AtkinsRéalis

R617 Road Widening - Ecology Technical Note

Clockstrike Ltd.

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Phase 2 Ringwood LRD

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1. R617 Road Widening – Ecology Technical Note

This report has been prepared by AtkinsRéalis in accordance with the Planning and Development Regulations 2001 (as amended), as further outlined in the Planning and Development Act 2000 (as amended).

This note summarises the current understanding of the ecological receptors in and around the area of a proposed road widening project along the R617 regional road, tied to the ongoing Large-scale Residential Development (LRD) in Ringwood, Blarney, Co. Cork (hereafter referred to as the 'Site' and/or the 'proposed works'). The proposed works involve the widening of the R617 regional road, which will facilitate the development of the following:

> *A new access roadway into the site from the R617 with associated pedestrian and cyclist infrastructure, which will form the 1st phase of the proposed Stoneview Access Link Road.*
>
> *A new signalised junction on the R617 road which will provide a single lane approach to the west and a two lane approach to the east, comprising one lane for through traffic on the R617 and a right turn lane for traffic turning into the site, and associated footpath improvements and cycle lane provision.*
>
> *A new signalised junction at the R617 and Killard Road junction which will provide a two lane approach from the west, one lane for through traffic heading eastbound on the R617 and a right turn lane onto the Killard Road, with associated footpath improvements and pedestrian and cyclist infrastructure.*
>
> *A new junction arrangement at Castle Close Lawn with associated footpath improvements and pedestrian and cyclist infrastructure;*

These works shall address the technical information requested through the RFI issued by Cork City Council on the 18th February, 2026, specifically addressing parts i to viii of RFI Item (d) External Connections.

The proposed works will improve road safety at the junction with the future Stoneview Access Link Road and provide increased visibility in both directions of travel for all road users. To facilitate this widening, it is proposed to remove an area of coniferous plantation woodland which runs immediately adjacent to the road at its southern end.

This note sets out what ecological survey work has been undertaken to-date, the current understanding of the ecological sensitivity of the Site and its' environs, and what ecology surveys are yet to be carried out.

The location of the coniferous plantation in relation to the red-line boundary of the Ringwood LRD (Phase 2) is outlined below in Figure 1.

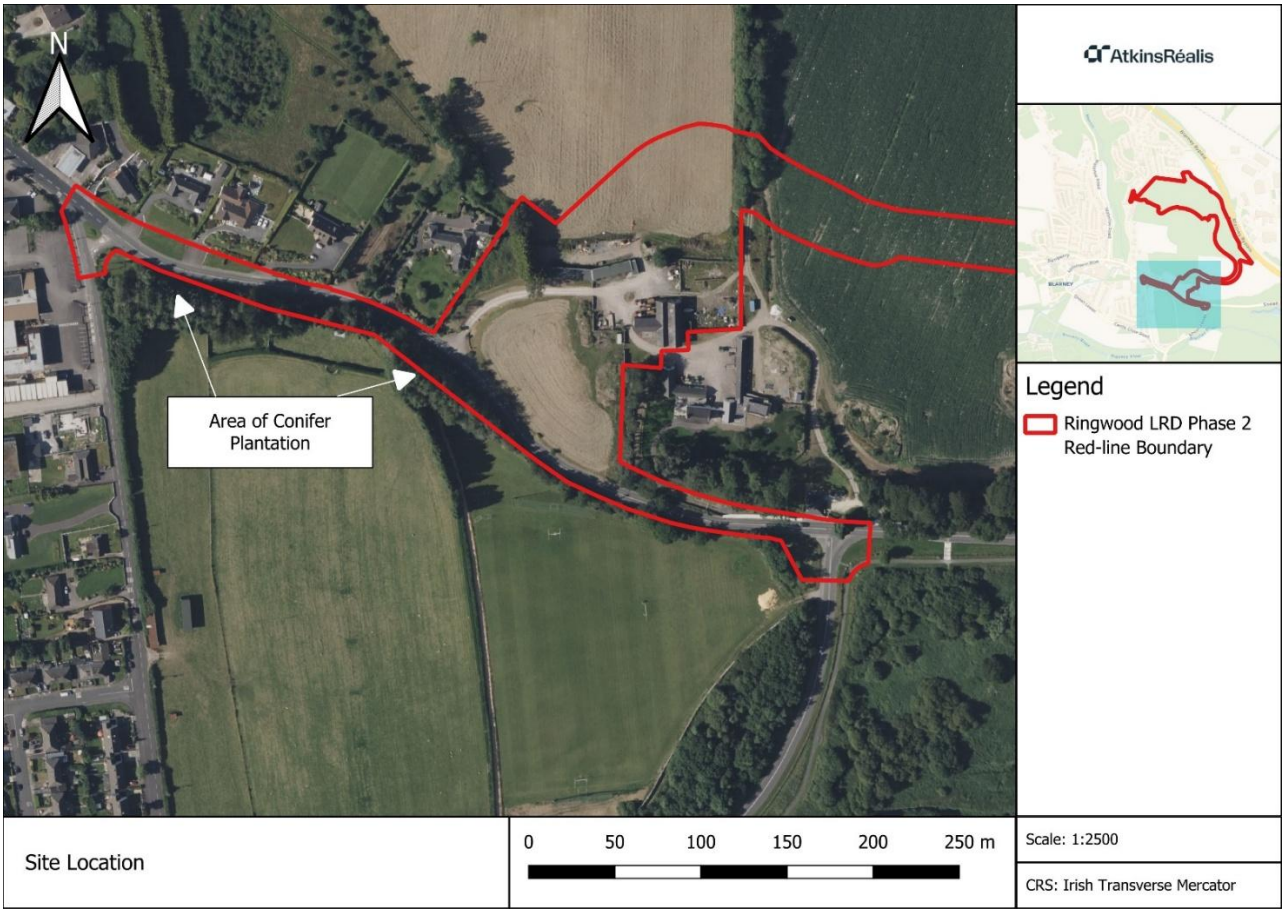


Figure 1 - Location of the conifer plantation in relation to the Ringwood LRD Phase 2 boundary.

1.1 Site History

The site of the proposed works has not been surveyed previously, with the exception of a tree survey conducted by Cunnane Stratton Reynolds (CSR) Land Planning and Design in July 2026. The results of the tree survey report have been considered in relation to the ecological receptors as defined within this technical note.

The surrounding lands, particularly those of the Ringwood LRD Phase 2 application to the north of the site (whose red-line boundary incorporates the site of the proposed works), have been surveyed extensively over the past few years. An AA Screening Report and EIAR Biodiversity Chapter were prepared for Phase 1 (planning reference no. 24/43031, permission granted) of the Ringwood LRD in 2024 (AtkinsRéalis, 2024a; AtkinsRéalis, 2024b). A series of technical notes for the proposed Phase 2 of the Ringwood LRD (planning reference no. 25/44406) were also prepared in 2024 and 2025 (AtkinsRéalis, 2024c, AtkinsRéalis, 2025).

More recently, a Preliminary Ecological Appraisal was prepared for a proposed Wastewater Pumping Station (WwPS) and pipeline, located directly to the east of the site of the proposed works, also in relation to the Ringwood LRD (AtkinsRéalis, 2026).

In addition, an Ecological and Tourism Plan of the Clogheenmilcon Fen, located to the east of the site within the Blarney Bog pNHA, was prepared in 2021 and provides further information about the ecological sensitivities of the surrounding environment (Alan Lauder Consulting, 2021).

The findings of these previous reports have informed the preparation of this technical note.

1.2 Protected Sites

1.2.1 European Sites

The Habitats Directive (92/43/EEC) is the primary legislation of the European Union which provides legal protection for habitats and species of ‘Community interest’. Article 2 requires the maintenance or restoration of such habitats and species at a favourable conservation status, while Articles 3 to 9, inclusive, provide for the establishment and conservation of a community-wide network of special areas of conservation (SACs), known as Natura 2000, which also includes special protection areas (SPAs) designated under the Birds Directive (2009/147/EC). Both SACs and SPAs are commonly referred to as “European sites” or “Natura 2000 sites”.

There are no European sites located within or intersecting the site of the proposed works (Figure 2). However, the Site is located within the EPA-named MANIN_SC_010 subcatchment, with the Blarney River located ca. 176m (at its closest extent) from the site of the proposed works. The Blarney River lies upstream (via a series of watercourses) of two no. Natura 2000 sites, namely the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030).

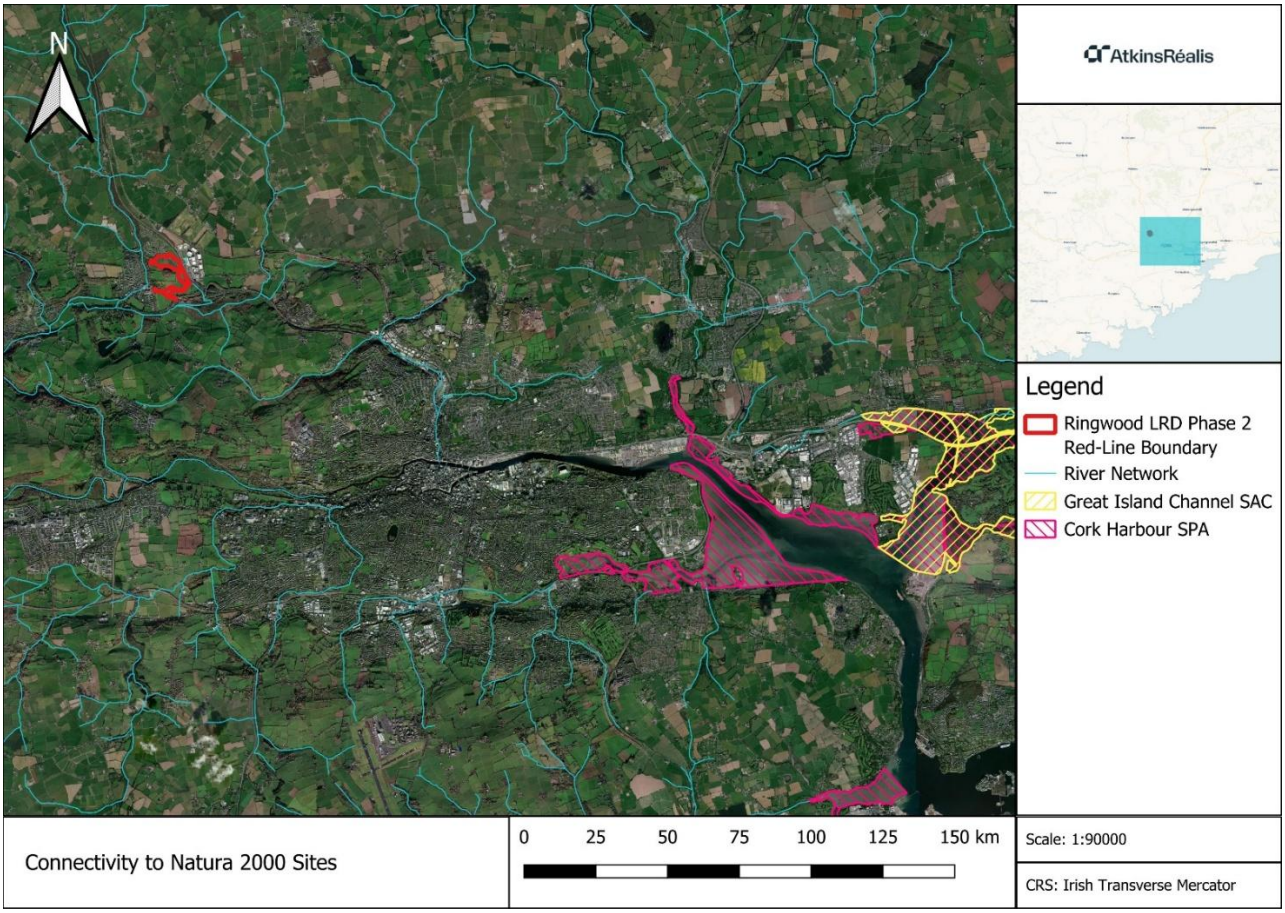


Figure 2 - Hydrological connectivity between the site of the proposed works and relevant Natura 2000 sites.

1.2.1.1 Great Channel Island SAC (001058)

Great Channel Island SAC is designated for the following Qualifying Interest habitats: -

- Mudflats and sandflats not covered by seawater at low tide [1140],
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330].

Great Island Channel SAC is located 15.5km downstream of the proposed works via the Blarney River and subsequently the Manin River/Shournagh River/River Lee/Lough Mahon. Surface waters from the proposed works will likely discharge to the Blarney River, and thus the potential for construction and/or operational impacts will be considered in full once a detailed design has been developed.

The potential for impacts to European (Natura 2000) sites, such as Great Island Channel SAC will be discussed in full in the Appropriate Assessment Screening Report, and if appropriate the Natura Impact Statement (NIS), to accompany the proposed planning application.

1.2.1.2 Cork Harbour SPA (004030)

Cork Harbour SPA is designated for the following Qualifying Interest species: -

- Little grebe (*Tachybaptus ruficollis*),
- Great crested grebe (*Podiceps cristatus*),
- Cormorant (*Phalacrocorax carbo*),
- Grey heron (*Ardea cinerea*),
- Shelduck (*Tadorna tadorna*),
- Wigeon (*Mareca* (*Anas) penelope*),
- Teal (*Anas crecca*),
- Pintail (*Anas acuta*),
- Shoveler (*Anas clypeata*),
- Red-breasted merganser (*Mergus serrator*),
- Oystercatcher (*Haematopus ostralegus*),
- Golden plover (*Pluvialis apricaria*),
- Grey plover (*Pluvialis squatarola*),
- Lapwing (*Vanellus vanellus*),
- Dunlin (*Calidris alpina*),
- Black-tailed godwit (*Limosa limosa*),
- Bar-tailed godwit (*Limosa lapponica*),
- Curlew (*Numenius arquata*),
- Redshank (*Tringa totanus*),
- Black-headed gull (*Chroicocephalus ridibundus*),
- Common gull (*Larus canus*),
- Lesser black-backed gull (*Larus fuscus*),
- Common tern (*Sterna Hirundo*),
- Wetland and waterbirds.

Cork Harbour SPA is located 10.5km downstream of the proposed works via the Blarney River and subsequently the Manin River/Shournagh River/River Lee/Lough Mahon. Surface waters from the proposed development will likely discharge to the Blarney River, and thus the potential for construction and/or operational impacts will be considered in full once a detailed design has been developed.

The potential for impacts to European (Natura 2000) sites, such as Cork Harbour SPA will be discussed in full in the Appropriate Assessment Screening Report, and if appropriate the Natura Impact Statement (NIS), to accompany the proposed planning application.

1.2.2 Sites of National Importance

Natural Heritage Areas (NHAs) are designated under the Wildlife Act, 1976 (as amended) due to their importance for the habitats present or which support species of plants and animals whose habitat requires protection. In addition, there are 630 no. proposed Natural Heritage Areas (pNHAs) nationally. These sites were published on a non-statutory basis in 1995 and, although they have not yet been formally designated, their ecological value is recognised by planning and licensing authorities.

The site of the proposed works does not lie within and does not directly intersect any NHA or pNHA.

There are no NHAs and six pNHAs that are in proximity to, or downstream of the site for which potential impacts could be reasonably perceived (see Figure 3). The six pNHAs that are in proximity to, or downstream of the site are discussed in Section 1.2.2.1. The potential for impacts to pNHAs will be discussed in full within the Biodiversity chapter of the EIAR, to accompany the proposed planning application.

The relevant pNHAs are as follows: -

- Blarney Bog pNHA (001857)
- Ardamadane Wood (001799)
- Blarney Castle Woods (001039)
- Blarney Lake (001798)
- Shournagh Valley (000103)
- Lee Valley (000094)

1.2.2.1 Proposed Natural Heritage Areas (pNHAs)

1.2.2.1.1 Blarney Bog pNHA (001857)

The Blarney Bog pNHA is located approximately 65m to the east of the site of the proposed works (at the closest extent). The Site Synopsis describes the site as follows (NPWS, 2009a):

> *Blarney Bog is a small area of Reed Canary-grass (*Phalaris arundinacea*) fen, situated in the flat valley floor of the River Blarney. It is located 0.5km west of Blarney Town and 4.5km north-west of Cork City. It is bounded on the north side by a new road development and to the south of the river by the fences of the agricultural land abutting the wetland site. This wet area was formed through ponding of the Blarney River by a natural blockage at Gothic Bridge to the west of the site (probably a fault in the underlying bedrock). Sediments brought downstream from the Blarney River and its tributaries have accumulated and the soil is a fine silt with some peat. There was greater peat accumulation on the south side of the river (Inchancomain townland) but this has been cut away in the past, the only evidence of this activity remaining at the field edges. The vegetation on the south side is also of a more acidic nature. The area is damp throughout the year and is flooded in the winter particularly at the western side of the site.*

*The main habitats of the area are lowland wet grassland, both grazed and ungrazed and freshwater marsh/fen. The dominant species of the wet grassland are Reed Canary-grass, Soft Rush (*Juncus effusus*) and grasses such as Creeping Bent (*Agrostis stolonifera*), Tufted Hair-grass (*Deschampsia cespitosa*) and Yorkshire-fog (*Holcus lanatus*). Land to the west is generally wetter with herbs such as Greater Tussock sedge (*Carex paniculata*), Greater Pond-sedge (*Carex riparia*) and Bladder-sedge (*C. vesicaria*). Commonly occurring herbs are Meadowsweet (*Filipendula ulmaria*) and Common Valerian (*Valeriana officinalis*), locally distributed in the sward are Yellow Loosestrife (*Lysimachia vulgaris*) and Purple-loosestrife (*Lythrum salicaria*). The land nearer the Blarney road is drier with a mixture of grasses and sedges with the ungrazed areas being more tussocky with herbs such as Common Sorrel (*Rumex acetosa*) and Tormentil (*Potentilla erecta*). There is considerable disturbance to the area as a new road development is occurring in the north of the site and soil/subsoil has been bulldozed onto some of this grassland.*

*South of the river the land is wetter with scattered willow (*Salix *spp.) trees, Purple Moor-grass (*Molinia caerulea*), Tufted Hair-grass and Soft Rush dominating the vegetation. The wetter areas support the growth of Marsh Cinquefoil (*Potentilla palustris*), Bogbean (*Menyanthes trifoliata*), Devil's-bit Scabious (*Succisa pratensis*) and Common Yellow-sedge (*Carex demissa*). Towards Horgan's Bridge in the east of the site, is an area dominated by tussocks of Greater Tussock-sedge (*Carex paniculata*). The water course flora is not particularly rich but contains Common Duckweed (*Lemna minor*), Floating Sweet-grass (*Glyceria fluitans*) and Fool's Watercress (*Apium nodiflorum*). Less frequently found are Branched and Unbranched Bur-reed (*Sparganium erectum *and* S. emersum *respectively) and pondweeds (*Potamogeton *spp.).*

The area as a whole is used by a variety of bird species. Birds noted to be breeding in the site include Sedge and Grasshopper Warblers, Reed Bunting, Stonechat, Meadow Pipet, Snipe and Mallard. In the water Snipe and Mallard are seen feeding in the area and also Teal. Hen Harriers, a species listed in Annex I of the E.U. Birds Directive and also a Red Data Book species whose status is threatened in Ireland, are regularly seen in this area, hunting over the wetter ground and sometimes nesting in the reedbeds.

The area is threatened by the road developments to the north of the site which has disturbed and destroyed some of the grassland, and the closer proximity of the traffic may disturb the birds which breed in the area. It may also alter the hydrology of the site.

1.2.2.1.2 Ardamadame Wood pNHA (001799)

The Ardamadame Wood pNHA is located approximately 208m north-west of the site of the proposed works (at the closest extent). The Site Synopsis describes the site as follows (NPWS, 2009b): -

*Ardamadane Wood is located north of Blarney village, 6km north-west of Cork City. It is situated along the banks of the River Martin. The site is bounded in parts by the river, the old Blarney-Mallow road and on the eastern side by an embankment and the new Cork road. This site comprises mainly dry deciduous woodland of Sessile Oak (Quercus petraea) and Downy Birch (*Betula pubescens*) with some scrub woodland and improved agricultural grassland. Threats to this particular site include eutrophication of the river from fertiliser run off and litter/domestic rubbish dumping in the woodland adjacent to roads.*

The following description is compiled from the An Foras Forbatha (1972) report for three sites around Blarney - Ardamadare Woods (001799) north of the village and two sites to the south - Blarney Castle Woods (001039) and Blarney Lake (001798). Together they encompass some 53ha.

*The woodland at Blarney has a rich soil due to the influence of the nearby limestone and is able to support a wide variety of plants and animals. Blarney Castle Woods comprises old estate woodland with Sessile Oak, Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Beech (*Fagus sylvatica*). Ardamadane Wood consists of a patch of scrub with Hazel (*Corylus avellana*) and Ash and a linear Sessile Oak and Downy Birch*

wood stretching northwards along the River Martin towards Waterloo (the river is also included in this site). The Blarney Lake site includes the artificial lake near the Castle.

*The base-rich woodland of Blarney Castle Wood is probably the most interesting site botanically, with a species-rich ground flora. Species include Pignut (*Conopodium majus*), Sanicle (*Sanicula europaea*), Garlic Mustard (*Alliaria petiolata*), Goldilocks Buttercup (*Ranunculus auricomus*) and the violets - Common Dog-violet (*Viola riviniana*) and Early Dog-violet (*V. reichenbachiana*). The two parasitic species Ivy Broomrape (*Orobanche hederae*) and Toothwort (*Lathraea squamaria*) are found occasionally, usually in places with deeper soils, while the rocky areas support the growth of wood Melic (Melica uniflora) and Bearded Couch (Elymus caninus).*

*The flora of Ardamadane Wood is not as species-rich and includes species of more acid conditions such as Great Wood-rush (*Luzula sylvatica*). The three sites are of some importance to birds with Woodcock using the area in winter and a variety of species breeding in the area.*

*Near the river and lake the aquatic communities include beds of sedges (e.g. Greater Pond-sedge (*Carex riparia*), Bladder-sedge (*C. vesicaria*), Smooth-stalked Sedge (*C. laevigata*) and Great Fen-sedge (*Cladium mariscus*) and stands of tall herbs such as Meadowsweet (*Filipendula ulmaria*), Great Willowherb (*Epilobium hirsutum*) and Hemp-agrimony (*Eupatorium cannabinum*). At the river's edge are found Nodding Bur-marigold (Bidens cernua), Blue Water-speedwell (Veronica anagallis-aquatica) and mints (Mentha spp.).*

Threats to the survival of these sites include coniferous afforestation of the woodland communities and the encroachment of agricultural activity e.g. grazing pressures, clear felling and agricultural improvement. Where possible, management agreements should be made with the landowners. As a whole, the three sites compose a caved area including interesting aquatic and terrestrial habitats. The base-rich woodland (Blarney Castle Woods) is an example of a type not widely found in Cork County, where acid upland woods are more common. The sites are all easily accessible and close to Cork City and they could therefore form a useful environmental education resource within the area.

1.2.2.1.3 Blarney Castle Woods pNHA (001039)

The Blarney Castle Woods pNHA is located approximately 589m south-west of the site of the proposed works (at the closest extent). The Site Synopsis describes the site as follows (NPWS, 2009c): -

This site is situated 1km south-west of Blarney in the grounds of Blarney Castle. The wood is bounded to the north by the Blarney River and to the south by the parklands surrounding the castle. The wood is situated on limestone which is exposed in several places. Within this rich area of limestone two other Natural Heritage Areas occur, Blarney Lake (001798) and Ardamadare Wood (001799).

In 1986 An Foras Forbartha provided the following description of the woodland –

*The influence of the nearby limestone gives the woodland at Blarney a rich soil able to support a wide variety of plants and animals. The site is an old estate woodland with oak (*Quercus *spp.), Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*) and Beech (*Fagus sylvatica*). The ground flora in this base-rich woodland contains many species including Pignut (*Conopodium majus*), Sanicle (*Sanicula europaea*), Garlic Mustard (*Alliaria petiolata*), Goldilocks Buttercup (Ranunculus auricomus) and the violets - Common Dog-violet (*Viola riviniana*) and Early Dog-Violet (*V. reichenbachiana*). In rocky areas of shallow soils Wood Melic (*Melica uniflora*) and Bearded Couch (*Elymus caninus*) grow. Two parasitic plants occur in areas of deeper soils within the wood, namely Toothwort (Lathraea squamaria) and Ivy Broomrape (*Orobanche hederae*).*

Ivy Broomrape is listed in the Irish Red Data Book and is associated with areas where Ivy (Hedera helix), and its accompanying woodland have persisted for long periods of time.

The woodland is of interest for its birdlife. Woodcock occurs within the woodlands during winter.

The main land uses within this site are fishing, shooting, grazing by sheep and cattle and amenity use.

This site is very scenic and seen by many tourists who visit Blarney Castle. Its proximity to Cork city and nearby roads gives it considerable educational value. The base-rich woodland is an example of a habitat not widely found in Cork where acid uplands predominate.

1.2.2.1.4 Blarney Lake pNHA (001798)

The Blarney Lake pNHA is located approximately 589m south-west of the site of the proposed works (at the closest extent). The Site Synopsis describes the site as follows (NPWS, 2009d): -

This site is situated 1km southwest of Blarney, close to Blarney Castle. This site is one of three sites occurring in close proximity to one another and includes Blarney Castle Woods (001039) and Ardamadane Wood (001799). The area is underlain by limestone which produces a rich soil capable of supporting a wide variety of plants and animals.

*Blarney Lake is an artificial lake surrounded by a narrow band of woodland predominantly oak (*Quercus *spp.), Beech (*Fagus sylvatica*) and fir (*Abies *spp.). The outflow of the lake is also included within the site.*

In 1986 An Foras Forbatha provided the following description of the wetlands near Blarney Castle.

*Aquatic communities near the river and lake include beds of sedges e.g. Greater Pondsedge (*Carex riparia*), Bladder-sedge (*C. vesicaria*), Smooth-stalked Sedge (*C. laevigata*) and Great Fen-sedge (*Cladium mariscus*), tall herb stands of Meadowsweet (*Filipendula ulminaria*), Great Willowherb (*Epilobium hirsutum*) and Hemp agrimony (*Eupatorium cannabinum*) and river edge groups of Nodding Bur-marigold (*Bidens cernua*), Blue Water-speedwell (*Veronica anagallis-aquatica*) and mints (*Mentha *spp.). Rigid Hornwort (*Ceratophyllum demersum*) grows in Blarney Lake.*

A recent survey of the lake noted a good deal of waterfowl on the lake including Tufted Duck, Teal and Mallard.

The main land uses within the site are boating, fishing and shooting.

This site contains an interesting wetland community which is one of three closely situated rich and varied sites.

1.2.2.1.5 Shournagh Valley pNHA (000103)

The Shournagh Valley pNHA is located approximately 2.6km west and south-west of the site of the proposed works (at the closest extent). The Site Synopsis describes the site as follows (NPWS, 2009e): -

This site includes two lower sections of the Shournagh River c. 8km west of Cork City – this river flows south-east to join the River Lee which then flows through the City. The Shournagh River has its source in the foothills of the Boggeragh Mountains and is a fairly turbulent river, whose energy, in former times, was used to power the Mills which are now derelict along its banks.

*The section furthest north-west from Cork City, comprises areas of wet woodland, scrub and an old estate mixed woodland - Cloghphilip Wood. Wet woodland areas are composed mainly of Hazel (*Corylus avellana*) and oak (*Quercus *spp.) with some Crab Apple (*Malus sylvestris*). The ground-flora species include Bilberry (*Vaccinium myrtillus*),* Rhytidiadelphus triquetrus*, Wood-sorrel (*Oxalis acetosella*) and Soft Shield-fern (*Polystichum setiferum*). In some places, Beech (*Fagus sylvatica*) has been planted. The areas of scrub are dominated by Grey Willow (*Salix cinerea*) and are developing into willow woodland with some Downy Birch (Betula pubescens), Hazel and Holly (Ilex aquifolium). They are grazed by cattle, and the ground flora is composed of Common Water-starwort (*Callitriche stagnalis*), Blinks (*Montia fontana*), Bulbous Rush (*Juncus bulbosus*), Creeping Bent (Agrostis stolonifera) and the sedges - Glaucous Sedge (*Carex flacca*) and Common Yellow-sedge (*C. demissa*). The sloping fields adjacent to this part of the river have been abandoned for agriculture and are being colonized by the aforementioned scrub and by Bracken (Pteridium aquilinum), whereas the more level fields next to the site boundary are often endangered, with improved agricultural grassland grazed by sheep or cattle.*

*Within this section of the site is an old planted wood (Cloghphilips) co-dominated by Beech and oak with Hazel in the clearings. The ground flora species include Wood Anemone (*Anemone nemorosa*), Soft Shield-fern, Lesser Celandine (*Ranunulus ficara*) and Bluebell (*Hyacinthoides non-scripta*); wetter areas support the growth of Meadowsweet (*Filipendula ulmaria*) and Wild Angelica (*Angelica sylvestris*). The introduced species Winter Heliotrope (*Petasites fragrans*), Greater Periwinkle (*Vinca major*) and Columbine (*Aquilegia vulgaris*) are present in parts of the wood. The spread of Sycamore (Acer pseudoplatanus) is also noted in this wood. On the opposite side of the river (north bank) to Clogphillips Wood a young woodland of Hazel, willow (*Salix *spp.) and Hawthorn (*Crataegus monogyna*) is developing with a ground flora of Bramble (*Rubus fruticosus *agg.), Hemlock Water-dropwort (Oenanthe crocata) and Meadowsweet.*

*Further downstream in Codatanavally townland a golf course has been built, and the grass is mown right up to the river bank and some areas of scrub woodland have also been bulldozed. The remaining woodland here is of an open structure with Beech and Ash (Fraxinus excelsior) being the dominant species, and a ground flora of Bracken, Bluebell and Greater Stitchwort (Stellaria holostea). Both Holly and Spindle (*Euonymus europaeus*) are spreading through this woodland. Wetter areas are dominated by Alder (*Alnus glutinosa*), willow, Ash and some tall oak. Oak is also regenerating in Bracken dominated areas and like in Cloghphillips Wood, Sycamore is also spreading.*

*The Coolymurraghne estate woodland consists of a broadleaved woodland mostly of full grown, widely spread oak trees with a diverse understorey growth of Holly with Scaly Male-fern (*Dryopteris affinis*), but the northern end of the wood consists of Beech with pine (*Pinus *spp.) and larch (*Larix *spp.). Much of the ground is steeply sloping (c. 50 degrees) and the ground flora is sparse, possibly limited by dryness and the shading from the abundance of Holly. At the southern end of this wood is an area of old oak and Sycamore coppice, also with Holly and much Ivy (*Hedera helix*) and Navelwort (*Umbilicus rupestris*). An extensive badger sett is found here. This area grades northwards into young oak woodland with Hazel and Holly, and a ground flora of Great Wood-rush (*Luzula sylvatica*),* Mnium hornum*, Bilberry and carpets of Bluebell.*

Dippers and Grey Wagtail are noted to feed along and around the river channel, with Willow Warbler and Redpoll Finches on the higher reaches of the river.

Wood Improvement Scheme grants are being sought (1993) for both Cloghphilip and Coolymurraghne woods. Both of these woods contain large fully grown oak trees, within the surrounding area. They form the most important part of the Valley's woodland. Replanting with conifers or non-native broadleaves is a major threat and the spread of non-native species such as Sycamore, may also be detrimental.

The woods along the Shournagh Valley included in this site (103) are recommended for conservation and are noted to be of regional importance and deserving of NHA status.

1.2.2.1.6 Lee Valley pNHA (000094)

The Lee Valley pNHA is located approximately 2.6km west of the site of the proposed works (at the closest extent). The Site Synopsis describes the site as follows (NPWS, 2009f): -

> *This site occupies five separate sections of the valley of the River Lee, immediately to the west of Cork City. One section passes close to Ballincollig, and the Ballincollig Regional Park makes up a portion of the site. A diverse range of semi-natural habitats occurs here, with those described below being the most prevalent:*
>
> *Wet broadleaved woodland has developed in a number of places on the river side. The dominant trees are either Alder (*Alnus glutinosa*), Grey Willow (*Salix cinerea*) or Small-leaved Elm (*Ulmus minor*). Downy Birch (*Betula pubescens*) is often present also. Typical species occurring in the ground flora include Cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), Canary-grass (*Phalaris *spp.*), Meadowsweet (*Filipendula ulmaria*), Cuckooflower (*Cardamine pratensis*), Common Marsh-bedstraw (*Galium palustre*), Wild Angelica (*Angelica sylvestris*) and Lesser Celandine (*Ranunculus ficaria*). Other parts have abundant Hemlock Water-dropwort (*Oenanthe crocata*), Marsh-marigold (*Caltha palustris*), Yellow Iris (Iris pseudacorus), Fool's Water-cress (*Apium nodiflorum*) and Purple-loosestrife (*Lythrum salicaria*).*
>
> *Some areas behind the riverbank are frequently flooded and support wet grassland communities. Species of the wet woodland ground flora described above occur in many of these stands, as do Sweet Vernal-grass (*Anthoxanthum odoratum*), Ribwort Plantain (Plantago lanceolata), Meadow Buttercup (*Ranunculus *acris*), Silverweed (*Potentilla anserina*), Red Clover (*Trifolium pratense*) and Common Sorrel (*Rumex acetosa*).*
>
> *Dry broadleaved woodland exists in other sections of the valley, with the most important trees being Ash (*Fraxinus excelsior*), oak (*Quercus *spp.*) and Holly (*Ilex aquifolium*). Hazel (*Corylus avellana*) and Hawthorn (*Crataegus monogyna*) are important components of some stands, while the exotic species Beech (*Fagus sylvatica*) and Sycamore (*Acer pseudoplatanus*) occur in others. The ground flora of many of these woods is relatively species-rich and includes Wood Anemone (*Anemone nemorosa*), Herb-Robert (*Geranium robertianum*), Honeysuckle (*Lonicera periclymenum*), Ground-ivy (*Glechoma hederacea*), Bramble (*Rubus fruiticosus *agg.*), Bluebell (*Hyacinthoides non-scripta*) and False Brome (*Brachypodium sylvaticum*).*
>
> *In places, Hard Fern (*Blechnum spicant*), Great Wood-rush (*Luzula sylvatica*), Malefern (*Dryopteris filix-mas*) and Wood Speedwell (*Veronica montana*) are common, and one stand has a very well-developed shrub layer of Spindle (*Euonymus europaeus*).*
>
> *Unimproved dry grassland occurs on an area of soil that has probable glacial origins. Field Wood-rush (*Luzula campestris*), Sweet Vernal-grass, Crested Dog's-tail (*Cynosurus cristatus*), Spring-sedge (*Carex caryophyllea*), Wild Carrot (*Daucus carota*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Glaucous Sedge (*Carex flacca*), White Clover (*Trifolium repens*) and Cowslip (*Primula veris*) are all present here.*
>
> *Freshwater marsh fringes the river itself in places. Here, Bulrush (*Typha latifolia*), Branched Bur-reed (*Sparganium erectum*), Bottle Sedge (*Carex rostrata*), Canarygrass, Meadowsweet, Water Horsetail (*Equisetum fluviatile*), Marsh-marigold and Water Mint (*Mentha aquatica*) are all species frequently encountered.*
>
> *A number of wetland bird species breed here, including Mallard, Heron, Sedge and Grasshopper Warblers and Reed Bunting and two rather locally distributed butterflies, the Small Blue and the Wood White also occur.*
>
> *Land-use in the site consists of a little cattle-grazing and hay-making in the grasslands. Sections of the valley have been improved for agriculture in the past, so that the site now consists of five sub-sites. This should not*

be allowed to infringe further into the site. The spread of Sycamore poses a threat to the naturalness of parts of the woodlands, as do river engineering works to the riverbank communities. Recreation is important in the Valley, especially in the Ballincollig Regional Park.

The diverse range of intact semi-natural habitats in the Lee Valley makes this a site of regional conservation importance.

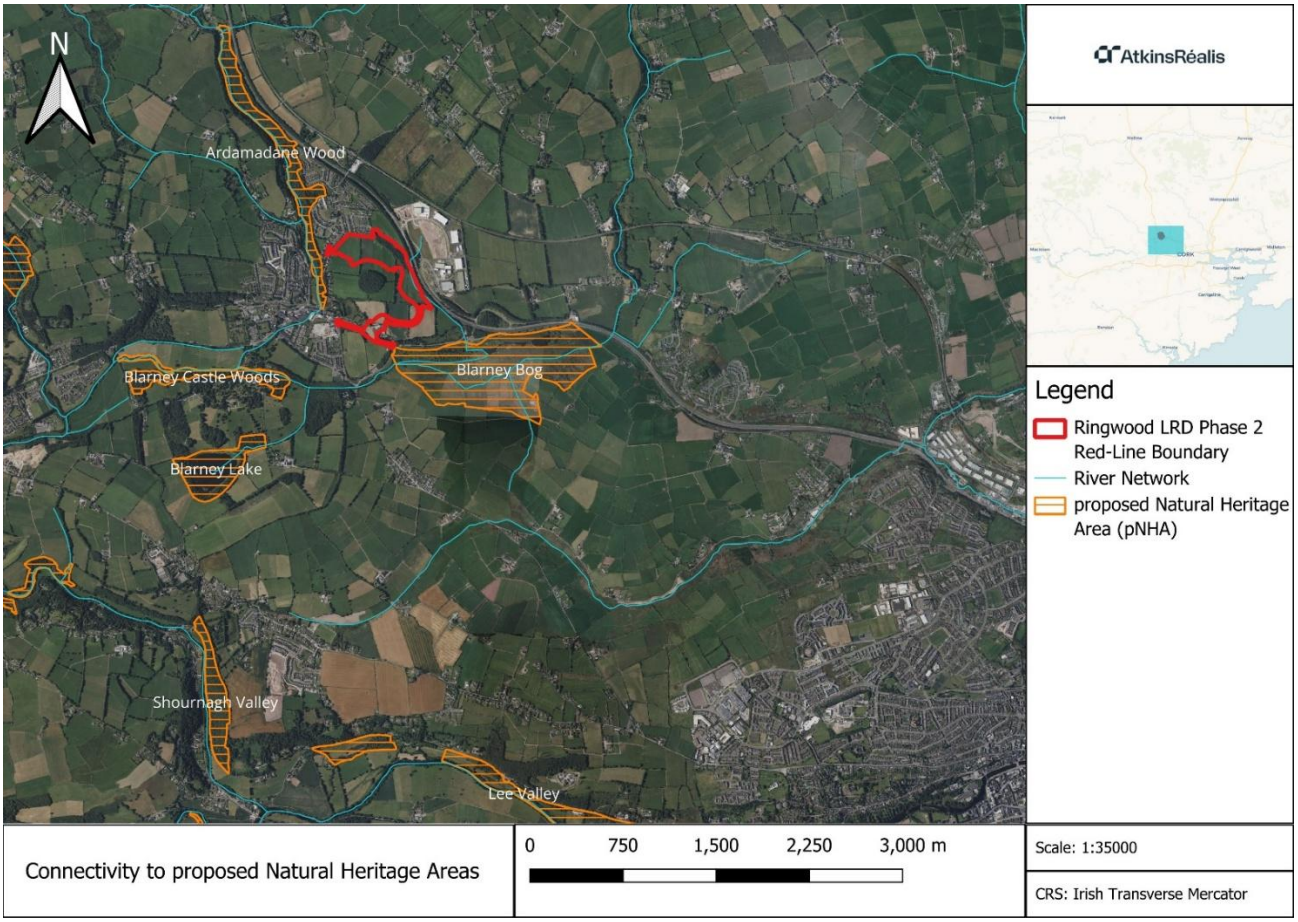


Figure 3 - PNHAs within the vicinity of the site of the proposed works.

1.2.3 Other Sites

1.2.3.1 Nature Reserves

There is no nature reserve located in proximity to the Site. The nearest, Capel Island and Knockadoon Head, is over 50km to the east.

1.2.3.2 Other Non-Statutory Designated Sites of Ecological Value

There are two Wildfowl Sanctuaries[1] in proximity of the Site (downstream): Douglas Estuary (WFS-67) and The Lough (WFS-12).

[1] https://www.npws.ie/protected-sites/wildfowl-sanctuaries

A review of Wetland Survey Ireland[2] data showed no wetlands with any connectivity to the site. There are wetlands in the vicinity of Lough Mahon, however given that these are upstream of Lough Mahon (i.e. on the mainland) there is no hydrological connectivity to the site of the proposed works.

1.3 Hydrology

The site of the proposed works is located within the Lee, Cork Harbour and Youghal Bay catchment (Catchment ID: 19), and within the Manin_SC_010 subcatchment. The woodland area is located approximately 176m from the nearest watercourse the Blarney River (EPA Code: 19B02), which flows in a west-southwesterly direction, later flowing into the Manin River, Shournagh River, River Lee, Lough Mahon and ultimately, Cork Harbour.

The site sits above the Ballinhassig East groundwater body upon a karstified aquifier classified as 'Locally Important'. The groundwater vulnerability to pollution of the area encompassed by the site of the proposed works is predominantly classified as 'Moderate'. As such, any soil removal works associated with the proposed vegetation clearance should consider potential groundwater impacts.

Table 1-1 presents the details of the hydrological and hydrogeological features relevant to the woodland area and the proposed pipeline route.

Table 1-1 - Hydrological features relevant to the primary study area.

Name	EU Code	Latest WFD Status	WFD Risk Status	Relevance to Study Area
River Waterbodies				
Blarney	IE_SW_19M010600	Moderate	At Risk	Located c. 176m east of the site of the proposed pumping station. Intersects the proposed pipeline route.
Manin	IE_SW_19S010300	Good	At Risk	Downstream of Blarney, southwest of the site of the proposed works.
Shournagh	IE_SW_19S010500	Moderate	At Risk	Downstream of Manin, southwest of the site of the proposed works
Lee [Cork]	IE_SW_19L030800	Moderate	Not at Risk	Downstream of Shournagh, south of the site of the proposed works.
Transitional Waterbodies				
Lough Mahon	IE_SW_060_0750	Moderate	At Risk	Depositing point of Lee [Cork].
Coastal Waterbodies				

[2] https://www.wetlandsurveys.ie/

Name	EU Code	Latest WFD Status	WFD Risk Status	Relevance to Study Area
Cork Harbour	IE_SW_060_0000	Good	At Risk	Downstream of Lough Mahon.
Outer Cork Harbour	IE_SW_050_0000	Good	At Risk	Downstream of Cork Harbour.
Subcatchments				
Manin_SC_010	19_5	N/A	N/A	Underlying subcatchment.
Catchments				
Lee, Cork Harbour and Youghal Bay	19	N/A	N/A	Underlying catchment.
Groundwater Bodies				
Ballinhassig East	IE_SW_G_004	Good	Not at Risk	Majority underlying groundwater body.

1.4 Historical Ecology Studies

As stated above, the site of the proposed works has not previously been surveyed with the exception of the tree survey conducted in July 2026. However, lands within the greater landholding of the Ringwood LRD to the north have been surveyed at multiple periods over the last few years. Furthermore, the site of a proposed wastewater pumping station and associated pipeline directly to the east of the site of the proposed works was surveyed in 2026.

1.4.1 Ringwood Lands

The first habitat survey of the main lands encompassing the majority of the overall Ringwood LRD site was conducted on the 26th of August and 5th of September 2021 (Phase 1). The most recent survey occurred on the 16th April 2025, targeting the Phase 2 area. Targeted surveys included mammal and wintering bird surveys. Mammal surveys were conducted in March 2023 and wintering bird surveys in November and December 2023 with a follow-up survey period between January and February 2024.

The site is dominated by arable crops (BC1), with other recorded habitats including improved agricultural grassland (GA1), scrub (WS1), hedgerow (WL1), treelines (WL2), mixed broadleaf woodland (WD1), wet willow-alder-ash woodland (WN6), dry meadows and grassy verges (GS2), wet grassland (GS4), lowland/depositing streams (FW2), drainage ditches (FW4), recolonising bare ground (ED3) and stone walls and other stonework (BL1).

A number of animal burrows were noted on the site; many of these were clearly rabbit (*Oryctolagus cuniculus*). Rabbit was found to be widespread across the site with many by burrows, droppings and sightings of live animals. Evidence of fox (*Vulpes vulpes*) was also recorded on site, along with domestic cat (*Felix catus*). A trail camera was placed at burrows located along the southern boundary of the wider Ringwood landholding to look for any signs of current occupation by badger (or other species). The camera was left in place from 16th March 2022 to 25th March 2022, with further surveys undertaken in July and August 2025. The trail camera survey consistently found evidence of two badgers (*Meles meles*), so this burrow was classified as an active badger sett. A Third-Schedule invasive species, American Mink was recorded on the trail camera footage during the 2025 survey period.

Snipe were flushed from agricultural grassland (GA1) between the entrance of the site and the eponymous 'Ring Wood' (ITM - 561608; 57626). Snipe is listed on the *Birds of Conservation Concern in Ireland* (Gilbert *et al*., 2021). However, there was no evidence that snipe was nesting on site, rather they were most likely feeding in wet areas of grassland. It is possible, however, that snipe may be nesting in Blarney Bog to the south of the main Ringwood agricultural and woodland area.

Roosting opportunities for bats at the site were limited to 5 trees in the field boundaries of the wider land-holding that support potential roosting features such as cracks in limbs; none of these are located on the site of the proposed development. Common and soprano pipistrelle (*Pipistrellus pipistrellus* and *P. pygmaeus*) and Leisler's bat (*Nyctalus leisleri*) were recorded regularly foraging at the proposed development site. Brown long-eared bat (*Plecotus auratus*) and *Myotis* species were recorded in low numbers at the west of the site. Natterer's bat (*Myotis nattereri*), Daubenton's bat (*Myotis daubentoni*), Whiskered bat (*Myotis mystacinus*), *Myotis* species and brown long-eared bat were also recorded within Ring Wood which abuts the southern boundary of the Phase 1 site.

No rare, protected or third-schedule invasive plant species were recorded on the site.

1.4.2 Ringwood WwPS and Pipeline Route

The site of a proposed wastewater pumping station and pipeline route was first surveyed on the 21st April 2026. It should be noted that the location of this pumping station (and the associated pipeline route) has been relocated to elsewhere within the Ringwood lands. However, given the proximity of the surveyed area to the site of the proposed works, it remains relevant from an ecological perspective.

The site of the previous proposed location is composed of three habitat types; largely mixed broadleaved woodland (WD1), and to a lesser extent spoil and bare ground (ED2) and recolonising bare ground (ED3). The route of the proposed pipeline is largely surrounded by amenity grassland (GA2), built land and artificial surfaces (BL3), wet grassland (GS4), with bog woodland (BN7) and wet willow woodland (WN7) within Blarney Bog pNHA.

The largest diversity of floral species present within the study area was found within the mixed broadleaved woodland habitat. As previously described, tree species present include grey willow and grey alder (not native). The lower canopy level, mostly developed at the southern end of the study area, also contains some gorse bushes. The field layer is generally poor, being dominated by bramble (*Rubus fruticosus*), cleavers (*Galium aparine*) and soft-shield fern (*Polystichum setiferum*), with occasional presence of reed canary grass (*Phalaris arundinacea*) and rosebay willowherb (*Chamaenerion angustifolium*).

Several bird species were visually or audially identified within the woodland area, including blue tit, dunnock, long-tailed tit, goldcrest, goldfinch, and rook. Bird species identified in the vicinity of the proposed pipeline included great crested grebe, cormorant, and mute swan present within the Blarney Bog pNHA.

No mammals were recorded along the previously proposed pipeline route. However, the route intersects or adjoins several habitat types including grassland and hedgerows that support the breeding and foraging requirements of many mammal species.

The site has not yet been surveyed for bats, although there is potential for roosting and foraging within many sections of the site.

1.5 Desk Study

A desktop study was carried out to compile information pertaining to the woodland area for the proposed wastewater pumping station and the proposed pipeline route with regards to any designated sites for nature conservation, priority habitats, and previously recorded species within the general area. The boundaries and locations of Natura 2000 sites in proximity to the proposed development were analysed. Information regarding qualifying interests of Natura 2000 sites was found on the NPWS website in the Site Synopsis and Conservation Objectives documents for each relevant site.

Reporting under Article 17 of the Habitats Directive (NPWS, 2019a-c; ETC/DB, 2026a) and Article 12 of the Birds Directive (NPWS, 2019b; ETC/BD, 2026b) provided further information (including spatial data) on habitats and species of Community interest.

Spatial data regarding waterbodies was obtained from the Environmental Protection Agency (EPA) and its online map viewer EPA Maps. Information relating to records of species in the area was obtained from the National Biodiversity Data Centre (NBDC, 2026) online map viewer Biodiversity Maps. Data from the NBDC included records from the last 10 years (2016-2026) at a spatial resolution of 2km x 2km (grid squares W67C, W67D, W67H, W67I) encompassing and surrounding the site of the proposed works. The site is contained within the W67C grid square.

Reports and data from previous works in the vicinity of the study area and proposed route of the pipeline were also consulted, where relevant.

1.5.1 Vascular Plants

No species listed on the Flora Protection Order (2022) or those designated as threatened were recorded within the relevant grid squares within the previous 10 years.

1.5.2 Bryophytes

There are no records of bryophytes recorded within the relevant grid squares within the last 10 years.

1.5.3 Mammals

Native mammal species, including terrestrial mammals and bats, with records dated within the previous 10 years and within the relevant grid squares are included in Table 1-2 below. This list includes species which have either been recorded in the vicinity of the proposed works (W67C) or have been recorded within 2km (W67D, W67H or W67I) and where the study area has potential to support the breeding or foraging activities of that species.

Table 1-2 - Mammal species recorded within the relevant NBDC grid squares (NBDC, 2026).

Common Name	Scientific Name	Grid Square	Protection Status	Potential Suitable Habitat within Study Area
Terrestrial Mammals				
Hedgehog	*Erinaceus europaeus*	W67D	Wildlife Act	Breeding and foraging
Pygmy Shrew	*Sorex minutus*	W67I	Wildlife Act	Breeding and Foraging
Red Fox	*Vulpes vulpes*	W67I	Not protected in Ireland	Breeding and Foraging
Red Squirrel	*Sciurus vulgaris*	W67C	Wildlife Act	Breeding and Foraging
Bats				
Common Pipistrelle	*Pipistrellus pipistrellus*	W67C	Habitats Directive, Annex IV, Wildlife Act	Breeding and Foraging
Leisler's Bat	*Nyctalus leisleri*	W67C	Habitats Directive, Annex IV, Wildlife Act	Breeding and Foraging
Soprano Pipistrelle	*Pipistrellus pygmaeus*	W67C	Habitats Directive, Annex IV, Wildlife Act	Breeding and Foraging

1.5.4 Birds

Bird species records from the relevant grid squares are in Table 1-3. 85 species of bird have been recorded in the last 10 years. 7 species are red-listed (as per BOCCI; Gilbert *et al.* 2021), 17 are amber-listed and the remnant 61 are green-listed. Alternative sources such as Irish Wetland Bird Survey (I-WeBS) and the Countryside Bird Survey (CBS) have also been consulted. This list includes species which have either been recorded in the vicinity of the proposed works (W67C) or have been recorded within 2km (W67D, W67H or W67I) and where the study area has potential to support the breeding or foraging activities of that species.

Table 1-3 - Bird species recorded within the relevant grid squares (NBDC, 2026).

Common Name	Scientific Name	Grid Square	BOCCI Status	Potential Suitable Habitat within Study Area
Barn Owl	*Tyto alba*	W67H	Red	Breeding and foraging
Curlew	*Numenius arquata*	W67C, W67H	Red	No
Goldeneye	*Pluvialis apricaria*	W67C	Red	No
Grey Wagtail	*Moticilla cinerea*	W67C, W67D, W67H	Red	No
Kestrel	*Falco tinnunculus*	W67C, W67D, W67H	Red	Foraging
Meadow Pipit	*Anthus pratensis*	W67C, W67H	Red	No
Redwing	*Turdus iliacus*	W67C, W67H	Red	Foraging
Shoveler	*Spatula clypeata*	W67C, W67H	Red	No
Snipe	*Gallinago gallinago*	W67C, W67H	Red	No
Stock Dove	*Columba oenas*	W67C, W67H	Red	Breeding and foraging
Swift	*Apus apus*	W67C, W67D, W67H	Red	No
Common Gull	*Larus canus*	W67C, W67H	Amber	No
Common Sandpiper	*Actitis hypoleucos*	W67C	Amber	No
Coot	*Fulica atra*	W67C, W67H	Amber	No
Cormorant	*Phalacrocorax*	W67C, W67H	Amber	No
Goldcrest	*Regulus regulus*	W67C, W67D, W67H, W67I	Amber	Breeding and foraging
Great Crested Grebe	*Podiceps cristatus*	W67C	Amber	No
Greenfinch	*Chloris chloris*	W67C	Amber	Breeding and foraging
Herring Gull	*Larus argentatus*	W67C, W67H	Amber	No
House Martin	*Delichon urbicum*	W67C, W67D, W67H	Amber	No
House Sparrow	*Passer domesticus*	W67C, W67D, W67H	Amber	Foraging
Kingfisher	*Alcedo atthis*	W67C, W67D	Amber	No

Common Name	Scientific Name	Grid Square	BOCCI Status	Potential Suitable Habitat within Study Area
Lesser Black-backed Gull	*Larus fuscus*	W67C, W67H	Amber	No
Linnet	*Linaria cannabina*	W67C, W67H, W67I	Amber	Breeding and foraging
Mallard	*Anas platyrhynchos*	W67C, W67D, W67H	Amber	No
Mute Swan	*Cygnus olor*	W67C, W67H	Amber	No
Sand Martin	*Riparia riparia*	W67C, W67H	Amber	No
Shag	*Gulosus aristotelis*	W67C	Amber	No
Shelduck	*Tadorna tadorna*	W67C	Amber	No
Skylark	*Alauda arvensis*	W67C	Amber	No
Spotted Flycatcher	*Muscicapa striata*	W67C, W67H	Amber	No
Starling	*Sturnus vulgaris*	W67C, W67D, W67H, W67I	Amber	Breeding and foraging
Swallow	*Hirundo rustica*	W67C, W67D, W67H, W67I	Amber	No
Teal	*Anas crecca*	W67C, W67H	Amber	No
Tufted Duck	*Aythya fuligula*	W67C, W67H	Amber	None
Wigeon	*Mareca Penelope*	W67C, W67H	Amber	No
Willow Warbler	*Phylloscopus trochilus*	W67C, W67H	Amber	Breeding and foraging
Blackbird	*Turdus merula*	W67C, W67D, W67H, W67I	Green	Breeding and foraging
Blackcap	*Sylvia atricapilla*	W67C. W67D, W67H	Green	Breeding and foraging
Blue Tit	*Cyanistes caeruleus*	W67D, W67H, W67I	Green	Breeding and foraging
Bullfinch	*Pyrrhula pyrrhula*	W67C, W67D, W67H, W67I	Green	Breeding and foraging
Buzzard	*Buteo buteo*	W67D, W67H, W67I	Green	Breeding and foraging
Chaffinch	*Fringilla coelebs*	W67C, W67D, W67H, W67I	Green	Breeding and foraging
Chiffchaff	*Phylloscopus collybita*	W67C, W67D, W67H	Green	Breeding and foraging
Coal Tit	*Periparus ater*	W67C, W67D, W67H	Green	Breeding and foraging

Common Name	Scientific Name	Grid Square	BOCCI Status	Potential Suitable Habitat within Study Area
Collared Dove	*Sterptopelia decaoto*	W67C, W67D, W67H	Green	Breeding and foraging
Cuckoo	*Cuculus canorus*	W67C	Green	Breeding and foraging
Dipper	*Cinclus cinclus*	W67C, W67D	Green	No
Dunnock	*Prunella modularis*	W67C, W67D, W67H, W67I	Green	Breeding and foraging
Goldfinch	*Carduelis carduelis*	W67C, W67H, W67I	Green	Breeding and foraging
Great Black-backed Gull	*Larus marinus*	W67C, W67H	Green	No
Great Spotted Woodpecker	*Dendrocopos major*	W67C	Green	Breeding and foraging
Great Tit	*Parus major*	W67C, W67D, W67H	Green	Breeding and foraging
Grey Heron	*Ardea cinerea*	W67C, W67D, W67H	Green	No
Hooded Crow	*Corvus cornix*	W67C, W67D, W67H, W67I	Green	Breeding and Foraging
Jackdaw	*Coloeus monedula*	W67C, W67D, W67H, W67I	Green	Breeding and foraging
Jay	*Garrulus glandarius*	W67C, W67D, W67H	Green	Breeding and foraging
Little Egret	*Egretta garzetta*	W67C	Green	No
Long-tailed Tit	*Aegithalos caudatus*	W67C, W67D, W67H	Green	Breeding and foraging
Magpie	*Pica pica*	W67C, W67D, W67H	Green	Breeding and foraging
Mistle Thrush	*Turdus viscivorus*	W67C, W67D, W67H	Green	Breeding and foraging
Moorhen	*Gallinula chloropus*	W67C, W67D, W67H	Green	No
Peregrine	*Falco peregrinus*	W67C, W67H	Green	Foraging
Pheasant	*Phasianus colchicus*	W67C, W67H	Green	No
Pied Wagtail	*Motacilla alba yarrellii*	W67C, W67D, W67H, W67I	Green	No
Raven	*Corvus corax*	W67C, W67H	Green	Breeding and Foraging
Redpoll	*Acanthis flammea*	W67C, W67H	Green	Foraging

Common Name	Scientific Name	Grid Square	BOCCI Status	Potential Suitable Habitat within Study Area
Reed Warbler	*Acrocephalus scirpaceus*	W67C	Green	No
Robin	*Erithacus rubecula*	W67C, W67D, W67H	Green	Breeding and foraging
Rock Dove	*Columba livia*	W67C, W67D	Green	No
Rook	*Corvus frugilegus*	W67C, W67D, W67H, W67I	Green	Breeding and foraging
Sedge Warbler	*Acrocephalus schoenobaenus*	W67C, W67H	Green	No
Siskin	*Spinus spinus*	W67C, W67D, W67H	Green	No
Snow Goose	*Anser caerulescens*	W67C	Green	No
Song Thrush	*Turdus philomelos*	W67C, W67D, W67H	Green	Breeding and foraging
Sparrowhawk	*Accipiter nisus*	W67C, W67H	Green	No
Stonechat	*Saxicola rubicola*	W67C, W67H	Green	Foraging
Treecreeper	*Certhia familiaris*	W67C, W67D, W67H	Green	Breeding and Foraging
Water Rail	*Rallus aquaticus*	W67C, W67H	Green	None
Whitethroat	*Curruca communis*	W67C	Green	Breeding and foraging
Woodpigeon	*Columba palumbus*	W67C, W67D, W67H	Green	Breeding and foraging
Wren	*Troglodytes troglodytes*	W67C, W67D, W67H, W67I	Green	Breeding and foraging

1.5.5 Reptiles and Amphibians

Reptile and amphibian species records from the relevant grid squares are in Table 1-4. One species of amphibian and no reptiles have been recorded in the relevant grid squares in the last 10 years.

Table 1-4 - Reptile and amphibian species recorded within the relevant grid squares (NBDC, 2026).

Common Name	Scientific Name	Grid Square	Protection Status
Amphibians			
Common Frog	*Rana temporaria*	W67I	Habitats Directive, Annex V

1.5.6 Fish

The Clogheenmilcon Fen Ecological and Tourism Plan (Alan Lauder Consulting, 2021) makes reference to the fact that the fish species present within the Blarney River system include lamprey spp., European eel (*Anguilla anguilla*), brown trout (*Salmo trutta*) and salmon (*Salmo salar*), although no recent records were provided. These records were

not present within the relevant NBDC grid squares. There is no habitat within or directly intersecting the site which can support the breeding and foraging requirements of these species.

1.5.7 Invertebrates

No species of endangered or threatened invertebrates have been recorded in the relevant grid squares within the last 10 years according to the NBDC database.

1.5.8 Invasive Alien Species

1.5.8.1 Invasive Flora

Table 1-5 displays the invasive floral records from within the vicinity of the site (W67C) in the last 10 years. Invasive impact risk, as per O'Flynn *et al*. (2014) is included. 3 invasive floral species have been recorded.

Table 1-5 - Invasive plant species recorded within the relevant grid squares (NBDC, 2026).

Common Name	Scientific Name	Grid Square	Status
American Skunk-cabbage	*Lysichiton americanus*	W67C	Medium-impact, Third Schedule
Japanese Knotweed	*Fallopia japonica*	W67C, W67D	High-impact, Third Schedule
Three-cornered Garlic	*Allium triquetrum*	W67C	Medium-impact, Third Schedule

1.5.8.2 Invasive Fauna

Table 1-6 displays invasive fauna records from the relevant grid squares in the last 10 years. Invasive impact, as per O'Flynn *et al.* (2014) is included. Two invasive mammals and one insect have been recorded.

Table 1-6 - Invasive animal species recorded within the relevant grid squares (NBDC, 2026).

Common Name	Scientific Name	Grid Square	Status
Mammals			
American Mink	*Neovison vison*	W67I	High-impact, Third Schedule
Greater White-toothed Shrew	*Crocidura russula*	W67C	Medium-impact
Insects			
Harlequin Ladybird	*Harmonia axyridis*	W67C	High-impact, Third Schedule

Note that sika deer (*Cervus nippon*) have also recently been recorded at Blarney Bog pNHA.

1.6 Field Surveys

The site of the proposed works was surveyed on the 11th June 2026 by AtkinsRéalis ecologists Alec Schmidt and Caroline Downey. The area surveyed included the vegetated and woodland areas immediately to the south of the R617 along the relevant section, including the areas both within and outside of the red-line boundary of the Ringwood LRD Phase 2 application. The purpose of the site visit was to undertake a rapid assessment of the ecological conditions of the site, including an identification of the flora, fauna and habitats present within the woodland area, as well as an identification of any ecological constraints that may be present within or adjacent to the woodland area and route of the proposed pipeline.

A habitat survey was undertaken in line with published practice (Smith *et al*., 2011), with habitats classified in line with the Heritage Council Classification scheme (Fossitt, 2000). Dominant plant species in each habitat type were recorded. Habitats were later mapped using QGIS (version 3.34 LTR). During the ecological survey the presence of invasive plant species as listed on the 3rd Schedule of the Natural Habitats Regulations (S.I. 477 of 2011), as well as other potentially significant invasive plant species as listed by Invasive Species Ireland, was noted where present. All data is within the range of age of data specified for use of ecological data in CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019).

1.6.1 Habitats

The largest habitat by area within the site is that of conifer plantation (WD4), which was present within the western half of the site. A significant amount of human disturbance was noted within the conifer plantation through significant amounts of litter and a makeshift camping area that was burned/scorched in parts. There were also a number of fallen trees and cut branches throughout. It should be noted that these fallen trees did not particularly result in any increase in open canopy, due to the compact nature of the original planting regime. As noted within the tree survey report, beyond the exception of two high-quality trees, the area of conifer plantation has been classified as low quality, with retention optional.

At the eastern end of the site, there is a small pocket of mixed broadleaved woodland (WD1) surrounded by a patch of neutral grassland (GS1) to the east and south, which itself is encompassed by the amenity grassland (GA1) of the sports pitch to the south. The woodland narrows down to a treeline (WL2) as it progresses westwards before shortening to a hedgerow (WL1) further west. As noted in the tree survey report, the woodland and treeline/hedgerow habitat was classified as being of moderate quality, with retention desirable.

At the western end of the site, there is a small patch of neutral grassland (GS1) with scattered trees (WD5) and a small area of scrub (WS1) dominated by stinging nettle (*Urtica dioica*).

Two small drainage ditches (FW4) were recorded within the site. The first was recorded at the eastern end of the site, positioned within the small patch of mixed-broadleaved woodland and the adjacent neutral grassland. Due to the presence of the drainage ditch a number of wet grassland species were present (although not in an amount to constitute a habitat by itself). The second drainage ditch was located within the conifer plantation, slightly to the west of the centre of the site and running parallel to the R617 road. No water was noted in either drainage ditch at the time of the survey.

The habitats are mapped below in (Figure 4).

1.6.2 Flora and Fauna

The canopy layer of the coniferous plantation was dominated by a largely monocultural plantation of sitka spruce (*Picea sitchensis).* The ground layer was species poor, largely dominated by ivy (*Hedera helix*). Other species recorded included lord's and ladies (*Arum maculatum*), hart's tongue fern (*Asplenium scolopendrium*), herb robert

(*Geranium robertianum*), orpine (*Hylotelephium telephium*), common sowthistle (*Sonchus oleraceus*), honeysuckle (*Lonicera periclymenum*), along with scattered saplings of elder, holly and oak.

The pocket of mixed broadleaved woodland consists of elder, ash, oak, hawthorn and some saplings of willow. Sycamore (*Acer pseudoplatanus*), a medium-impact invasive species is also present. These tree species were also present within the treeline heading west towards the coniferous plantation, with the addition of gorse. On the roadside face of the treeline and hedgerow, fuschia (*Fuschia magellanica*), Japanese cherry (*Prunus serrulata*), elder, hawthorn, bindweed, rose, hogweed, bramble, nettle, willowherb, bracken, hedge woundwort, foxglove, herb robert and traveller's joy (a medium-impact invasive species), were recorded. The surrounding neutral grassland included creeping thistle, meadow buttercup, creeping buttercup, cuckooflower, common speedwell, foxglove, cleavers, ragwort and common hogweed.

The area of neutral grassland to the west of the site contained a mixture of grasses and flowering species including creeping cinquefoil, greater bird's foot trefoil, ragwort, germander speedwell, mouse-ear chickweed, lesser knapweed, common chickweed, white clover and ground elder. The scattered trees consisted of sweet cherry and whitebeam.

Several mammal paths were noted throughout the conifer plantation and along the southern boundary of the site towards the eastern end.

A burrow (likely used by rabbit) was recorded at the eastern end of the drainage ditch within the conifer plantation. However, it should be noted that the entrance was covered in cobwebs and is unlikely to be in constant use. There were no signs of burrows within the hare coursing ground to the south of the coniferous plantation.

Bird species recorded included swallow within the sports fields to the south, and wren and jackdaw within the coniferous plantation.

No third-schedule invasive species were recorded.



Figure 4 - Habitats present within the surveyed area.

1.6.3 Site Photos



Figure 5 - Drainage Ditch (FW4) at the eastern end of the site.



Figure 6 - Neutral grassland (GS1) at the eastern end of the site.



Figure 7 - Mixed broadleaved woodland (WD1) at the eastern end of the site.



Figure 8 - Treeline (WL2) bordering the R617 road.



Figure 9 - Ground layer of coniferous plantation dominated by ivy.



Figure 10 - Coniferous plantation dominated by sitka spruce (WD4).

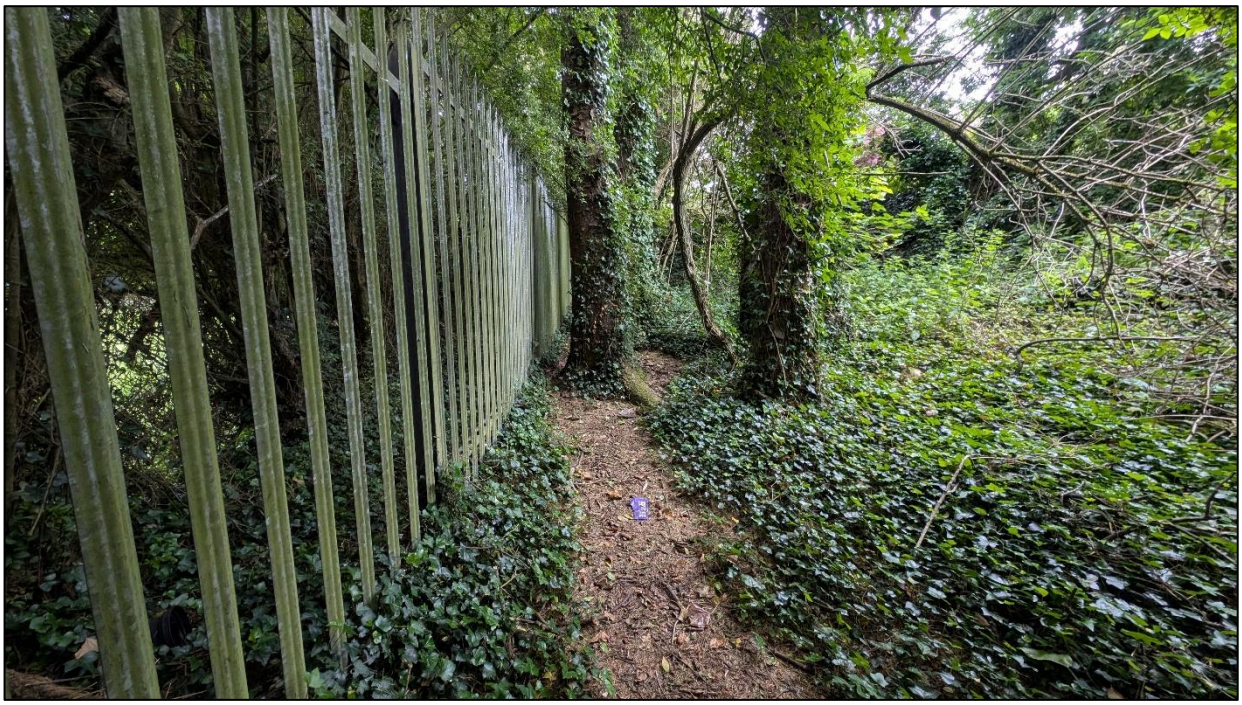


Figure 11 - Fencing within coniferous plantation.



Figure 12 - Mammal burrow within coniferous plantation.



Figure 13 - End of culvert with concrete drainage pipe, within coniferous plantation.



Figure 14 - Grassland and scattered trees at western end of the site with nettle scrub in foreground.

1.7 Future Activity On-Site

It should be noted that the current proposal only involves the removal of vegetation along the roadside within land under Cork City Council ownership. This does not include the entire conifer plantation. One recommendation involves the provision of replacement planting, converting the area of coniferous forest to be removed into a broadleaved woodland mix with native deciduous species. It should be noted that this falls outside the current scope of works as relating to the road widening. Further details, including a finalised planting mix shall be decided upon at a later date, should this additional scope of works be included. It should also be considered in this case that the current soil chemistry may be acidic and initially inconducive to the planting of such species. As such, a period of recovery may be required, which may have potential impacts through reduced soil stability and increased erosion following the removal of the coniferous trees, which may have potential impacts for the surrounding hydrological systems. As such, any proposed planting regime should consider the current soil characteristics, the desired soil characteristics to support a native deciduous planting mix, and the time needed for the soil characteristics to align with the desired requirements.

The site has not been surveyed for the activity and/or presence of bats. In general, broadleaved woodland and riparian habitats are of high importance for all Irish bat species. As such, the greatest potential for the presence of bats is likely within the small pocket of broadleaved woodland at the eastern extent of the site. As stated within the landscape plan, only two trees within this area of woodland have been classified as ‘retention optional’. As such, the suitability of this woodland for bat species will be retained. Furthermore, if an area of the coniferous plantation were to be replaced with native deciduous planting, habitat suitability for bats would be increased within the medium-to-long term.

Under Section 40 of the Wildlife Act 1976 (as amended), it is illegal to cut, grub, burn, or destroy vegetation on uncultivated land, hedgerows, or ditches between 1 March and 31 August to protect nesting birds and their eggs. As such, any removal of trees within the site should occur outside of this period. It should be noted, however, that the nesting patterns of individual birds or species can vary in time and space, and may fall outside of this protected period. Therefore, it is recommended that a nesting bird survey be conducted prior to the removal of any trees regardless of whether the nesting period, as defined in the Wildlife Act 1976 (as amended), has passed or is yet to occur.

2. References

- Alan Lauder Consulting (2021). *Clogheenmilcon Fen Ecological and Tourism Plan.* June 2021. Report to Cork City Council.
- AtkinsRéalis (2024a). *Screening for Appropriate Assessment Report: Ringwood LRD*. June 2024. Accessible at: [https://planning.corkcity.ie/idocsWebDpss/listFiles.aspx?catalog=planning&id=2443031] (last accessed 14-07-2026)
- AtkinsRéalis (2024b). *Environmental Impact Assessment Report: Ringwood LRD*. June 2024. Accessible at: [https://planning.corkcity.ie/idocsWebDpss/listFiles.aspx?catalog=planning&id=2443031] (last accessed 14-07-2026)
- AtkinsRéalis (2024c). *Phase 2 Technical Note: Ringwood LRD*. Unpublished.
- AtkinsRéalis (2025). *Phase 2 Technical Note: Ringwood LRD*. Unpublished.
- AtkinsRéalis (2026). *WwPS Preliminary Ecological Appraisal: Ringwood LRD*. Unpublished.
- CIEEM (2019). *Advice Note on the Lifespan of Ecological Reports and Surveys.* Winchester, UK.
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna. *Official Journal of the European Communities* L 206/7-50.
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. *Official Journal of the European Union* L 20/7-25.
- ETC/BD (2026a) *Article 17 web tool* <https://nature-art17.eionet.europa.eu/article17/> [accessed 14/07/2026]. European Topic Centre on Biological Diversity, European Environment Agency, Copenhagen.
- ETC/BD (2026b) *Article 12 web tool* <https://nature-art12.eionet.europa.eu/article12/> [accessed 14/07/2026]. European Topic Centre on Biological Diversity, European Environment Agency, Copenhagen.
- *European Communities (Birds and Natural Habitats Regulations), 2011* (IR No. 477/2011).
- Fossitt, J.A. (2000). *A Guide to Habitats in Ireland.* The Heritage Council, Kilkenny.
- Gilbert, G., Stanbury, A., & Lewis, L. (2021). *Birds of Conservation Concern in Ireland 2020 –2026*. Irish Birds 9: 523-544.
- NPWS (2009a). *Site Synopsis: Blarney Bog pNHA (001857).*
- NPWS (2009b). *Site Synopsis: Ardamadame Wood pNHA (001799).*
- NPWS (2009c). *Site Synopsis: Blarney Castle Woods pNHA (001039).*
- NPWS (2009d). *Site Synopsis: Blarney Lake pNHA (001798).*
- NPWS (2009e). *Site Synopsis: Shournagh Valley pNHA (000103).*
- NPWS (2009f). *Site Synopsis: Lee Valley pNHA (000094).*
- NPWS (2019a) *The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview.* National Parks & Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Dublin.
- NPWS (2019b) *The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments.* National Parks & Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Dublin.
- NPWS (2019c) *The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments.* National Parks & Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Dublin.
- O'Flynn, C., Kelly, J. and Lysaght, L. (2014) *Ireland's invasive and non-native species – trends in introductions.* National Biodiversity Data Centre, Waterford.

- *Planning and Development Act 2000* (IR No. 30/2000) (as amended).
- *Planning and Development Regulations, 2001* (IR No. 600/2001) (as amended).
- Smith, G.F., O'Donoghue, P., O'Hora, K. and Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping.* The Heritage Council, Kilkenny.
- *Wildlife Act, 1976* (IR No. 39/1976) (as amended)

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