjacent to it. No hydrological connection
Mountmellick SAC (002141) https://www.npws.ie/protected-sites/sac/002141	**Conservation Objectives Version 1.0 (NPWS, 2021c)** - *Vertigo moulinsiana* (Desmoulin's -Whorl Snail) [1016]	1.3 km	None	None envisaged	None envisaged	No potential direct or indirect effects as no proposed activities occur within the SAC or immediately adjacent to it. No hydrological connection
Lisbigney Bog SAC (000869) https://www.npws.ie/protected-sites/sac/000869	**Conservation Objectives Version 1.0 (NPWS, 2021b)**	4.8 km	None	None envisaged	None envisaged	No potential direct or indirect effects

Site Name & Code	Qualifying Interests	Distance to Project Route	Pathway	Potential Direct Effects	Potential Indirect Effects	Rationale for exclusion
	- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210] - *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016]					as no proposed activities occur within the SAC or immediately adjacent to it. No hydrological connection
Knockacoller Bog SAC (002333) https://www.npws.ie/protected-sites/sac/002333	**Conservation Objectives Version 1.0 (NPWS, 2016c)** - Active raised bogs [7110] - Degraded raised bogs still capable of natural regeneration [7120] - Depressions on peat substrates of the *Rhynchosporion* [7150]	8.1 km	None	None envisaged	None envisaged	No potential direct or indirect effects as no proposed activities occur within the SAC or immediately adjacent to it. No hydrological connection
Clonaslee Eskers And Derry Bog SAC (000859) https://www.npws.ie/protected-sites/sac/000859	**Conservation Objectives Version 1.0 (NPWS, 2019)** - Alkaline fens [7230] - *Vertigo geyeri* (Geyer's Whorl Snail) [1013]	9.3 km	None	None envisaged	None envisaged	No potential direct or indirect effects as no proposed activities occur within

Site Name & Code	Qualifying Interests	Distance to Project Route	Pathway	Potential Direct Effects	Potential Indirect Effects	Rationale for exclusion
						the SAC or immediately adjacent to it. No hydrological connection
Coolrain Bog SAC (002332) https://www.npws.ie/protected-sites/sac/002332	**Conservation Objectives Version 1.0 (NPWS, 2016b)** - Active raised bogs [7110] - Degraded raised bogs still capable of natural regeneration [7120] - Depressions on peat substrates of the *Rhynchosporion* [7150]	10.2 km	None	None envisaged	None envisaged	No potential direct or indirect effects as no proposed activities occur within the SAC or immediately adjacent to it. No hydrological connection
Charleville Wood SAC (000571) https://www.npws.ie/protected-sites/sac/000571	**Conservation Objectives Version 1.0 (NPWS, 2021a)** - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] - *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016]	12 km	None	None envisaged	None envisaged	No potential direct or indirect effects as no proposed activities occur within the SAC or immediately adjacent to it. No

Site Name & Code	Qualifying Interests	Distance to Project Route	Pathway	Potential Direct Effects	Potential Indirect Effects	Rationale for exclusion
						hydrological connection
Special Protection Areas (SPA)						
Slieve Bloom Mountains SPA (004160) https://www.npws.ie/protected-sites/spa/004160	**Conservation Objectives Version 1.0 (NPWS, 2021e)** - Hen Harrier (*Circus cyaneus*) [A082]	Within Project Route	Land	Loss/alteration of habitat along project route, which passes within SPA due to erection of poles or excavations for poles. Possible reduction in population densities of protected bird species, in particular Hen Harrier (*Circus cyaneus*) due to colliding with new infrastructure.	None envisaged	
River Nore SPA (004233) https://www.npws.ie/protected-sites/spa/004233	**Conservation Objectives Version 1.0 (NPWS, 2021f)** - Kingfisher (*Alcedo atthis*) [A229]	5.9 km	Hydrological	None envisaged	Pollution of watercourse from potential sediment / pollutants entering SPA due to erection of poles within 30m of waterbodies which flow into SPA.	

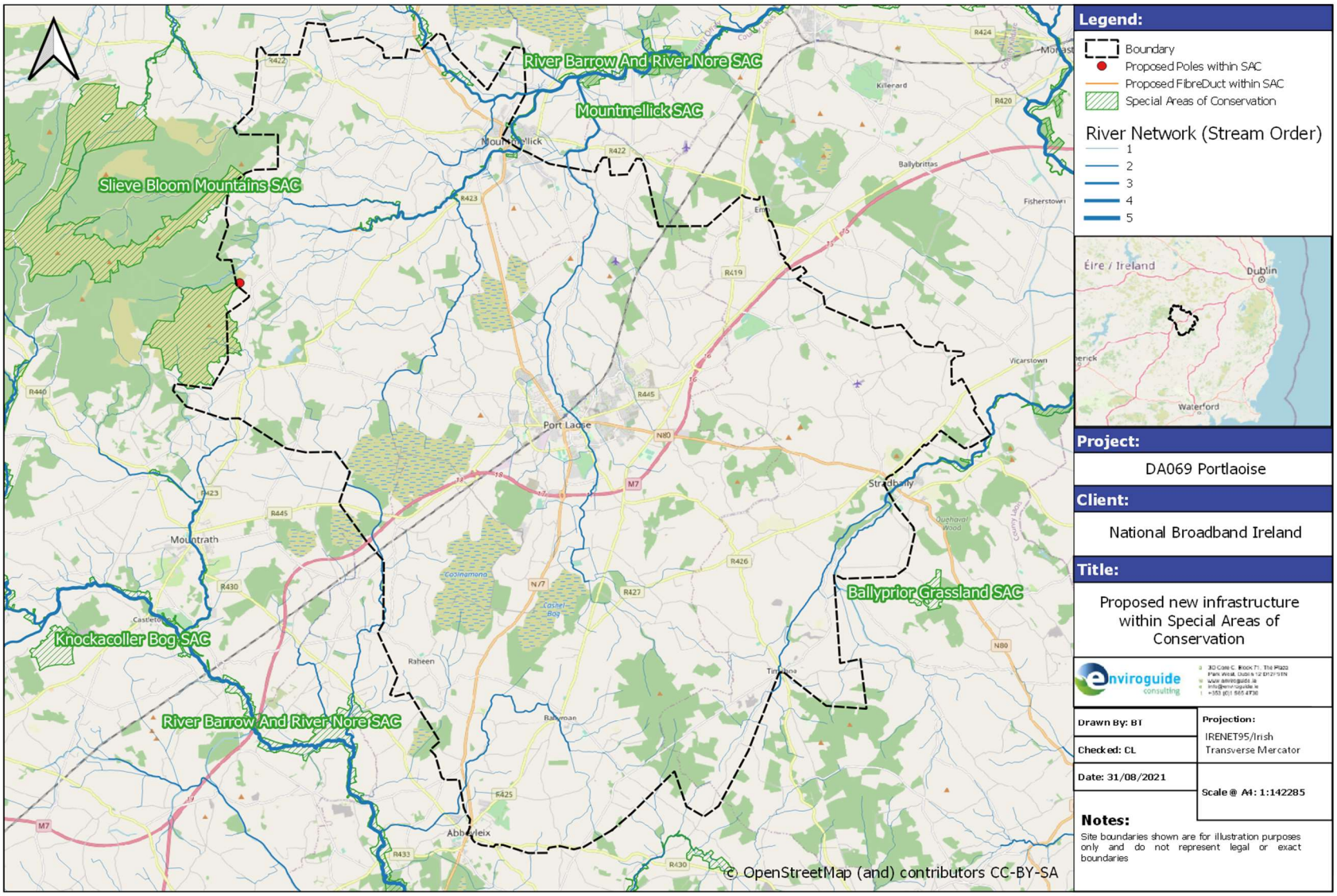

FIGURE 9. NEW INFRASTRUCTURE FEATURES WITHIN SAC SITES.

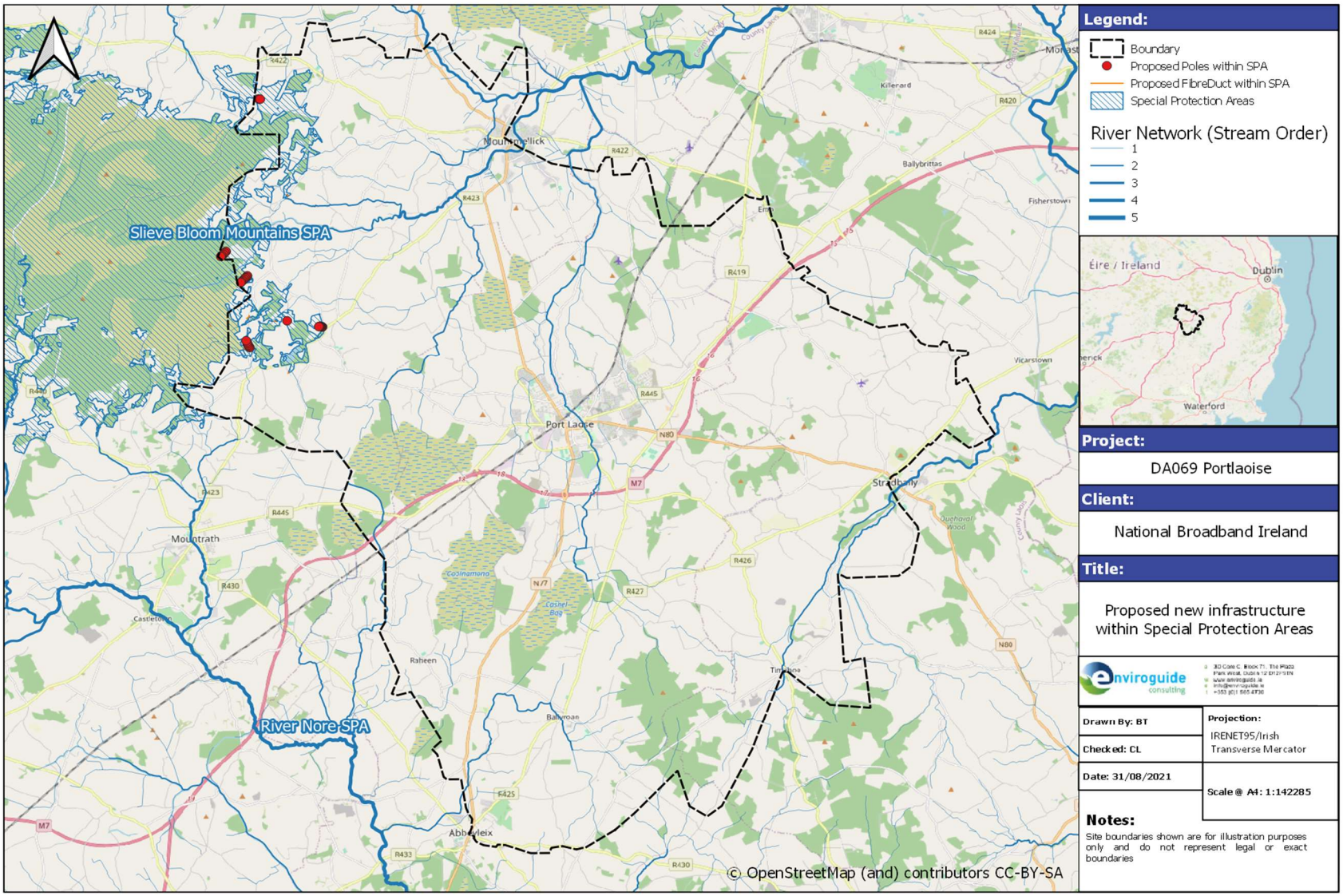

FIGURE 10 NEW INFRASTRUCTURE FEATURES WITHIN SPA SITES.

2.7 Brief Description of European Sites

All 11 of the European Sites within the precautionary ZOI of the Project were assessed for potential direct and indirect impacts. A total of 7 European Sites were screened out following this assessment (Table 5). It was concluded that these European Sites would not be directly or indirectly affected by the Proposed Project due to the minimal nature of the proposed installation activities and the absence of pathways (e.g., hydrological, land, air) between the Project and the European Site (for which a rationale for exclusion was not included in Table 5). Shown below are brief descriptions of the remaining 4 European Sites which will be further assessed in section 2.9 as they have a direct connection with, or are within close proximity to, the project route. The below descriptions are taken from the "Site Description" section of the NPWS Natura 2000 Standard Data Forms.

2.7.1 Slievebloom Mountains SAC (000412)

This site is an isolated, inland mountain range, composed of Old Red Sandstone, forming an elongated ridge extending for 25km in a North-east/South-west direction, supporting extensive mountain blanket bog development. Site includes the headwaters of several river systems, including the river Barrow. Surrounding lands are extensively afforested with conifer monocultures.

This site is one of the best and least disturbed mountain blanket bogs in Ireland, representing an important biogeographical link in the east/west gradient of bog variation. Contains transitional elements between raised and blanket bogs, notably Andromeda polifolia *and* Vaccinium oxycoccus*, and includes extensive heaths and headwater streams. Wet heath is well represented within the site. Alluvial woodland occurs within the Camcor River valley - this is of variable quality due to afforestation but quality will be improved with sensitive management by the forestry agency. The Slieve Blooms is a stronghold for breeding* Circus cyaneus*.*

2.7.2 River Barrow and River Nore SAC (002162)

This site consists of most of the freshwater stretches of the Barrow/Nore River catchments. The Barrow is tidal as far upriver as Graiguenamanagh while the Nore is tidal as far upriver as Inishtioge. The site also includes the extreme lower reaches of the River Suir and all of the estuarine component of Waterford Harbour extending to Creadan Head. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains. They traverse limestone bedrock for a good proportion of their routes, though the middle reaches of the Barrow and many of the eastern tributaries run through Leinster Granite. A wide range of habitats associated with the rivers are included within the site, including substantial areas of woodland (deciduous, mixed), dry heath, wet grassland, swamp and marsh vegetation, salt marshes, a small dune system, biogenic reefs and intertidal sand and mud flats. Areas of improved grassland, arable land and coniferous plantations are included in the site for water quality reasons.

The site supports many Annexed habitats including the priority habitats of alluvial woodland and petrifying springs. Quality of habitat is generally good. The site also supports a number of Annex II animal species - Salmo salar, Margaritifera margaritifera, M.m. durrovensis, Alosa

fallax fallax, Austropotamobius pallipes, Petromyzon marinus, Lutra lutra, Lampetra fluviatilis *and* L. planeri*. Annex I Bird species include* Anser albifrons flavirostris, Falco peregrinus, Cygnus cygnus, Cygnus columbianus bewickii, Limosa lapponica, Pluvialis apricaria *and* Alcedo atthis. *A range of rare plants and invertebrates are found in the woods along these rivers and rare plants are also associated with the saltmarsh.*

2.7.3 Slievebloom Mountains SPA (004160)

The site lies on the Offaly-Laois border and runs along a NE-SW ridge for approximately 25km. Much of the site is over 200 m in altitude, with a maximum of 527 m at Arderin. The mountains are of Old Red Sandstone, flanked by Silurian rocks. Several important rivers rise within the site, including the Barrow, Delour, and Silver rivers. Approximately 60% of the site is afforested, including both first and second rotation plantations and clearfell areas. Roughly one-quarter of the site is unplanted blanket bog and heath, with the remainder of the site largely rough grassland that is used for hill farming. Some stands of deciduous woodland and scrub also occur, especially within the river valleys.

This site supports 3.7% of the all-Ireland population of Circus cyaneus *and among the top 5 most important sites in the country for this species. Also the most easterly population in the country. Habitat excellent for nesting and foraging purposes. Also has nesting* Falco peregrine*,* Falcon columbarius *and* Lagopus lagopus*, the later a Red Data Book Species.*

2.7.4 River Nore SPA(004233)

The River Nore SPA is a long linear site that includes the following river sections: the River Nore from the bridge at Townparks, (north-west of Borris in Ossory) to Coolnamuck (approximately 3 km south of Inistioge) in Co. Kilkenny; the Delour River from its junction with the River Nore to Derrynaseera bridge (west of Castletown) in Co Laois; the Erkina River from its junction with the River Nore at Durrow Mills to Boston Bridge in Co. Laois; a 1.5 km stretch of the River Goul upstream of its junction with the Erkina River; the Kings River from its junction with the River Nore to a bridge at Mill Island Co. Kilkenny. The site includes the river channel and marginal vegetation.

The River Nore support nationally important numbers of Alcedo atthis*. Other species which occur within the site include* Cygnus olor, Anas platyrhynchos, Phalacrocorax carbo, Ardea cinerea, Gallinula chloropus, Gallinago gallinago *and* Riparia riparia.

2.8 Conservation Objectives

Table 6 identifies the Conservation Objectives of European Sites which have a direct connection, or are within close proximity, with the project route. The contents in the below table are taken from the NPWS conservation objectives documents. The Conservation Objectives for other European Sites which lie within the precautionary ZOI, but which have been screened out by virtue of distance or no other possible link (Table 5), are not included in this document.

TABLE 6 CONSERVATION OBJECTIVES OF EUROPEAN SITES WHICH HAVE A DIRECT CONNECTION, OR ARE WITHIN CLOSE PROXIMITY, WITH THE PROJECT ROUTE.

European Site & code	Conservation Interests
Special Areas of Conservation (SAC)	
Slieve Bloom Mountains SAC (000412) https://www.npws.ie/protected-sites/sac/000412	To restore the favourable conservation condition of the species for which this SAC has been selected: - Northern Atlantic wet heaths with *Erica tetralix* [4010] - Blanket bogs (* if active bog) [7130] - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]
River Barrow and River Nore SAC (002162) https://www.npws.ie/protected-sites/sac/002162	To maintain or restore the favourable conservation condition of the species which this SAC has been selected: - Estuaries [1130] - Mudflats and sandflats not covered by seawater at low tide [1140] - Reefs [1170] - *Salicornia* and other annuals colonising mud and sand [1310] - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] - Mediterranean salt meadows (*Juncetalia maritimi*) [1410] - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] - European dry heaths [4030] - *Hydrophilous* tall herb fringe communities of plains and of the montane to alpine levels [6430] - Petrifying springs with tufa formation (*Cratoneurion*) [7220] - Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] - *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016] - *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] - *Austropotamobius pallipes* (White-clawed Crayfish) [1092] - *Petromyzon marinus* (Sea Lamprey) [1095] - *Lampetra planeri* (Brook Lamprey) [1096] - *Lampetra fluviatilis* (River Lamprey) [1099] - *Alosa fallax fallax* (Twaite Shad) [1103] - *Salmo salar* (Salmon) [1106] - *Lutra lutra* (Otter) [1355] - *Trichomanes speciosum* (Killarney Fern) [1421] - *Margaritifera durrovensis* (Nore Pearl Mussel) [1990]
Special Protection Areas (SPA)	
Slieve Bloom Mountains SPA (004160) https://www.npws.ie/protected-sites/spa/004160	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: - Hen Harrier (*Circus cyaneus*) [A082]
River Nore SPA (004233) https://www.npws.ie/protected-sites/spa/004233	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: - Kingfisher (*Alcedo atthis*) [A229]

2.9 Assessment of Significance of Potential Impacts

Installation work within European Sites will be limited to:

- 28 proposed new poles,
- 12 lengths of ducting,

which will be installed exclusively within *Slieve Bloom Mountains SAC, River Barrow and River Nore SAC* and *Slieve Bloom Mountains SPA.*

In summary, it was concluded that there is no potential for significant effects on European Sites. Due to the minor, temporary nature of the proposed new infrastructure installations, no significant loss or fragmentation of QI habitat will occur as a result of the proposed Project, there will be no significant effects on QI/SCI species regarding disturbance, displacement or changes to population density and there will be no significant effects to the water quality and resource of any European Site. The following paragraphs outline the rationale for these conclusions.

2.9.1 Habitat Loss and Alteration

Should any of the estimated additional poles or any excavations for underground cables fall within a European Site, it could conceivably constitute a loss/alteration of habitat, although extremely insignificant in size, at the designated site. Furthermore, tree trimming along the stretches of the route that pass within/adjacent to the European Sites also has the potential to cause minor habitat alteration/loss.

Installation work within European Sites will be limited to a total of 40 new items of infrastructure as outlined above.

Importantly, all the above listed infrastructure will be placed along existing roads, laneways/farm tracks/private gardens, footways or agricultural fields. The habitat at these roadside locations consists of made or maintained ground, grassy verges and hedging which are not qualifying interests for the European Site.

It is noted that the vast majority of infrastructure required for the project is already in place and, as a result, tree trimming has been historically occurring along these sections on a regular basis. Therefore, it is considered that the proposed upgrade of the broadband network will not cause a significant negative effect on the habitat associated with any European Site.

In conclusion, due to the minor and localised nature of the installation activities, and the absence of any loss/alteration of QI habitats designated for the European Sites due to the Proposed Activities, it is considered that the Proposed Project will not cause any significant impacts in relation to habitat loss/alteration at any European Site.

2.9.2 Habitat / Species Fragmentation

Habitat fragmentation has been defined as the ‘reduction and isolation of patches of natural environment’ (Hall et al., 1997 cited in Franklin et al., 2002) usually due to an external disturbance such that an alteration of the spatial composition of a habitat occurs that alters the habitat and ‘create[s] isolated or tenuously connected patches of the original habitat’ (Wiens, 1989 cited in Franklin et al., 2002). This results in spatial separation of habitat units which had previously been in a state of greater continuity.

Given the nature of the installation activities, and as there will be no loss of QI habitats within any European Sites, it is not considered that habitat fragmentation will arise from the Proposed Project.

2.9.3 Disturbance and/or Displacement of Species

As part of the project activities, there may be small scale installation activities taking place within/adjacent, or in close proximity to European Sites. The installation activities, as described in section 2.4.2 consist of the erection of new poles, installation of new underground chambers and placement of new underground cable ducts. In the case of Slieve bloom Mountains SPA, the installation of poles (N2090006, N2090007, N2090550, N2090551, N2090552, N2090553, N2090554, N2090555 and N2090556) may lead to brief disturbance of Hen Harrier (*Circus cyaneus*) however this will not lead to significant negative effects of the conservation objectives of this species.

2.9.3.1 Potential Impacts to QI and SCI Species

Installation work within European sites will be limited to a total of 40 new items of infrastructure outlined above, which will be installed exclusively within *Slieve Bloom Mountains SAC, River Barrow and River Nore SAC* and *Slieve Bloom Mountains SPA*. Figure 11 to Figure 20 above detail the location and name of the additional infrastructure that will be installed. This infrastructure will be installed along the existing road network.

Finally, a total of 40 poles and 41 lengths of ducting are proposed to be placed within 30m of watercourses which may ultimately flow into European Sites within the precautionary ZOI of the Project. There are numerous aquatic species associated with these sites which may be affected by the Project activities, namely, Otter (*Lutra lutra)*, Salmon (*Salmo salar*), Freshwater Pearl Mussel (*Margaritifera margaritifera*), White-clawed Crayfish (*Austropotamobius pallipes*) Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), Twaite Shad (*Alosa fallax fallax*) and the Nore Pearl Mussel (*Margaritifera durrovensis*).

These new items of infrastructure were assessed for potential significant effects on downstream European Sites and the species designated for them. As noted previously, a distance of 30m was chosen to account for differences in river width and mapping errors. It was concluded following desk studies that these new items of infrastructure would not result in significant effects on European Sites and the aquatic species therein for one or more of the following criteria:

1. The new item(s) of infrastructure being placed an acceptable distance from a watercourse (e.g., not on or immediately adjacent to a riverbank),
2. The new item(s) of infrastructure being placed on the opposite side of the road/laneway/track to the watercourse,
3. The presence of a vegetation buffer (e.g., hedgerow) between the new item(s) of infrastructure and the watercourse,
4. The distance between the new item(s) of infrastructure and downstream European Site, and consequent dilution factor.
5. The very minor nature and temporary duration of the Project activities

Particular species listed for the aforementioned European Sites which may be susceptible to noise disturbance, namely Otter. However, given the very minor nature and short-term duration of the project activities (the installation of a new pole and ducting will be within a very small, localised footprint and will not generate significant amounts of noise) it can be concluded that the Proposed Project will not have a significant effect on the aforementioned species associated with SPAs in close proximity to the Project activities.

FIGURE 11 EXISTING INFRASTRUCTURE AND NEW INFRASTRUCTURE WITHIN AND/OR ADJACENT TO SLIEVEBLOOM MOUNTAINS SAC/SPA.

FIGURE 12 PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SPA.

FIGURE 13 PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SPA.

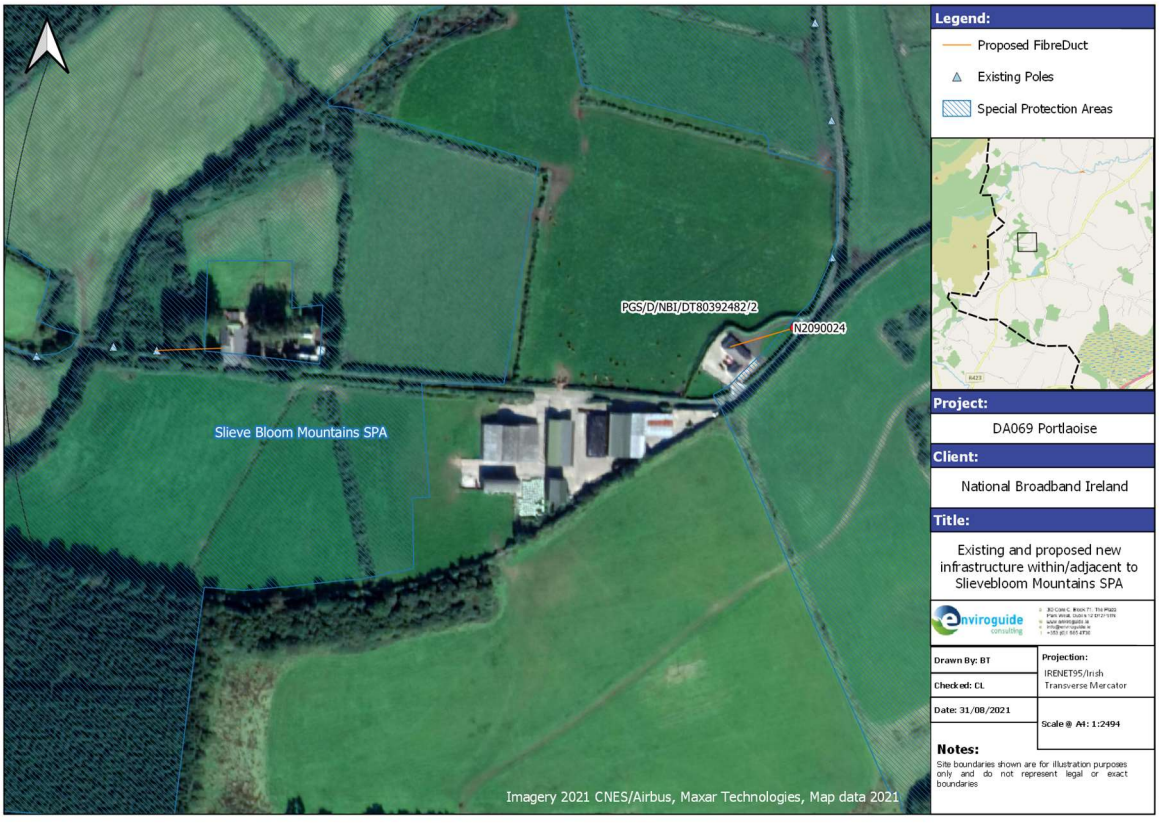

FIGURE 14 EXISTING AND PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT SLIEVEBLOOM MOUNTAINS SPA.

FIGURE 15 PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SPA.

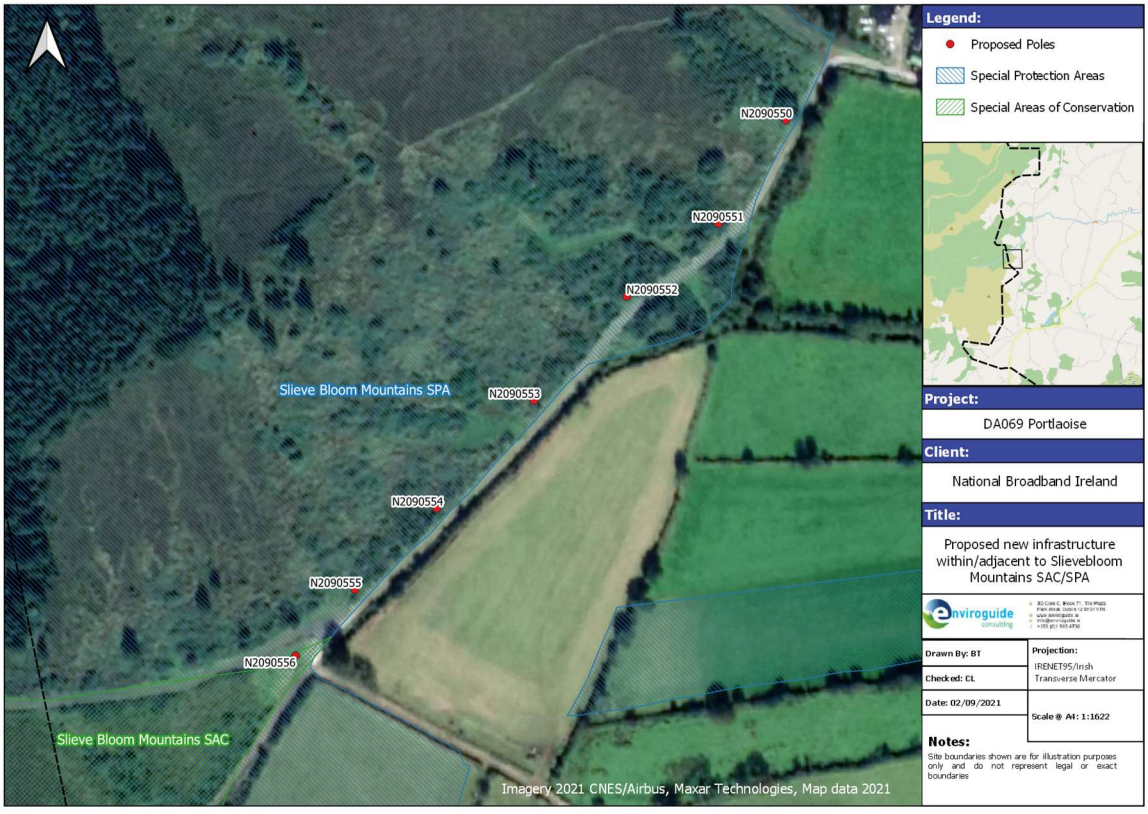

FIGURE 16 PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SAC/SPA.

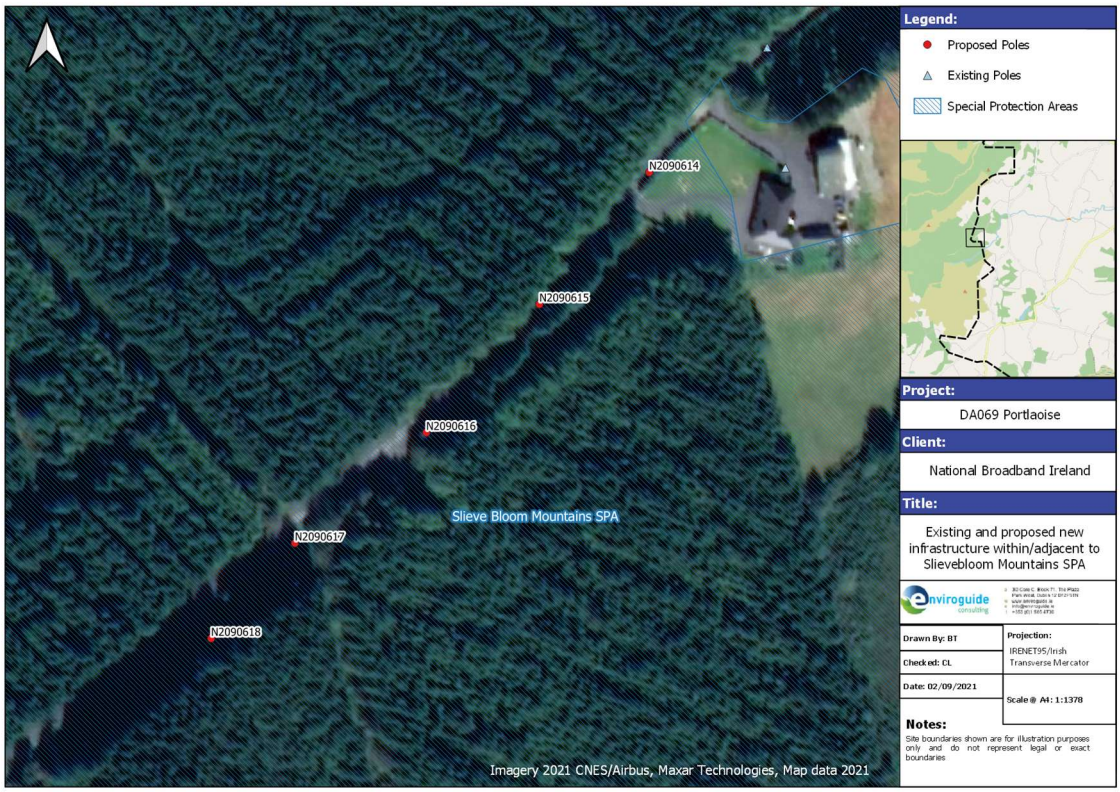

FIGURE 17 EXISTING AND PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SPA.

FIGURE 18 EXISTING AND PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO RIVER BARROW AND RIVER NORE SAC.

FIGURE 19 EXISTING AND PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SPA.

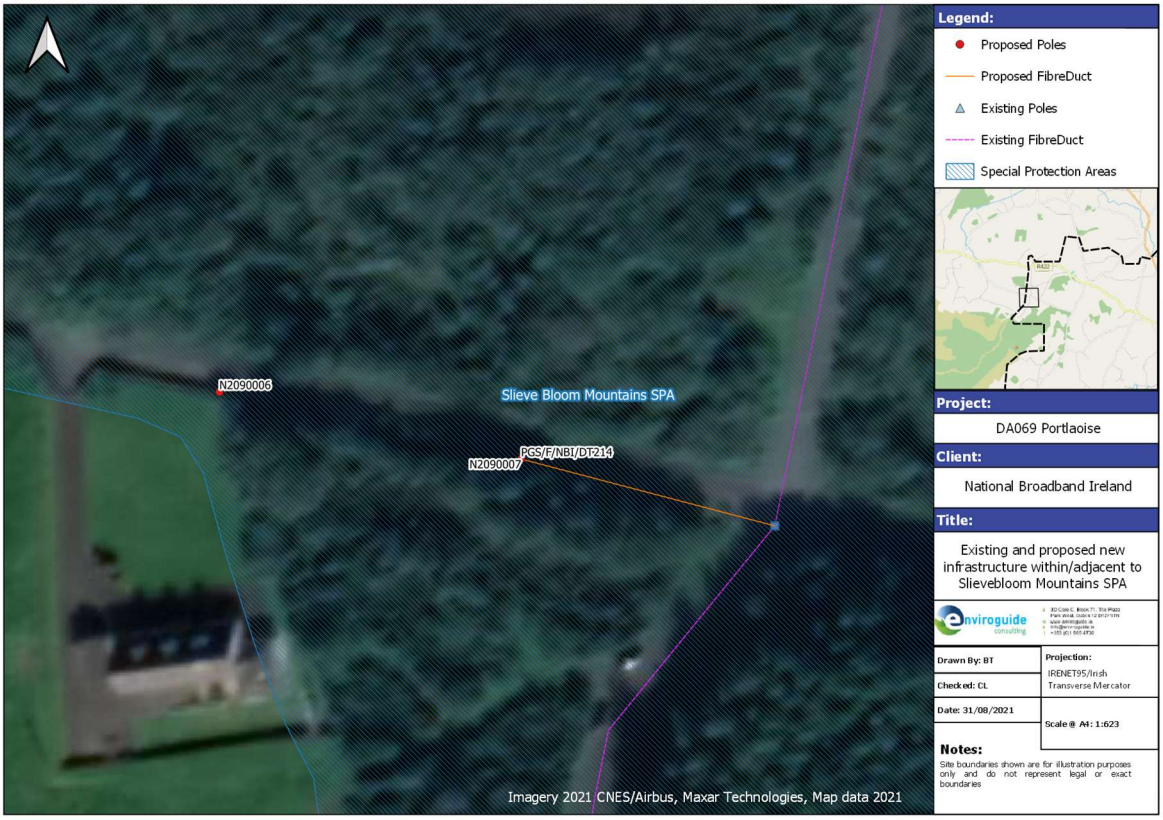

FIGURE 20 EXISTING AND PROPOSED NEW INFRASTRUCTURE WITHIN AND ADJACENT TO SLIEVEBLOOM MOUNTAINS SPA.

2.9.4 Changes in Population Density

Installation work within European sites will be limited to a total of 40 new items of infrastructure outlined above, which will be installed exclusively within *Slieve Bloom Mountains SAC, River Barrow And River Nore SAC* and *Slieve Bloom Mountains SPA*. Figure 11 to Figure 20 above detail the location and name of the additional infrastructure that will be installed. This infrastructure will be installed along the existing road network.

The Hen Harrier is the primary bird species associated with the Slieve Bloom Mountains SPA which may be affected by the Project activities. The proposed new items of infrastructure were assessed for the likelihood of significant effects on the Hen Harrier within the Slieve Bloom Mountains SPA. Expert ornithologist (Eric Dempsey), conducted vantage point surveys on 7th September 2021 on poles which were identified during desk studies to pose a potential collision risk to Hen Harrier. It was concluded that these new items of infrastructure would not result in significant effects on European sites and the bird species therein for the following reason:

- The presence of tall hedgerows and trees along roadways which proposed poles will be located. New poles will not be higher than these hedgerows and treelines and do not pose a collision risk.

Therefore, considering the above findings the Proposed Project will not cause any reduction in the baseline population of bird species associated with any European site.

2.9.5 Changes in Water Quality and Resource

The project route intersects with a large number of rivers and streams, which either flow though or discharge into a number of European Sites.

A potential impact on the water quality of these European Sites was identified through possible sediment run-off, caused by the project activities, into waterbodies in close proximity to the project activities. An additional potential impact on water quality was identified through accidental spillages of fuel or other substances.

All items of infrastructure within 30m or less of a waterbody were assessed using GIS imagery, street view or photos provided by NBI to determine potential hydrological linkages with European Sites. It was concluded, following desk studies that these items of infrastructure would not result in significant effects on European Sites and the aquatic species therein as each of the proposed infrastructure met one or more of the following criteria:

1. The new item(s) of infrastructure being placed an acceptable distance from a watercourse (e.g., not on or immediately adjacent to a riverbank),
2. The new item(s) of infrastructure being placed on the opposite side of the road/laneway/track to the watercourse,
3. The presence of a vegetation buffer (e.g., hedgerow) between the new item(s) of infrastructure and the watercourse,
4. The distance between the new item(s) of infrastructure and downstream European Site, and consequent dilution factor.
5. The very minor nature and temporary duration of the Project activities

The results of the assessment of each of the proposed features on the basis of criteria 1-4 as described above are presented in Appendix 1

In addition, the project activities do not include any water course crossing or instream works. The installation of each new pole or replacement of existing poles or installation of underground ducts or chambers takes place within a very small, localised footprint and will not generate significant amounts of sediment. The Proposed Project will have no impact on the flow rates or nutrient levels of any waterbody.

The poles being erected may carry the risk of contamination of soil and/or groundwater with creosote which is used as a preservative for telecommunications poles. Creosote is a dense non-aqueous liquid which is not soluble in water. Therefore, the risk associated with its use will be extremely localised by virtue of it not migrating through the watercourse or soil. The impact associated with its use can therefore be deemed negligible.

2.9.6 In-combination Effects

Cumulative impacts can be defined as "*impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project*". Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor. Such effects are not caused or controlled by the project developer.

Plans include all statutory and non-statutory land use, framework and sectoral plans and strategies to the extent that they have the potential to have significant effects on a European Site. This incorporates 'plans and programmes' covered by the SEA Directive, and other plans and strategies, including those that are designed or intended to benefit the environment or heritage, such as Heritage and Biodiversity plans, recreation/amenity plans or strategies, and River Basin Management Plan (*Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* Report (2009). Prepared by Department Environment, Heritage and Local Government).

The following plans were reviewed and considered for possible in-combination effects with the Proposed Project:

- The National Broadband Plan,
- The County Laois Development Plan 2017 – 2023
- The 2nd Cycle River Basin Management Plan 2018-2021,
- The Draft River Basin Management Plan 2022-2027,
- The Flood Risk Management Plan for the Barrow River Basin (2018)
- The Flood Risk Management Plan for the Nore River Basin (2018).

The National Broadband Plan (NBP) has been considered and while detailed designs are not currently available for neighbouring DAs, based on the same criteria used in this assessment, it is deemed that the NBP as a whole will not give rise to in-combination effects with the Portlaoise Project. There are no neighbouring DAs for which installation activities are scheduled in parallel with the Portlaoise DA build, therefore no in-combination effects from adjoining DA's are possible.

The Laois County Development Plan 2017 – 2023 outlines specific objectives and policies for the protection of European sites (NHB-1 to NHB-11).

The River Basin Management Plan is set out to protect and improve water quality, and as such will not result in negative in-combination effects with the current Project. The proposed measures for the Flood Risk Management Plan for the Barrow River Basin (2018) and the Nore River Basin (2018), including Portlaoise, include the assessment of a proposed flood relief scheme for Portlaoise and Mountrath and the construction of flood defences, embankments and walls for several smaller towns within the project route. It is not considered that these existing measures will act in combination with the Proposed Project. Thus, upon examination of the listed plans, it is concluded that there is no possibility for any in-combination effects between these plans and the Proposed Project.

Projects considered to have significant effects on a European Site and require consideration for Appropriate Assessment, include the following:

- All development that requires a planning permission process.
- All public development carried out by planning authorities.
- Exempted development either within a European Site or which could potentially have a significant effect on European Sites.
- All material contravention proposals.
- All other local authority authorised 'projects' – waste permits, discharge licenses; and
- recreation and amenity projects and road works.
- Forestry Operations
- Flooding and Drainage

Recent (within the last 3 years) pending and/or permitted planning permissions within c.500m of the proposed infrastructure located within a European Site were reviewed, using the National Planning Application Database[2] and the Laois Planning Application Database[3]. Given the minor and temporary nature of the installation activities, a relatively small buffer of 500m was considered sufficient to assess in-combination effects with existing proposed and/or permitted developments. Withdrawn, refused, and incomplete applications were eliminated from the search. In this instance, all pending or permitted developments were small in scale to the extent that no significant in-combination effects were considered likely to arise (Table).

2.9.7 Proposed Infrastructure within 30m of European Sites.

Proposed new items infrastructure within 30m of European Sites are identified in Figure 7 and Figure 8. A total of 27 items of infrastructure (12 poles and 15 lengths of Fibre Duct) are proposed to be installed within 30m of European Sites.

[2] https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de

[3] https://laois.ie/departments/planning/carry-out-a-planning-search/

Having assessed these items of infrastructure following the methodology outlined in section 2.5.6, it was concluded that none of the new items of infrastructure would result in significant effects to any European Sites. The items outlined above are proposed to be installed within agricultural land or along roadways, tracks and lanes, in both urban and rural areas, thus resulting in no significant habitat loss. Furthermore, the project activities will be very minor in nature and short-term in duration and therefore do not present a threat to any protected species.

TABLE 7 SUMMARY OF INTERSECTING INFRASTRUCTURE WITHIN EUROPEAN SITES.

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090006	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	None	Pole occurs along roadside verge. No risk of habitat loss or collision as mature roadside vegetation occurs at both sides of proposed pole.	No likelihood of significant effects
N2090007	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	None	Pole occurs along roadside verge. No risk of habitat loss or collision as mature roadside vegetation occurs at both sides of proposed pole.	No likelihood of significant effects
N2090024	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Pole occurs along roadside verges at the end of a line of existing infrastructure. No risk of habitat loss and no risk of collision as Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles.	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090550	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along roadside verge. No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects
N2090551	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along roadside verge. No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects
N2090552	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along roadside verge. No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090553	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along roadside verge. No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects
N2090554	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along roadside verge. No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects
N2090555	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along roadside verge. No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090556	Utility Pole	Verge	Slievebloom Mountains SPA/SAC	Visually assessed using Satellite Imagery/Street view and Vantage Point Surveys	Ref: 20633	Pole occurs along grassy roadside verge. There will be no impact on QI habitats of this SAC No risk of collision as existing infrastructure already in place in the vicinity. Hen Harrier will be acclimatised to the position of pole network. Proposed Pole is comparable in terms of height and size to existing poles. Planning application is small scale (extension to existing dwelling house)	No likelihood of significant effects
N2090579	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20350 Ref:20223	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale for retention and construction of existing small scale dwellings.	No likelihood of significant effects
N2090580	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20350 Ref:20223	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale for retention and construction of existing small scale dwellings.	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090581	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20350 Ref:20223	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale for retention and construction of existing small scale dwellings.	No likelihood of significant effects
N2090582	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20350 Ref:20223	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale for retention and construction of existing small scale dwellings.	No likelihood of significant effects
N2090583	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20350 Ref:20223	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale for retention and construction of existing small scale dwellings.	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090584	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20350 Ref:20223	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale for retention and construction of existing small scale dwellings.	No likelihood of significant effects
N2090592	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects
N2090593	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090594	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects
N2090595	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects
N2090596	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects
N2090597	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090598	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref:21601 Ref: 19434 Ref: 18572	Poles occurs along existing roadside verge with mature treelines on both sides of the road. No risk of habitat loss or collision Planning applications are small scale (permission/ retention of dwelling houses and agricultural entrances)	No likelihood of significant effects
N2090614	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge with mature treelines on both sides of the road. The poles are a continuation of a run of existing similar infrastructure. No risk of habitat loss or collision	No likelihood of significant effects
N2090615	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge with mature treelines on both sides of the road. The poles are a continuation of a run of existing similar infrastructure. No risk of habitat loss or collision	No likelihood of significant effects
N2090616	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge with mature treelines on both sides of the road. The poles are a continuation of a run of existing similar infrastructure. No risk of habitat loss or collision	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
N2090617	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge with mature treelines on both sides of the road. The poles are a continuation of a run of existing similar infrastructure. No risk of habitat loss or collision	No likelihood of significant effects
N2090618	Utility Pole	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge with mature treelines on both sides of the road. The poles are a continuation of a run of existing similar infrastructure. No risk of habitat loss or collision	No likelihood of significant effects
PGS/F/NBI/DT214	Fibre Duct	Carriageway	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects
PGS/F/NBI/DT27113944	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
PGS/D/NBI/DT36642289	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects
PGS/D/NBI/DT40885268	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 20677 Ref: 19658	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat Planning applications are small scale (construction of domestic dwelling)	No likelihood of significant effects
PGS/D/NBI/DT80392482	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	Ref: 21601	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat Planning applications are small scale (construction of domestic dwelling)	No likelihood of significant effects
PGS/D/NBI/DT38530996	Fibre Duct	Carriageway	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
PGS/D/NBI/DT40366705	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects
PGS/D/NBI/DT80392404	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects
PGS/F/NBI/DT40802265	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects
PGS/D/NBI/DT36642289/2	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects

Barcode/Duct Label	Infrastructure Type	Location	Site Name	Assessment Methodology	Recent permitted or pending planning permissions within c. 500m of feature	Assessment Findings	Conclusion
PGS/F/NBI/DT27113944/2	Fibre Duct	Verge	Slievebloom Mountains SPA	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing private roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects
PGS/F/NBI/DTN2015182	Fibre Duct	Carriageway	River Barrow and River Nore SAC	Visually assessed using Satellite Imagery/Street view	None	Poles occurs along existing roadside verge and is not suitable hen harrier habitat	No likelihood of significant effects

TABLE 8 SUMMARY OF IMPACT ASSESSMENT ON EUROPEAN SITES FROM THE PROPOSED PROJECT.

Site	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required
Slieve Bloom Mountains SAC (000412)	No	No	No	None	None	**No**
River Barrow and River Nore SAC (002162)	No	No	No	None	None	**No**
Ballyprior Grassland SAC (002256)	No	No	No	None	None	**No**
Mountmellick SAC (002141)	No	No	No	None	None	**No**
Lisbigney Bog SAC (000869)	No	No	No	None	None	**No**
Knockacoller Bog SAC (002333)	No	No	No	None	None	**No**
Clonaslee Eskers And Derry Bog SAC (000859)	No	No	No	None	None	**No**
Coolrain Bog SAC (002332)	No	No	No	None	None	**No**
Charleville Wood SAC (000571)	No	No	No	None	None	**No**
Slieve Bloom Mountains SPA (004160)	No	No	No	None	None	**No**
River Nore SPA (004233)	No	No	No	None	None	**No**

3 CONCLUDING STATEMENT

The Proposed Project consisting of the installation of Broadband Network at DA069 Portlaoise has been assessed taking into account:

- the nature, size and location of the proposed activities and possible impacts arising from the installation activities.
- the qualifying interests and conservation objectives of the European Sites.
- the potential for in-combination effects arising from other plans and projects.

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that, on the basis of objective information; the possibility **can be excluded** that the Proposed Project will have a likely significant effect on any of the European Sites listed below:

Slieve Bloom Mountains SAC (000412)

River Barrow and River Nore SAC (002162)

Ballyprior Grassland SAC (002256)

Mountmellick SAC (002141)

Lisbigney Bog SAC (000869)

Knockacoller Bog SAC (002333)

Clonaslee Eskers And Derry Bog SAC (000859)

Coolrain Bog SAC (002332)

Charleville Wood SAC (000571)

Slieve Bloom Mountains SPA (004160)

River Nore SPA (004233)

Thus, it can be concluded on the basis of the results of Stage 1 of the Appropriate Assessment process that there is no requirement to proceed to Stage 2 of said process; and the preparation of a Natura Impact Statement (NIS) is not required.

4 REFERENCES

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NPWS (2016b) Conservation Objectives: Coolrain Bog SAC 002332. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2016c) Conservation Objectives: Knockacoller Bog SAC 002333. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2019) Conservation Objectives: Clonaslee Eskers and Derry Bog SAC 000859. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

NPWS (2021a) Conservation objectives for Charleville Wood SAC [000571]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS (2021b) Conservation objectives for Lisbigney Bog SAC [000869]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS (2021c) Conservation Objectives: Mountmellick SAC 002141. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (2021d) Conservation objectives for Ballyprior Grassland SAC [002256]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS (2021e) Conservation objectives for Slieve Bloom Mountains SPA [004160]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS (2021f) Conservation objectives for River Nore SPA [004233]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

APPENDIX 1

The following table presents the results of the assessment of all items of infrastructure within 30m or less of a waterbody against the following criteria:

1. The new item(s) of infrastructure being placed an acceptable distance from a watercourse (e.g., not on or immediately adjacent to a riverbank),
2. The new item(s) of infrastructure being placed on the opposite side of the road/laneway/track to the watercourse,
3. The presence of a vegetation buffer (e.g., hedgerow) between the new item(s) of infrastructure and the watercourse,
4. The distance between the new item(s) of infrastructure and downstream European site, and consequent dilution factor.

Table 1: Summary of the likely impacts of proposed infrastructure within 30m of watercourses leading to European Sites.

Infrastructure Barcode	Location	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Conclusion
N2090004	Verge	Yes	Yes	No	No	No significant effect
N2090020	Verge	Yes	No	Yes	Yes	No significant effect
N2090115	Verge	No	No	No	Yes	No significant effect
N2090133	Verge	Yes	NA	Yes	Yes	No significant effect
N2090196	Verge	Yes	No	Yes	Yes	No significant effect
N2090197	Verge	Yes	No	Yes	Yes	No significant effect
N2090198	Verge	Yes	No	Yes	Yes	No significant effect
N2090240	Verge	Yes	No	Yes	Yes	No significant effect
N2090241	Verge	Yes	No	Yes	Yes	No significant effect
N2090242	Verge	Yes	No	Yes	Yes	No significant effect
N2090243	Verge	Yes	No	Yes	Yes	No significant effect
N2090244	Verge	Yes	No	Yes	Yes	No significant effect
N2090245	Verge	Yes	No	Yes	Yes	No significant effect
N2090246	Verge	Yes	No	Yes	Yes	No significant effect
N2090247	Verge	Yes	No	Yes	Yes	No significant effect
N2090313	Verge	Yes	NA	Yes	Yes	No significant effect
N2090314	Verge	Yes	NA	Yes	Yes	No significant effect
N2090315	Verge	Yes	NA	Yes	Yes	No significant effect
N2090316	Verge	Yes	NA	Yes	Yes	No significant effect
N2090442	Verge	Yes	Yes	Yes	Yes	No significant effect
N2090443	Verge	Yes	Yes	Yes	Yes	No significant effect
N2090444	Verge	Yes	No	Yes	Yes	No significant effect
N2090512	Verge	Yes	NA	Yes	Yes	No significant effect
N2090651	Verge	Yes	Yes	Yes	No	No significant effect
N2090652	Verge	Yes	Yes	Yes	No	No significant effect
N2090653	Verge	Yes	Yes	Yes	No	No significant effect
N2090678	Verge	No	No	No	Yes	No significant effect
N2090684	Verge	Yes	NA	Yes	Yes	No significant effect
N2090708	Verge	Yes	NA	Yes	Yes	No significant effect
N2090724	Verge	Yes	No	Yes	Yes	No significant effect

N2090725	Verge	Yes	No	Yes	Yes	No significant effect
N2090726	Verge	Yes	No	Yes	Yes	No significant effect
N2090727	Verge	Yes	No	Yes	Yes	No significant effect
N2090728	Verge	Yes	No	Yes	Yes	No significant effect
N2090729	Verge	Yes	NA	Yes	Yes	No significant effect
N2090733	Verge	Yes	Yes	Yes	Yes	No significant effect
N2090734	Verge	Yes	Yes	Yes	Yes	No significant effect
N2090735	Verge	Yes	Yes	Yes	Yes	No significant effect
N2090736	Verge	Yes	Yes	Yes	Yes	No significant effect
N2090737	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/D/NBI/DT048	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/D/NBI/DTN2015121	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/F/NBI/DTN2015182	Carriageway	Yes	No	Yes	No	No significant effect
PGS/D/NBI/DT02525146	Carriageway	No	No	Yes	Yes	No significant effect
PGS/F/NBI/DTN2015852	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/D/NBI/DT02525146/2	Carriageway	No	No	Yes	Yes	No significant effect
PGS/C/NBI/DT36664135	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/C/NBI/DT40806854	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT35359695	Verge	No	NA	Yes	No	No significant effect
PGS/F/NBI/DT80637805	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT40803193	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT37639873	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/D/NBI/DT37813995	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/D/NBI/DT60145106	Verge	No	No	No	Yes	No significant effect
PGS/F/NBI/DT35359715	Verge	Yes	NA	Yes	No	No significant effect
PGS/F/NBI/DT40000643	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/F/NBI/DT37639868	Verge	No	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT40342497	Verge	No	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT40342454	Verge	No	NA	Yes	Yes	No significant effect
PGS/D/NBI/DT27113971	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT80402319	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/F/NBI/DT36736525	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/D/NBI/DT80402056	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/D/NBI/DT80381736	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/D/NBI/DT40929090	Verge	No	NA	No	Yes	No significant effect
PGS/B/NBI/DT37801526	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/A/NBI/DT37823903	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/A/NBI/DT36962345	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/A/NBI/DT40802632	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/A/NBI/DT37823841	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/C/NBI/DT80937261	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/C/NBI/DT80006559	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/E/NBI/DT27315877	Verge	Yes	No	Yes	Yes	No significant effect
PGS/A/NBI/DT38542647	Verge	Yes	NA	Yes	Yes	No significant effect

PGS/A/NBI/DT40164366	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/C/NBI/DT80050952	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/A/NBI/DT80044891	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/E/NBI/DT80054267	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/D/NBI/DT80385747	Verge	Yes	NA	Yes	Yes	No significant effect
PGS/C/NBI/DT80006559/2	Verge	Yes	Yes	Yes	Yes	No significant effect
PGS/D/NBI/DT80381736/2	Verge	Yes	Yes	Yes	Yes	No significant effect